EFL Student Perspectives on Formative e-Assessment: A Case Study of Burapha University

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This Research Was Funded by the Faculty of Humanities and Social Sciences Burapha University 2013

ABSTRACT

The study aimed to examine the students' perspectives toward the merging of formative e-assessment (FEA) in relation to four theoretical frameworks (i.e., second language acquisition, language pedagogy, language assessment, and technology integration) with face-to-face teaching in various English courses between the first semester in 2009 and the first semester in 2011. Participants were 672 undergraduates who enrolled in *English III*, *English Structure* and *English for Sciences and Technology*, and 203 postgraduates who enrolled in *Reading* and *Research Methodology on English* taught by the researcher at the Department of Western Languages, Faculty of Humanities and Social Sciences, Burapha University. The study was quantitative research, using a longitudinal survey research design. All numerical data were collected through a questionnaire which was a four-point Likert rating scale. The questionnaire was piloted and administered to the participants by the researcher at the end of their courses. The applications of descriptive statistics (i.e., percentage, mean, standard deviation) were employed for data analysis.

The results revealed that the EFL students rated their perspectives on formative e-assessment in accordance with second language acquisition theory, language pedagogy theory, language assessment theory, and technology integration highly positive. Regarding the undergraduate participants in *English III* group, 85% responded optimistically to the merging of FEA in their required foundation EFL course. Meanwhile, 90% of the participants in the *English Structure* group replied in the questionnaire that FEA helped improve their language skills. In the last undergraduate group, *English for Sciences and Technology*, over 86% were satisfied with using FEA in their ESP course. In addition, 90% of the postgraduate participants in the *Reading* group expressed their preference to the content of FEA that it was related to their course syllabus, and over 85% stated that FEA helped improve their reading skills. More than 88% of the postgraduates in the *Research Methodology on English* group verified that FEA encouraged them to construct their knowledge by themselves as FEA was linked to tremendous amount of online information.

ACKNOWLEDGMENTS

I would like express my gratefulness to the Department of Western Languages, Faculty of Humanities and Social Sciences, Burapha University for the research grant.

My sincere gratitude also goes to all Thai and international undergraduate and postgraduate students, enrolling in the EFL courses (*English III, Structure, English for Sciences and Technology, Reading* which is now renamed *English Reading for Graduate Studies,* and *Research Methodology on English*) taught by the researcher between the 2009 second semester and 2011 first semester, who were cooperative and content to contribute their invaluable data for the study.

I really appreciate the *Burapha University International Conference 2012* (July 9-11, Pattaya, Thailand), *the 5th International Conference on Education Research (ICER) 2012* (September 8-9, Khon Kaen, Thailand), *Globalization and Localization (GloCALL) 2012 Conference & 2012 International Symposium on CALL* (October 18-20, Beijing, China), and *2012 International Conference "ICT for Language Learning" 5th Edition* (November 15-16, Florence, Italy) for allowing me to present my papers which are parts of this research at their conferences.

Finally, I am highly indebted to my parents, teachers, and family members for the inspiration and substantiation.

TABLE OF CONTENTS

List of Tables .... Page

List of Figures ....Page

Chapter 1 Introduction

This chapter presents the background (1.1), research problem (1.2), a brief history of English formative e-assessment at Burapha University (1.3), blending formative e-assessment in an EFL course (1.4), significance of the study (1.5), aims of the study and research questions (1.6), contribution of the study (1.7), terminology (1.8), and the chapter summary (1.9).

1.1 Background

Typically, teaching English as a foreign language (EFL) in a Thai university has been done through a lecture method instead of a serious student training to practice language skills. This is because their classes contain a huge number of students. For example, in 2009 second semester, there were 314 students in one foundation EFL class (*English II*) taught by a single teacher (Burapha University, 2009). Hence, it is challenging for teachers in those large classes to provide sufficient time to practice and train their students individually and effectively. Generally, these EFL teachers act as the center of knowledge while students listen to the lecture, take notes, and do some exercises. They do not have sufficient time to practice their language skills in class. The situation leads to students' limited English ability to communicate with the world outside their classrooms. This teaching method is contradictory to second language acquisition theory which focuses on communicative and student-centered approaches. In addition, the EFL teachers should try to find any method to support their students to have opportunities to use as much English as they can in their daily life. The teaching method should not be emphasized simply on using English in the classroom, yet students should be stimulated to use the language outside their classroom which is the basis of lifelong learning.

1.2 Research Problem

Apart from the abovementioned EFL teaching situations, testing EFL students also continues in the same manner. Most EFL tests are not constructed to test students' language skills, but to test mainly in English vocabulary and grammar through a multiple-choice question format. Employing other question format seems to be problematic due to the large number of students in each class. Therefore, EFL teachers cannot assess all students' language skills meticulously. This is the biggest problem inducing severe national dilemmas to both teaching and learning EFL in the country. EFL students lack their language skills because they do not have sufficient time to practice and then fail to use the language to communicate effectively. This also decreases the students' confidence to use the language after class.

Because assessment is the essence of education, as noted by Winter (2003), to transform education, we must revolutionize the assessment procedure. Within e-assessment task area, non-standard forms of assessment cover a variety of formats that can capture students' performances over time. In addition, digitization of the marking process provides students with an opportunity to reduce the busy and clerical work associated with it. Also, e-assessment offers effective forms of marking from self-and peer-marking to comparative pair-marking. Furthermore, as mentioned by Knight and Yorke (2007), e-assessment is important for all stakeholders and drives what is learnt and taught, while traditional marking methods are costly and time-consuming.

As a result, the researcher was interested in investigating whether merging formative e-assessment with conventional pencil-and-paper assessment would yield the same or better results for students and future development of the assessment system. And the researcher wanted to examine what students thought of the system after the researcher had blended the assessment with his face-to-face teaching for almost ten years. To provide a clearer view of the formative e-assessment at Burapha University, its brief account is described in the following section.

1.3 A Brief History of English Formative e-Assessment at Burapha University

After Burapha University Computer Center (BUCC) had been founded in 1992, the Information Technology Center of the Faculty of Humanities and Social Sciences (HUSO) of the university was initiated through the cooperation between HUSO and the Continuing Education Center (CEC) of Chulalongkorn University in 2002. In 2004, the researcher started blending his first formative e-assessment (FEA) in a foundation English course, *English II*, with 186 first-year undergraduates, using an experimental research design. At that time, the researcher employed the e-learning program linked from CEC to construct the first English FEA in the university. In 2008, after Moodle (Modular Object-Oriented Dynamic Learning Environment), an open source course management system, had been installed on the university's website, another FEA with Moodle as its platform was created and introduced by the researcher to almost every EFL course he taught to help solve problems experienced with teaching EFL in large classes. According to

Hunt (2012), there are many types of question patterns for formative purposes provided by this free source.

In that students' perspectives are necessary matters to evaluate the effectiveness of FEA for its further development plan, from 2009, the researcher administered a questionnaire to collect their points of view relating to the implementation of FEA blended with their traditional class. Reasons for combining FEA with face-to-face teaching are explained in the next section.

1.4 Blending Formative e-Assessment in an EFL course

Using technology integration in EFL classrooms is not a new trend. It is appropriate for stimulating learners' motivation in studying because language learners can use the technology to help practice and assess their language skills as frequently as they want. Using the Internet is a good means for students to link and explore to tons of information relevant to their studying the language in different situations; it is more authentic than simply attending an EFL lecture. Base on these considerations, Davis (2000) and Koohang and Durante (2003) agreed that nowadays research has emphasized on the importance of using a blended learning approach. Blended learning, as defined by Rubenstein (2003) and Ward and LaBranche (2003), is a hybrid teaching approach mixing parts of e-learning with the traditional classroom settings. Since innovative technologies are interactive, in accordance with Smart and Cappel (2006), it is now convenient to create online contexts in which students can have hand-on experience, receive feedback, and construct new knowledge. Technologies embrace great secure for escalating contact to knowledge and a means of promoting learning.

As learners' perceptions play a vital role in the effectiveness of integrating technologies in educational settings (Nguyen, 2011), researchers in many countries are interested in conducting research pertaining to investigating students' perspectives toward both blending e-learning and e-assessment in higher education.

With reference to blending e-learning, for instance, in Iran, Yaghoubi, Malek Mohammadi, Iravani, Attaran and Gheidi (2008) examined the perceptions of 110 students in Tehran University toward e-learning. Data relating to the participants' gender, age, computer literacy, and their attitudes were collected through online questionnaire. Findings indicated that the students had positive perceptions toward e-learning; especially, they could access their lessons anytime and anywhere. In addition, e-learning provided them with convenience and prompt information to share and exchange among learners. However, there were some drawbacks when they thought they lost their personal contacts when using studying online; it also reduced their social activities. The online content was not appropriate. Another one was that teachers lacked knowledge of online teaching and there were technological problems, for example, it was too slow and complicated when logging in to the system. These issues were valuable for future research and development of the e-learning program for the university. Friedl's (2012) research concerning the study of German as a foreign language indicated that participants liked this kind of teaching. Nakano (2012) developed 'Web-English' operated on Linux and available for Windows and Macintosh containing English grammar and conversation learning system. Questionnaires results revealed that the project using 'Web-English' was effective; it also showed that the 'Forum" helped improve participants' writing ability and encouraged them to communicate to each other. These studies showed that technology could help improve students' language skills.

In relation to participants' reactions to blending e-assessment, Cassady and Gridley (2005) discovered that the integration of online practice tests helped students prepare for course exams. In 2009, Jordan and Mitchell found that short-answer questions have the advantage of requiring students to construct a response for themselves, rather than selecting from a number of predetermined options. Bueno Alastuey's (2011) study involved 48 undergraduates, aged between 21 and 25, in a university in Spain, agricultural majors studying English as a compulsory subject. The results from seven-point Likert scale disclosed that 1) participants in the experimental group had better satisfaction than the control group; 2) those in the treatment group (78 %) said they had more improvement in speaking skills than did the control group; 3) 59% showed intention to use the medium; that was the promotion of lifelong learning; 4) 93% thought the medium fulfill their demand; and 5) they accepted that their anxiety decreased. Jordan (2012) used short-answer e-assessment questions in the Open University in the UK for five years since 2007 with around 5,000 individual student users per year. It was about the benefits of online assessment, short answer.

1.5 Significance of the Study

According to Born (2003), more and more teachers have used web-based or e-assessment to track their students' progress, inform, and amend teaching process in order to improve students' learning outcomes. Moreover, according to Jonassen, Howland, Moore and Marra (2003), technology integration can engage learners in active, constructive, intentional, authentic, and cooperative learning.

Cassady and Gridley (2005) note that the combination of e-assessment and traditional face-to-face teaching can increase instructional time. It is true when a teacher has to teach and test a large number of students who study English as a foreign language (EFL); however, there is not sufficient time for effective, individual practicing and assessing to advance their language skills.

Smart and Cappel (2006) suggested although e-learning (and various blended approaches that integrate online components into traditional classes) continues to grow rapidly, it still remains at an early stage of development. Consequently, developers and deliverers of online learning need more understanding of how students perceive and react to elements of e-learning (since student perception and attitude is critical to motivation and learning). This study examines students' perceptions of integrating online components in two undergraduate business courses where students completed online learning modules prior to class discussion. The results indicate that participants in an elective course rated the online modules significantly better than those in a required course. Overall, participants in the elective course rated the online modules marginally positive while those in the required course rated them marginally negative. These outcomes suggest that instructors should be selective in the way they integrate online units into traditional, classroom-delivered courses. For most participants of the study (83 percent), this was their first experience completing an online learning activity or module. In addition, the largest dissatisfaction factor reported among the participants was the time required to complete the online modules. Dermo (2008) stated that students' attitudes were a very important factor for the improvement of teaching, learning, and assessing English online in the tertiary level. This is well supported by Inoue and Bell (2006) who stated that technology integration is being employed by academics throughout Asia and Pacific regions for the reason.

In addition, Campbell (2010) found that using e-assessment can reduce teachers' marking time comparing with marking prolonged and pricey traditional paper-based assessment, while Cardodo (2011) concluded that technology integration also increases participation and fosters interactions. It also leads students to increase their motivation in class.

From sample research studies stated above, researchers aimed to study learners' attitudes in a single study concerning merely a cross-sectional survey. There were few studies which focused on more participants, more courses and more time frames conducted in a single study. This study was designed to collect data from more groups of participants as well. Approximately 1,000 undergraduates and postgraduates who enrolled in regular and special programs were selected to participate in the study which took around three years (2009-2011) to complete. It was anticipated that these huge data would make more reliable results for the sustainable development of teaching and learning English as a life-long process. In addition, it would yield more benefits for students and faculty staff in the university and relevant education institutes in either public or private sectors.

1.6 Aims of the Study and Research Questions

The study aimed primarily to investigate the perspectives on the applications of formative e-assessment of EFL students both undergraduate and postgraduate who enrolled in various English courses taught by the researcher at the Department of Western Languages, Faculty of Humanities and Social Sciences, Burapha University between 2009 and 2011 academic years. It also focused on examining feasible methods to establish research-based evidence regarding teaching and EFL for lifelong learning in a Thai tertiary level. To fulfill these aims, there were four major research questions as follows:

1. What are the EFL students' perspectives on formative e-assessment in relation to second language acquisition theory?
2. What are the EFL students' perspectives on formative e-assessment in relation to language pedagogy theory?
3. What are the EFL students' perspectives on formative e-assessment in relation to language assessment theory?
4. What are the EFL students' perspectives on formative e-assessment in relation to technology integration?

1.7 Contributions of the Study

1. Results of the study would yield the useful participants' perspectives on the blending of formative e-assessment to be used for the improvement of the program in the future.

2. The research findings would ensure both EFL teachers and learners to learn more about technology integration in their EFL teaching and learning to understand more about their ongoing progress.
3. It would encourage more teachers to conduct more research to empower the institute academic strength.
4. The study would lead to new, evidence-based information to upgrade EFL teaching and learning including the planning for the betterment of the students' language competence.

1.8 Terminology

EFL students were approximately 1,000 undergraduate and postgraduate students who enrolled in English courses taught by the researcher at the Department of Western Languages, Faculty of Humanities and Social Sciences, Burapha University, Chon Buri, Thailand, between 2009 and 2011 academic years.

Formative e-assessment was a system constructed by the researcher to assess EFL students' ongoing progress while studying their courses. It was related to the content of what the students had learnt in their lecture classes and their course description and syllabus. Questions were in multiple-choice, fill-in, matching and true/false formats. The assessment system could be performed simply through the Internet via the e-learning program installed on the university website.

1.9 Summary

In this chapter, the research problem and the purpose statement are described. Reasons for the need of alternative teaching and testing methods are explained through the merging of technologies into the traditional EFL classrooms in the university. The benefits of the formative e-assessment are detailed as well as the aims of the study and research questions. In addition, the significance and the contribution of the study are described. Finally, the terminology secion is includrd to clarify definitions of specific terms used in the study.

Chapter 2 Review of the Literature

This chapter provides the review of the literature related to the study. It contains four main sections. First, it views particularly in formative e-assessment and its use (2.1). Then it describes the four theoretical perspectives guiding and underpinning the study (2.2). After that, the related literature on students' perspectives toward formative e-assessment is reviewed (2.3). And the last section is the chapter summary (2.4).

2.1 Formative e-Assessment (FEA)

Formative assessment was defined by Black and Wiliam (1998) as all activities attempted to improve teaching and learning. The assessment confers essential pedagogical benefits to both teachers and learners as noted by many researchers. For instance, Crooks (2001) pointed that formative assessment helped improve students' attainment. Likewise, Hanson, Millington and Freewood (2001) stated that formative assessment had a positive impact on students' work. Additionally, Boston (2002) and Robles and Braathen (2002) concluded that formative assessment provided useful feedback to teachers and students during a teaching-learning process.

In connection with the advance of digital technology, there is a trend to merge traditional formative assessment with traditional method. Hence, many researchers focus on the blended method and try to define the combination. For instance, Born (2003) used a term as 'web-based assessment (WBA) and explained that it was used by teachers to follow their students' ongoing progress to amend the teaching and learning process in order to improve students' learning outcomes. Online or e-assessments is also employed to describe a testing system different from conventional paper-and-pencil assessment because there is no paper or pencils involved. Students can perform e-assessment via the Internet access by reading the items from the screen, using a computer keyboard and a mouse to select or type in answers they desire to respond to online questions. After completing each set of e-assessment, students can receive prompt results of their assessment since the technology helps provide automatic score reporting.

With regard to using e-assessment for formative purposes, researchers have found that it yields numerous benefits. For example, Caygill and Eley (2001) and Wong, C., Wong, W. and Yeung (2001) confirmed that the potential use of e-assessment system, with automated grading, can assist in improving traditional approaches as well as supply additional attention to students by recording their performance while online. Regarding teaching and assessing English as a foreign language or EFL, Macdonald (2002) expressed that e-assessment provided students with greater autonomy through networked environments, expecting that they would develop a self-directed approach to their language learning.

Generally, question types served on e-assessment are multiple-choice items. However, instead of employing certain multiple-choice question formats, some researchers focused their studies on peer e-assessment which relates to students exchanging their evaluation to others in the same group. According to Roberts (2006), self- and peer-assessments can enhance higher cognitive abilities, critical reflection, and self-awareness. Crisp (2007) stated that e-assessment had to keep up with the new technological and pedagogical challenges. In peer assessment, collaborative activities are often accompanied by peer-assessments. As noted by Barker and Bennett (2010), peer assessment was useful, fair and beneficial to learners. Bennett and Barker (2012) added that peer assessment has also received a lot of recent attention. A large amount of research has been undertaken on the beneficial effects of peer assessment on student motivation and ability to self-assess.

In this study, FEA was guided and underpinned by four theoretical and conceptual perspectives which are briefly described in the section below.

2.2 Theoretical Perspectives

2.2.1. Second Language Acquisition and FEA

Krashen (1985) emphasized that the input hypothesis is a vital part of second language acquisition (SLA). He stated that people obtain a language through comprehending messages or receiving understandable input. Krashen argued that comprehensible input is essential, but language students need to be well prepared to receive the input. He also suggested that language students could acquire the language when it is used for communicative purposes. Language teachers' responsibility is not restricted only in a language classroom; they need to encourage their students to improve their linguistic competence by themselves. Through the provision of sufficient comprehensible input, students can communicate with the world outside their classroom. According to Richards and Rodgers (2001) and Rodgers (2001), students should be provided with real-world and meaningful communicative activities involving the integration of different language skills. They should be encouraged to find answers for themselves.

In accordance with this theoretical perspective, FEA can be used as comprehensible input to link meaningful communicative activities to students' language learning support.

2.2.2 Language Pedagogy and FEA

In language pedagogy, students will understand what they learn better when they are fully motivated. Davies (1999) suggested that the importance of the language pedagogy theory was providing non-threatening situations along with systematic feedback to students throughout their course because, as noted by Mory (1992), such feedback had an impact on learning and it improved learners' performance. Widmayer and Gray (2000) indicated that the Internet provided tools for pedagogical purposes, for instance, discussion boards, online quiz creation, and students' workspace. Its greatest advantage is that EFL teachers can create communicative activities, providing their students with real-world opportunities. As online information is attractive, students will be well motivated to learn.

2.2.3 Language Assessment and FEA

Formative assessment is the most important assessment practice because it has the potential to have a powerful effect on students' learning (Black & Wiliam, 1998). Crooks (1988) supported that when teachers employed it to support students instead of judging them, any assessment could have a positive impact on students' learning. Bachman (1990) suggested that language teachers should use formative assessment to identify students' strengths and weaknesses in order to measure their progress and encourage their linguistic achievement.

2.2.4 Technology Integration and FEA

Timmis, Oldfield, Broadfoot and Sutherland (2012) disclosed the characteristics of digital technologies and the possibilities they offer to learning and assessment; possible affordances are to: 1) provide immediate feedback; 2) be potential for self-regulated learning; 3) support for collaborative learning; 4) provide authenticity; 5) widen range of measurement; 6) be flexible and appropriate; 7) increase efficiency and reduce teachers' workloads; 8) improve the assessment; 9) improve student performance; 10) integrate formative and summative assessments; and 11) improve assessment validity and reliability.

In the study, FEA would assist students to improve their learning through self-assessment with prompt score reporting, so they are able to take some control of their ongoing progress and move on to achieve their goals. In addition, FEA provides feedback to every student more rapidly than conventional paper-and-pencil formative assessment does. Therefore, EFL students can spot their weaknesses or strengths in learning. Formative language e-assessment can also provide feedback on teaching effectiveness to language teachers.

FEA in this study used Moodle (Modular Objected Oriented Dynamic Learning Environment) as its platform to create sets of questions. According to Hunt (2012), Moodle released its first version in August 2002. It is still a significant pedagogic enhancement, allowing quizzes to be more formative. According to Hunt, in Moodle the proportion of question formats used are as follows: multiple-choice 74.85%, true/false 12.04%, short-answer 6.30%, essay 4.33%, matching 1.03%, multi-answer 0.64%, description 0.28%, numerical 0.26%, calculated 0.19% and drag-and-drop 0.05%.

Wesiak, Al-Smadi and Gütl (2012) stated that the continuously growing development of information and communication technology in the context of learning, the adjustment of educational goals, settings, and assessment methods become a major challenge. Redecker, Ala-Mutka, Bacigalupo, Ferrari and Punie (2009) disclosed that the increasing number of courses offered fully online meets the demands of today's learner generation who grew up with digital media, such as e-mail, instant messaging, wikis, blogs, etc. However, according to Ebner, Kickmeier-Rust and Holzinger (2008), research with wikis also showed that students do not contribute when the contribution is optional. Thus, Judd, Kennedy and Cropper (2010) pointed out that there is still research required to find effective incentives for fostering participation and collaboration.

2.3 Students' Perspectives on Blended Learning and FEA

2.3.1 Students' Perspectives on Blended Learning

There have been many research studies which emphasize on the blending of e-learning with face-to-face teaching. In 2006, MaKinster, Barab, Harwood and Andersen investigated the utility of online case studies of accounting students. A questionnaire, a seven-point Likert scale, was designed and administered to 210 students at a lecture. It contained three parts, demographic information, 29 questions, and students' perceptions on the use of the online discussion group. The questions covered the benefits of discussion forums (i.e., convenience, critical review of information, written communication and student engagement and motivation). The results showed that participants liked the synchronous online discussion forums since they had the opportunity to share, discuss, and modify their own understanding based on others' perspectives and experiences. They thought it was better than the traditional lecture environment in terms of transferring knowledge.

Al-Smadi, Höfler and Gütl (2011) developed an enhanced Wiki system for collaborative writing and peer-review called *co-writing Wiki*. The aims of their study were 1) to use the system to research self-and peer-assessment attitudes, emotional aspects, and usability perception over the course of a collaborative writing assignment, and 2) to examine the relationships between the stated variables, usage patterns, and performance. The *co-writing Wiki* system for collaborative writing and peer-review had five features: 1) continuous feedback provision for learner scaffolding and for teachers to follow the collaboration progress and facilitate grading; 2) enhanced assignment homepage with visualization tools to support both students and teachers in knowing who did what and when; 3) motivational charts page with integrated assessment overview to motivate peers to contribute and work in comparison with others; 4) self-, peer-, and group-assessment with use of flexible assessment rubrics for grading and feedback; and 5) grading page with peer-scores, teacher-scores, and weighting possibility. The results showed that integrated self, peer assessment activities could be used to enhance students' learning. In addition, those activities provided valuable feedback to scaffold students' learning.

In Spain, Bueno Alastuey's (2011) explored the benefits and drawbacks of synchronous voice-based computer-mediated communication (CMC) in a blended course of English for specific purposes. Quantitative and qualitative data from two groups following the same syllabus, except for the oral component, were compared. Oral tasks were carried out face-to-face with same L1 partners in the control group and through synchronous voice-based CMC with different L1 partners in the experimental group. Participants were 48 undergraduates in a Spanish university, studying English as a compulsory subject. The analysis included data from general proficiency pre- and post-test scores, oral PowerPoint presentation grades, students' questionnaires and students' and teachers' diaries. The results showed that achievements were significantly better in the experimental group and there was also an increase of other positive factors which may effectively contribute both to second language acquisition and to solving many of the problems which made speaking the weakest skill in foreign language contexts. Most of the treatment group (78%) thought that they had more improvement in speaking skills than did the control group, while 59% of them showed intention to use the medium. In addition, 93% thought the medium fulfilled their demand and found that their anxiety decreased.

In Brazil, Cardodo (2011) examined learners' perceptions of the use on a learner response system (LRS). Survey questionnaires, a five-point Likert scale ranging from "strongly agree" to "strongly disagree" and open-ended oral interviews were employed for data collection. Participants were a group of 30 Brazilians learning English in a communicative classroom environment. The results indicated that LRS was a positive addition to their classes; its uses increased participation and enjoyment of the classes, fostered interactions, allowed learners to self-assess and compared their performance with their peers.

In Vietnam, Nguyen's (2011) examined Vietnamese learners' reflections and perceptions of the application of computer-mediated communication (CMC) into collaborative learning. Data for analysis included an evaluation questionnaire, a 4-point Likert scale with 24 items, along with six open-ended questions, and informal interviews transcripts of 15, out of 30, teacher trainees from a TEFL (Teaching English as a Foreign Language) class volunteering to participate. Findings revealed that the majority of participants enjoyed the technology-enhanced class in general. There were approximately equal numbers of students who preferred synchronous CMC, asynchronous CMC, or a combination of both. The participants stated that the course helped improve their computer skills and collaborative experience. In addition, the participants expressed confidence that they would attend similar courses in future and were willing to recommend this technology-embedded course to the next generations of students. When asked to give a brief description of the technology-enhanced class, 23 (76.7%) students agreed that they liked learning with computers. In general, no negative attitude relating to the use of networked computers in learning was found. In addition, half of the students in the interviews described this class as new, strange, modern, motivating, and interesting among many other positive adjectives, as compared with what they felt were boring and insipid traditional, teacher-fronted classes. Students were more interested in their study because they could use the social network. It helped to decrease the pressure found in common classes. Additionally, this kind of class required students to work independently, and they also had to keep themselves updated with group work, which made them more responsible.

In Mexico, Hernández, Bazán and Solorio (2012) investigated their students' perception on English e-learning, considering their study habits, attitudes towards the on line modality, time benefits and e-tutoring. The main purpose of this research was obtaining information about the English on line courses from the students' point of view for their improvement. Quantitative approach and a descriptive longitudinal type of study were chosen to collect data through a questionnaire. Participants were 32 students enrolled in *English 1* and *English 2* from February 2010 to December 2011. Results showed that 24 of the entire participants (75%) gave a "regular" rate to the improvement they made about the English language knowledge, 4 of them (12.5%) considered they improved "a lot" and 4 of them (12.5%) thought they improved just "a little". In relation to the improvement of their study habits, six students felt the benefit was "a lot", while 12 students (37.5%), "regular" and 12 (37.5%), "a little". Regarding the time benefits, 23 of them (71.88%) marked that they benefited "a lot. The online modality generated greater motivation in English learning because 16 of the participants (50%) noted that their interest in English learning increased "a lot". Most students marked that they had more progress in reading and writing skills than in oral production and listening comprehension.

In Japan, Nakano (2012) from Kyushu Women's University had developed '*Web-English*' in 2004, containing English grammar and conversation learning systems. It had a computer management communication (CMC) system, '*Forum*', allowing users to communicate with their peers and their instructor. Participants were graduate students (n = 32) enrolling in *Academic Writing* and *Presentation Writing* in the spring, 2012 at a national institute of technology. They learned expressions useful in academic writing and submitted their first project assignments to the *Forum*. In the second project, they made presentations in English using PowerPoint. A questionnaire was given to participants to provide feedback on the projects in their final class. The results suggested that *Academic Writing* and *Presentation Writing* on the '*Forum*' were effective. Moreover, practicing oral presentations using PowerPoint was also effective. The highest four means were four items in the questionnaire: *Having the script checked in 'Forum' was effective* (85.6%), *Comments and revision given by the teacher were useful and helpful* (84.4%), *Academic writing practice was effective for me in improving my writing skills* (81.3%), and *Practicing taking the chair and asking questions was effective* (84.4%). This demonstrated the usefulness of e-assessment through peer assessment, using as formative purposes when students could communicate with each other and their instructor employing English grammar and conversation system. Moreover, the participants' favorable perception toward the system was the vital evidence to ensure the implication of formative e-assessment.

2.3.2 Students' Perspectives on FEA

When compared to research related to blended learning, there are not many studies focusing on the investigation of students' perspectives on formative e-assessment. In the USA, for instance, in 2005, Cassady and Gridley verified the benefits of continual formative assessment when students were likely to use it for test preparedness of summative assessment. The use of formative assessments as practice for tests increased students' positive experience since there was no test pressure and anxiety. Students also gained self-regulatory processes in the practice testing session, leading to higher performance, growth, and subsequent success, as noted by Bandura (1986) and Schutz and Davis (2000). Cassady and Gridley's participants were 176 undergraduate students who enrolled in an US Midwestern university in the fall of 1999 and fall of 2000. One group (n = 84) joined the in-class testing group in the fall of 1999. There were 74 females and 10 males in the group. The other group (n = 92) were assigned to be in the online testing group in the fall of 2000. There were 68 females and 24 males in this online testing group. Taking part in the study was voluntary; they used it to complete a course requirement on professional research. Performance indicators used in this study were three course examinations taken across the duration of the target academic semester. Tests 1 and 2 in the semester served as indications of prior performance in the design of this study because they were completed prior to the self-report instruments which were the focus of the analyses. Test 3 was the targeted test for the investigation given that it was the test for which online assessments were available and the test students completed shortly after completing the self-report instruments on test perceptions and preparation behaviors. Findings revealed that students found that the online formative assessment tools (practice quizzes/tests) were useful in preparation for the exam. This provided preliminary evidence that online practice tests could serve as an effective summative test preparation strategy.

In New Zealand, Gikandi (2011) studied how integration of formative assessment improved the course design to assist student engagement in the context of ICT–related professional development for teachers. Participants included postgraduate students who enrolled in an ICT-related online course within a New Zealand university. Based on the findings, integrating ongoing authentic assessment activities within teaching and learning processes engaged the students actively, and provided opportunities for ongoing monitoring and assessment. These elicited appropriate formative feedback to support and scaffold learning. The formative processes also fostered development of an effective online learning community. The interaction between formative processes and an interactive learning community promoted learners' engagement with critical learning experiences. The findings showed that integrating open-ended and flexible assessment activities that were relevant to real-world applications created a contextualized learning environment that facilitated learners' autonomy and active cognitive engagement. The teacher role as an expert facilitator was evident in the course through fostering shared purpose and understanding, scaffolding learning, detecting misconceptions and providing formative feedback. The course design revealed a collaborative learning pedagogical approach that was facilitated through asynchronous threaded discussions. This fostered dynamic interactivity, co-construction of knowledge through multiple viewpoints, peer formative feedback, and promoted shared understanding of expected outcomes as the individual students engaged with the assessment activities. Through these formative processes within the asynchronous discussion forums, the students were also able to share their ongoing work and/or ideas with peers and receive critical feedback that supported them to improve their work and close their performance gaps. The findings also revealed that effective integration of online formative assessment promoted students' engagement in self-monitoring and assessment, reflectivity and self-regulatory processes. The students progressively developed mutual responsibility and recognized themselves as source of learning support for their peers. This led to development of a supportive learning community within this online course which reciprocally nurtured the formative processes.

In Sweden, Saito and Hayakawa Thor (2012) examined how students' learning and language acquisition could be supported by making better use of the available features of using a web conferencing system for language lessons. The research was conducted between autumn 2011 and spring 2012. Data were collected through the questionnaire after each course. Participants were 70 first year undergraduate students who enrolled in *Japanese I – Oral proficiency* at Dalarna University. All of them were web-based students. They were divided into small groups with around 10 students in order to create a suitable size for language classes. Saito and Hayakawa observed how students interacted with each other and how they learned Japanese through "*personalization*" approach. Results showed that "*personalization*" was an effective teaching method for making students active in classes. In turn, when students knew each other, it became easier to create a *"supportive classroom environment"* where students could feel relaxed about expressing themselves. A positive aspect of the *"personalization"* approach in web-based language classes was that relationship building was easily enabled from very early on in the courses. By showing their own things and being shown interesting objects that classmates had, everyone was "personalized" in an easy-going and "natural" way. The experience might hardly happen if it was in campus-based courses. It was also found that *"personalization"* in web-based language classes was an effective teaching method for reducing students' nervousness and making language learning interactive. The analysis suggested that web-based education could be seen as a unique and effective educational platform in itself.

In their study Krumsvik and Ludvigsen (2012) aimed to identify factors that influenced the relationship between intended and subjective learning outcomes in plenary lectures, and how formative e-assessment might improve moments of contingency by increasing the consistency between intended and subjective learning outcomes. The results of this study showed that audience response systems (ARS) could enhance formative e-assessment in plenary lectures and reduced the difference between the intended learning outcome and the subjective learning outcome in such lectures with several hundred students. There were two implications of the study. First, a better understanding of similarities and dissimilarities in students' learning processes in plenary lectures and how these processes affected by formative e-assessment had implications for the planning and implementation of teaching and learning in higher education. Second, this had implications for how it could reduce the difference between the intended, subjective and objective learning outcomes in plenary lectures. The sample for this survey consisted of 243 first-year psychology students who attended the plenary lectures for this course and, therefore, had experienced the use of feedback clickers during the lectures. The response rate in the chosen sample was 93%. The data were analyzed using scales for *motivation, perceived learning outcome* and *feedback.* In the survey, the majority of the students reported that the use of feedback clickers had contributed to their learning. The students emphasized that feedback; motivation and learning were linked together. Feedback from the clickers drove their motivation to pay attention to lectures, to attend reading and adjust their own understanding. The majority of the students (92%) reported that the feedback clickers provided feedback on their own understanding of the subjects in the curriculum.

2.4 Summary

In this chapter, the definition of FEA is explained along with its benefits to EFL teaching and learning. Four theoretical and conceptional perspectives guiding and underpinning the study are also described. In the conclusion, relevant literatures regarding EFL students' various perspectives on FEA are reviewed.

Chapter 3: Methodology

This chapter explains the research methods employed to collect and analyze data for the study. It is categorized into five sections. The first section (3.1) is a brief description of the design of the study. The second section (3.2) is relevant to participants recruited for the study. The third section (3.3) is related to research instruments. The fourth section (3.4) is pertaining to the procedure for gathering the data. And the final section (3.5) is the chapter summary.

3.1 Research Design

This study was a quantitative approach, using a longitudinal survey research design, because it was utilized to gather information from a large group of participants over three years. Babbie (1998, as cited in Creswell, 2008) defined this research design as follows:

> *A longitudinal survey research design involves the survey procedure of collecting data about trends with the same population, changes in a cohort group or subpopulation, or changes in a panel group of the same individuals over time. Thus, in longitudinal designs, the participants may be different or the same people. A cohort study is a longitudinal survey design in which a researcher identifies a subpopulation based on some specific characteristic and then studies that subpopulation over time. All members of the cohort must have the common characteristic while the individuals studied each time might be different* (pp. 391-392).

The focus of using this research design was underpinned by the concept of gathering and analyzing the different participants who enrolled in the same English courses (i.e., *English III, English Structure, English for Sciences and Technology,* and *Reading*) taught by the researcher between 2009 and 2011 in order to determine their perspectives on the merging of formative e-assessment in their lecture classes. Details of these participants are described in the following section.

3.2 Participants

There were 875 students chosen as participants in the study. These were also the entire population of the research. In the subsections below, they were categorized into two main groups: undergraduates and postgraduates (see Table 1).

3.2.1 Undergraduates

There were 672 participants who were both first year, $n = 260$ (38.69%) and second year, $n = 412$ (61.31%) undergraduates in the study. Most of them were Thai nationals (98.07 %, n = 659) while the rest were Chinese (n = 11, 1.64 %) and two Cambodians (n = 2, 0.30 %). These participants enrolled in *English III* (n = 164), *English Structure* (n = 162) and *English for Sciences and Technology* (n = 348) at the Department of Western Language, Faculty of Humanities and Social Sciences in an eastern Thai University between 2009 and 2011. First-year undergraduate participants were from various fields of study: education, humanities and social sciences, logistics, nursing, medical science, engineering, marine trade, management and tourism, and sport science. First-year participants were those who attended *English III* and *English Structure*; most of them (over 90%) were females.

Second-year undergraduate participants studied *English for Sciences and Technology*. They were all full-time students. The majority were science students (biology, microbiology, physics, applied physics, food science, chemistry, biochemistry, mathematics, geography, and computer science). The rest were from the Faculty of Education who would be future science teachers. There were a few juniors and seniors. All undergraduate participants in this group were full-time students, aged between 18 and 22.

Table 1 Numbers of Participants

Year	Undergraduate	Postgraduate	Total
2009	158	81	239
2010	341	88	429
2011	173	34	207
Total	672	203	875

3.2.2 Postgraduates

The 203 postgraduate participants were master (n = 109) and doctoral students (n = 94) who attended a *Reading* course. The master's degree students were mostly Thai nationals (n = 101), including a Bhutani, two Chinese and five Vietnamese. They were from the Faculty of Nursing and the Faculty of Education. These participants were a combination of full-time and part-time students, aged in their thirties. In addition, PhD students were from different disciplines: research methodology and cognitive science, education, nursing, sport science, and Thai studies. Most of them were part-time Thai students, aged in their forties and fifties. There were a few full-time

PhD participants, aged in their thirties. These postgraduate participants did not pass the Burapha University English Proficiency Test (BUU Test), so their English was quite limited. They also had different English backgrounds; some had never exposed English for 20 years before returning to their class. Both undergraduate and postgraduate participants in this study were taught by the researcher.

Table 2 illustrated the number of undergraduates who participated in the study. In 2009, there were 158 undergraduate participants from nine faculties who studied *English III* (n = 98) and *English Structure* (n = 60). In 2010, the number of the participants increased to 341 consisting of those from six disciplines who enrolled in *English III* (n = 66), *English Structure* (n = 102) and *English for Sciences and Technology* (n = 173). In 2011, there were also 173 undergraduate participants from five different disciplines who attended the same course *English for Sciences and Technology*. Most of them were Thai nationals; there were also eleven Chinese and two Cambodians. All course stated here were their compulsory subjects.

Table 2 Numbers of Undergraduate Participants Based on Their Disciplines

Year	Undergraduate	*n*	Total
2009	Faculty of Abhaibhubejhr Thai Traditional Medicine	10	
	Faculty of Education	85	
	Faculty of Engineering	5	
	Faculty of Fine and Applied Arts	3	
	Faculty of Geoinformatics	9	
	Faculty of Humanities and Social Sciences	39	
	Faculty of Logistics	6	
	Faculty of Management and Tourism	4	
	Faculty of Political Science and Law	3	
			158
2010	Faculty of Education	105	
	Faculty of Geoinformatics	70	
	Faculty of Humanities and Social Sciences	66	
	Faculty of Informatics	36	
	Faculty of Political Science and Law	2	
	Faculty of Science	62	
			341
2011	Faculty of Education	1	
	Faculty of Informatics	69	
	Faculty of Management and Tourism	3	
	Faculty of Political Science and Law	1	
	Faculty of Science	99	
			173
	Total		**672**

Table 3 showed the number of postgraduates who participated in the study. In 2009, there were 81 postgraduate participants from two faculties who studied *Research Methodology on English* (*n* = 13) as part of their master's degree, and 68 students (27 master students and 41 doctoral students) studying *Reading*, their compulsory course. In 2010, the number of the participants increased to 88 consisting of those from three disciplines who all enrolled in *Reading*. In 2011, there were 34 postgraduate participants from three different disciplines who attended the same course. Most of the postgraduate participants were Thais; there were also five Vietnamese, two Chinese, and one Bhutani. They came from various fields of study: English for Communication, Thai Studies, Educational Administration, Nursing, Science, Research Methodology and Cognitive Science.

Table 3 Numbers of Postgraduate Participants Based on Their Disciplines

Year	Undergraduate	*n*	Total
2009	Faculty of Education	44	
	Faculty of Humanities and Social Sciences	27	
	College of Research Methodology and Cognitive Science	10	
			81
2010	College of Research Methodology and Cognitive Science	25	
	Faculty of Education	29	
	Faculty of Nursing	34	88
2011	Faculty of Education	22	
	Faculty of Nursing	11	
	Faculty of Science	1	34
	Total		**203**

3.3 Instrumentation

3.3.1 Undergraduate Questionnaires

The questionnaire was developed by the researcher. It was consisted of two main parts; Part I aimed for the participants' demographic information, and Part II contained 20-30 closed-ended questions asking the participant attitudes toward the implementation of the e-formative blended with their relevant courses. The questionnaire was a Likert rating scale, ranging from *Strongly Disagree (1) to Strongly Agree (4).*

Prior to the data collection, each questionnaire was trialled to verify its validity and reliability. The research tool applied in the study was a closed-ended questionnaire. It was designed as a four-point Likert-like rating scale. The middle point was excluded in order to enforce the participants to provide distinctive perspectives on FEA. It was constructed in relation to each course descriptions and course objectives to maintain its content validity. However, each questionnaire emphasized on a similar major purpose, that is, to enquire the participants' perspective on blending FEA with their face-to-face lecture classes, in accordance with four conceptual frameworks: the second language acquisition, language pedagogy, language assessment, and technology integration, which underpinned this study. Prior to data collection, each questionnaire was trialled to examine its reliability and validity. Cronbach's alpha of reliability obtained was .81 for *English III*, and *English Structure* and .93 for *English for Sciences and Technology* questionnaires. According to Dornyei (2003), these were considered as the appropriate reliabilities for the rating scale in language research. For its content validity, the "descriptive approach to content validity" (Brown, 2005, p. 177) was employed. In doing this, the researcher constructed each item in the questionnaire in reference to in-depth literature review regarding the four conceptual perspectives underpinned and guided this study to ensure that all items were developed and asked what was aimed in this study.

Table 4 A Sample of Closed-Ended Questionnaire

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. I like using FEA in this English course.				
2. I have computer problems when using FEA.				
3. I never use FEA because it is not very useful.				
4. I like the content of FEA.				
5. FEA helps improve my listening skills.				
6. FEA encourages me to practice listening more.				
7. I always do FEA by myself.				
8. I do not use FEA because it is too difficult.				
9. I do not like FEA. I do it because I need 5% of the course grade.				
10. Using FEA makes me feel more confident to do better in the listening quiz.				

3.3.2 Postgraduate Questionnaires

A research tool administered to postgraduate participants was also a closed-ended questionnaire. It was designed as a four-point Likert-like rating scale, ranging *from 1 (Strongly Disagree), 2 (Disagree), 3 (Agree) to 4 (Strongly Agree)*. The middle point was excluded in order to enforce the participants to provide distinctive perspectives on FEA. The questionnaire contained two parts: student information and 20-30 closed-ended statements. It was constructed in relation to each course descriptions and course objectives to maintain its content validity. However, each questionnaire emphasized on a similar major purpose, that is, to enquire the participants' perspective on blending FEA with their face-to-face lecture classes, in accordance with four conceptual frameworks: the second language acquisition, language pedagogy, language assessment, and technology integration, which underpinned this study. Prior to data collection, each questionnaire was trialled to examine its reliability. Cronbach's alpha of reliability obtained was .83 for *Research Methodology on English* and .86 for *Reading* questionnaires. According to Dornyei (2003), these were considered as the appropriate reliability for the rating scale in language research. For its content validity, the "descriptive approach to content validity" (Brown, 2005, p. 177) was employed. In doing this, the researcher constructed each item in the questionnaire in reference to in-depth literature review regarding the four conceptual perspectives underpinned and guided this study to ensure that all items were developed and asked what was aimed in this study.

3.4 Procedures

Data were collected through a questionnaire which was a four-point Likert rating scale, developed by the researcher. After the participants studied each chapter in a lecture class, they could log in to perform FEA via the e-learning program installed on the university website (http://ncourse.buu.ac.th/).To access FEA, each participant used their user name (usually their student ID number) and their password received from Burapha University Computer Center (BUCC). The participants could change their password later for their own security issues. They had to login in this manner any time they accessed FEA. In addition, for more security, FEA system had security code for each course in order to allow only members of each group to perform their specific FEA. The participants were trained how to operate FEA prior to its implementation.

FEA was constructed by the researcher in simply three formats of multiple-choice, fill-in, matching, and true/false questions. It was divided into short test sets with 15-20 questions each. In each test set, there was a timer to let students perform their tasks in limited time, usually between 10 to 15 minutes. The participants had to complete approximately 100 to 150 questions in their course. Once they completed each test set, they would get prompt score reporting pertaining to their performance. There was no correct answer provided in each test set of FEA; this was to encourage the participants to seek correct answers by themselves because they could repeat doing FEA as many times as they wanted. Moreover, they could contact their teacher through e-devices (e.g., web board, chat room, e-mail), or in their face-to-face lecture class if they needed help. It should be noted that FEA system would record every online activity once the participants logged in to the system. Doing FEA was voluntary; any participant could resign from the program any time they desired. However, if they completed FEA in their course, they would be awarded 5-15% of the course grade.

The first FEA was constructed and used in the first semester of the 2009 academic year between June and October, 2009 (see Figure 1). It was blended in *Reading* for postgraduate students. The second FEA was constructed and blended with *English III* during the second semester of the 2009 academic year (from October, 2009 to March, 2010).

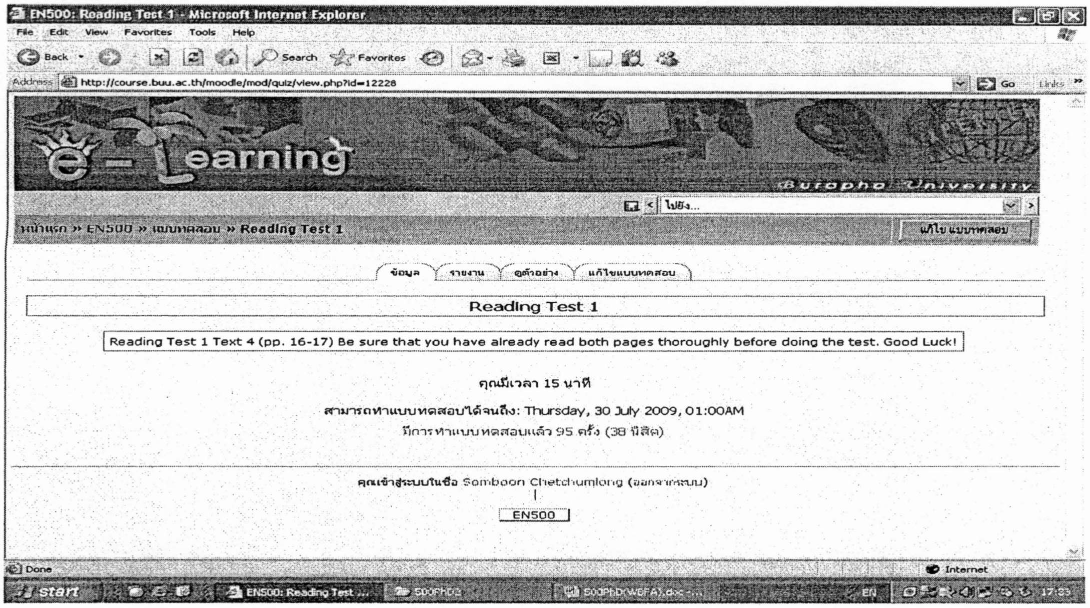


Figure 1 A Sample Page of FEA in 2009

The first listening FEA was used in the second semester of the 2009 academic year between October 2009 and March, 2010 (see Figure 2) for a group of 98 first-year undergraduate participants to perform in their required foundation course, *English III*. The undergraduate participants in this *English III* group were the largest class in the study; they came from ten different disciplines. In *English Structure* group, their first FEA was developed for a class of 60 first-year undergraduate participants, majoring in Teaching English from Faculty of Education. This was the first group who utilized a blended FEA in *English Structure* course, and it also included the first group of five undergraduate students from China in the study.

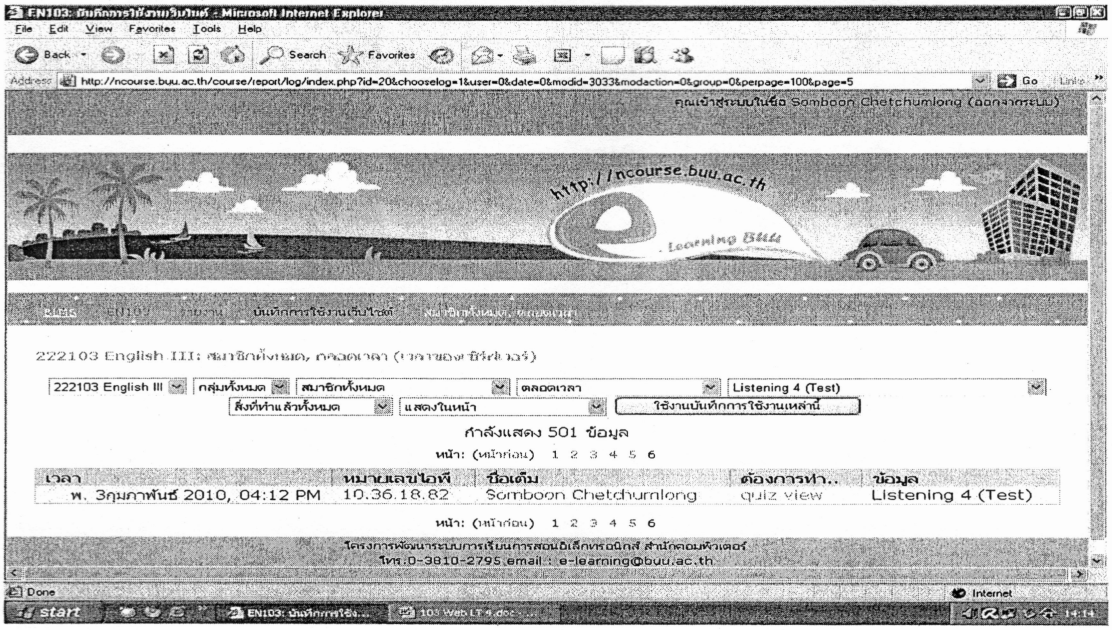


Figure 2 A Sample Page of FEA in 2010

Later, FEA was integrated in more EFL courses, for example, *English for Sciences and Technology*. Each class contained around 50 to 70 students. According to The Australian Universities Teaching Committee or AUTC (2002), a class with 50 or more students was defined as a large class in language instruction. FEA is still used by the researcher for the benefits of the students up to present (see Figure 3).

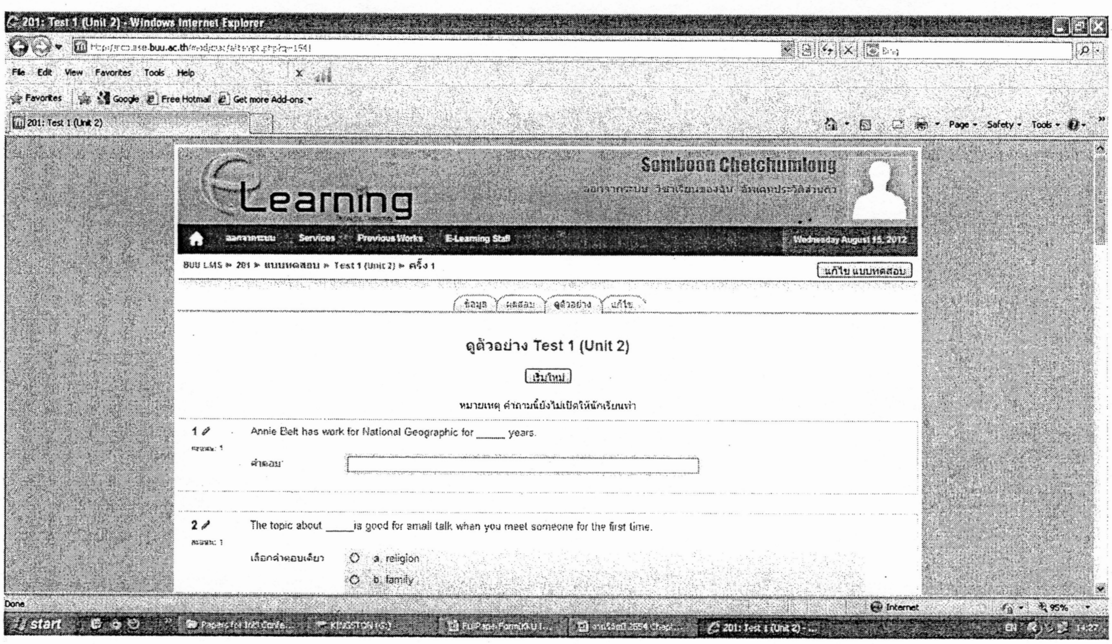


Figure 3 A Sample Page of FEA in 2011

The questionnaire was administered to the participants at the end of each EFL course by the researcher. The objectives of the research and how to respond to the questionnaire were explained to the participants. For ethical issues, an informed consent form was signed by each participant who was willing to provide their perspectives on the implementation of FEA blended in their course. This process took around 10 minutes. Most participants handed in the questionnaire on the data collection day; some returned it a week later.

The quantitative data gathered from the closed-ended questionnaires were categorized into two groups: undergraduates and postgraduates. Data from the two main groups were summarized in relation to their subgroups' data analysis. In each analysis, the data were categorized and coded in accordance with the four conceptual frameworks stated in Chapter 2. Descriptive statistics was applied to calculate the mean and the standard deviation of each closed-ended item. The results were presented in tables, figures and graphs.

3.5 Summary

This chapter provides details relevant to the research methodology. The recruitment of the participants, research tool, data collection and analysis are described. In addition, samples of the questionnaires and FEA are also illustrated.

Chapter 4 Results

This chapter reports the results of quantitative data analyses in accordance with the methodology explained in the previous chapter. The results are reported in three sections: *Undergraduate Participants' Perspectives on FEA* (4.1); *Postgraduate Participants' Perspectives on FEA* (4.2); and the chapter summary (4.3).

The first section presents the undergraduate students' perspectives on FEA in relation to SLA, LP, LA and TI respectively. This section is divided into three subsections: *English III Group* (4.1.1), *English Structure Group* (4.1.2), and *English for Sciences and Technology Group* (4.1.3). Meanwhile the second section is separated to two subsections: *Reading Group* (4.2.1) and *Research Methodology on English Group* (4.2.2).

4.1 Undergraduate Participants' Perspectives on FEA

This section is divided into three subsections in accordance with the three main groups of undergraduate participants taken in the study. The entire population of this group of participants was 672 undergraduate students who enrolled in *English III*, *English Structure* and *English for Sciences and Technology,* three EFL and ESP courses taught by the researcher. The first subsection (4.1.1) is pertaining to the results from data collected and analyzed from students in the *English III* group. The second subsection (4.1.2) reports the findings in relation to the *English Structure* group. Finally, the outcomes from the *English for Sciences and Technology* group (4.13) are described. In each subsection below, the report is explained to disclose undergraduate participants' perspectives on formative e-assessment (FEA) in relation to the four theoretical frameworks, second language acquisition (SLA), language pedagogy (LP), language assessment (LA) and technology integration (TI).

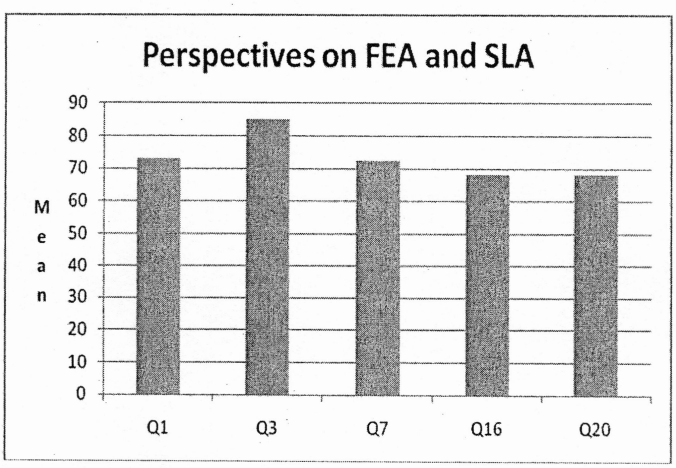
4.1.1 *English III* Group

The *English III* group was classified into two parts since the data were collected through two different questionnaires. The first part is concerning undergraduate participants who enrolled in the subject in the second semester of 2009 academic year (i.e., from October, 2009 to March, 2010). They were 98 full-time Thai students from ten different faculties. The biggest cohort (n = 39, 33 females and 6 males) were from the Faculty of Humanities and Social Sciences. The second discipline came from the Faculty of Education (n = 19, 14 females and 5 males). The rest were 9 students (7 females and 2 males) from the Faculty of Abhaibhubejhr Thai Traditional Medicine, another 9 (7 females and 2 males) from the Faculty of Geoinformatics, 6 students (2 females and 4 males) from the Faculty of Logistics, 5 students (3 females and 2 males) from the Faculty of Engineering, 4 (3 females and 1 male) from the Faculty of Management and Tourism, 3 male students from the Faculty of Fine and Applied Arts, 3 males from the Faculty of Political Science and Law, and 1 male student from the Faculty of Nursing. In sum, there were 69 females and 29 males, aged between 18 and 22.

The questionnaire was a four-point Likert rating scale, developed by the researcher. It consisted of two parts, demographic information and 20 closed-ended items. Prior to the data collection, the questionnaire was piloted; the Cronbach's alpha was .81, and the return rate was 89.80% (n = 88). Eight of the 20 items (2, 3, 8, 9, 12, 14, 16 and 20) were reversely coded to help ensure the variety of the questionnaire.

4.1.1.1 Perspectives on FEA and SLA

Figure 4 shows the perspectives of undergraduate participants, *English III* group, on FEA in relation to SLA. Over seventy percent (73.25%) of the participants found that using FEA as a comprehensible input was favorable; 85% said it was useful, and 72.5% stated that FEA encouraged them to learn and seek correct answers by themselves. Hence, 68.25% thought that FEA was as good as paper-based assessment. In addition, 68.25% of this group rated authentic materials linked to FEA positively. However, they preferred listening while watching videos to listening to uploaded audio files.

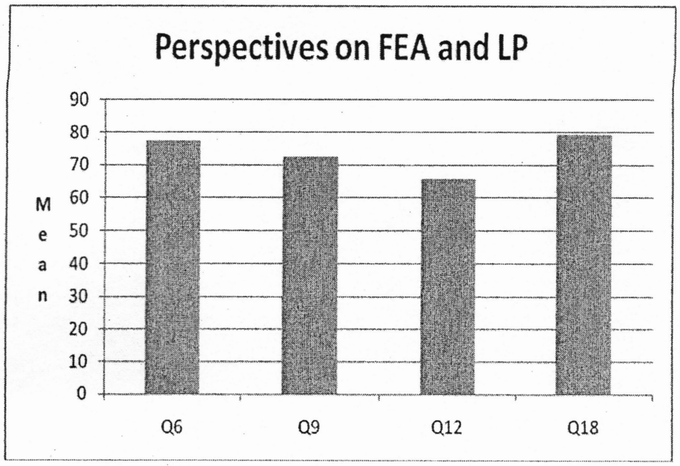


Q1 = Like using FEA in the course
Q3 = FEA is useful
Q7 = Doing FEA by myself
Q16 = FEA is as good as paper-based assessment
Q20 = Prefer listening while watching videos
FEA = Formative e-Assessment
SLA = Second Language Acquisition

Figure 4 Perspectives of *English III* 2009 Group on FEA and SLA

4.1.1.2 Perspectives on FEA and LP

With reference to the perspectives of these participants on LP (Figure 5) which supported that blending FEA in face-to-face teaching would create non-threatening situation where they could learn whenever they desired and could receive feedback when they wanted. Therefore, 77.5% of these participants accepted that FEA encouraged them to practice language skills (listening) more than before. Over seventy percent (72.5%) affirmed that they used FEA because they wanted to. According to their course syllabus, they would receive 5% of the course grade once they completed each FEA test set. But they would do FEA even they was not offered the score. Over sixty-five percent (65.25%) stated that doing FEA made them feel less anxious than doing paper-based assessment. Almost eighty percent (79.25%) were fond of the feedback provided on FEA.

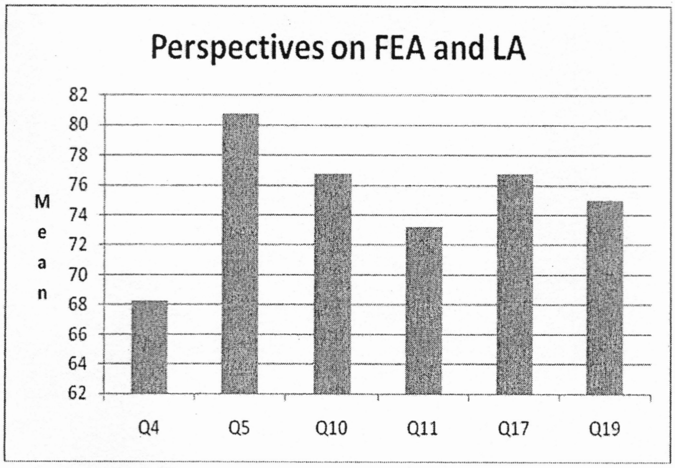


Q6 = FEA encourages me to practice listening more
Q9 = Do FEA without being awarded 5%of course grade
Q12 = Feel more relaxed than doing paper assessment
Q18 = Like feedback provided on FEA
FEA = Formative e-Assessment
LP = Language Pedagogy

Figure 5 Perspectives of *English III* 2009 Group on FEA and LP

4.1.1.3 Perspectives on FEA and LA

Regarding the group's perceptions toward FEA and LA as shown in Figure 6, 68.25% preferred the FEA content while 80.75% declared that FEA helped improve their listening skills. Over seventy-six percent (76.75%) accepted that using FEA made them feel more confident in preparation for the following summative assessment. Most participants (76.75%) revealed that FEA helped support self-assessment. In addition, 75% of the participants liked the multiple-choice questions provided in FEA.

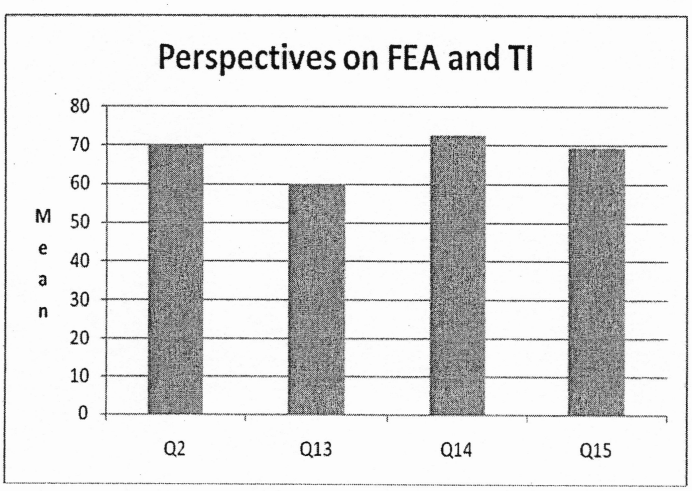


Q4 = Like FEA content
Q5 = FEA improves my listening skills
Q10 = FEA makes me more confident in summative exam
Q11 = FEA content relates to course syllabus
Q17 = FEA helps support self-assessment
Q19 = Like FEA question types
FEA = Formative e-Assessment
LA = Language Assessment

Figure 6 Perspectives of *English III* 2009 Group's on FEA and LA

4.1.1.4 Perspectives on FEA and TI

Figure 7 demonstrates the group's viewpoints related to FEA and TI. Seventy percent cited that they encountered no computer problems when they were using FEA in the University's e-learning program. Sixty percent liked e-devices, for instance, e-mail, web-board, chat room, provided in FEA system, and 72.5% claimed that they used those electronic devices. Meanwhile, 69.25% agreed that FEA should be blended with face-to-face teaching in their lecture class.



Q2 = No computer problems while using FEA
Q13 = Like e-contacts linked with FEA
Q14 = Use e-contacts linked with FEA
Q15 = FEA should be blended with the course
FEA = Formative e-Assessment
TI = Technology Integration

Figure 7 Perspectives of *English III* 2009 Group on FEA and TI

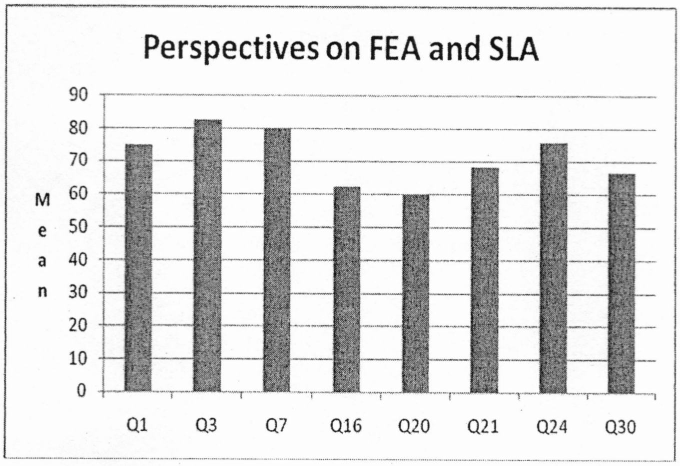
In conclusion, the highest mean related to this group's perspectives was on FEA in relation to second language acquisition theory, when 85% of the participants agreed that FEA, as a comprehensible input in the study, was useful for their course. However, the lowest mean was related to their perception on FEA as regards the concept of technology integration, when 60% responded that they favored e-contacts (e.g., e-mail, web-board) provided on FEA.

The second part of *English III* group related to a smaller number of students (n = 66) who enrolled in the similar course in the first semester of 2010 academic year (i.e., from June to October, 2010). These undergraduate participants were part-time students, 65 Thai nationals (47 females and 18 males) and one male Chinese student. To sum up, there were 47 females and 19 makes, aged between 18 and 22. All of them were English majors from the Faculty of Humanities and Social Sciences.

The questionnaire was designed as a four-point Likert rating scale, developed by the researcher. It also had two parts: demographic information and 30 closed-ended items with reference to the investigation of these participants' attitudes toward the implementation of FEA in their course. Prior to the data collection procedure, the questionnaire was piloted, and its Cronbach's alpha was .73. After the questionnaire was administered to the participants, the response rate was 69.70% (n = 46). Ten of the 30 closed-ended items (2, 3, 8, 12, 14, 16, 26, 27, 29 and 30) were reversely coded. This was to make the items in the questionnaire more assorted.

4.1.1.5 Perspectives on FEA and SLA

Figure 8 illustrates that 75% of the participants liked using FEA in their course, and 82.5 % accepted that FEA was useful for their study. Eighty percent confirmed that they performed FEA on their own pace. Over sixty percent (62.5%) of the participants suggested that FEA should be blended with face-to-face teaching in their lecture course. When asked about authentic materials uploaded in FEA, 60% stated that they preferred listening while watching videos to listening to audio files. However, almost seventy percent (68.25%) liked online information links provided on FEA; especially 75.75% of them preferred grammar links which they thought were related to what in their course syllabus. Additionally, 66.75% said they would use FEA in their next semester.

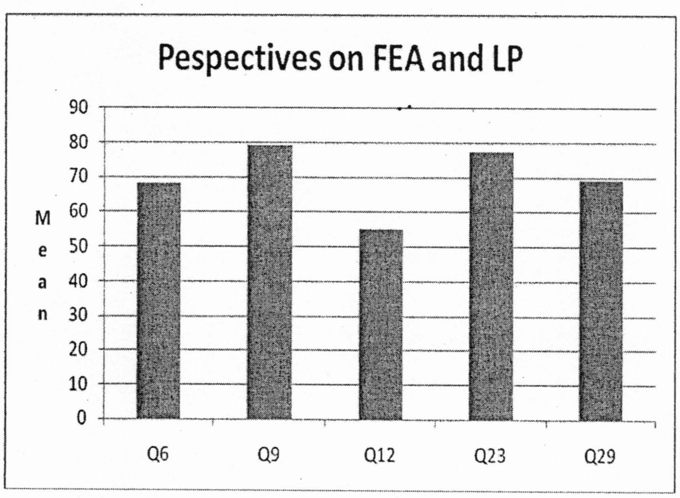


Q1 = Like using FEA in the course
Q3 = FEA is useful
Q7 = Do FEA by myself
Q16 = FEA should be blended in the course
Q20 = Prefer listening while watching video
Q21 = Like websites linked with FEA
Q24 = Grammar links related to course syllabus
Q30 = Want to use FEA in the next semester
FEA = Formative e-Assessment
SLA = Second Language Acquisition

Figure 8 Perspectives of *English III* 2010 Group on FEA and SLA

4.1.1.6 Perspectives on FEA and LP

In line with LP (see Figure 9), 68.25% of these participants affirmed that using FEA motivated them to practice language skills (listening) more than before. Almost eighty percent (79.25%) admitted that they did FEA because they needed 5-15% of the course grade offered for students to complete each FEA test set. Merely 55% agreed that while performing FEA, they felt more relaxed than doing paper-based assessment. Over seventy-five percent (77.5%) also said that they did reading FEA in order to receive extra 5% of the course grade. They stated that using FEA did not increase their study barrier.

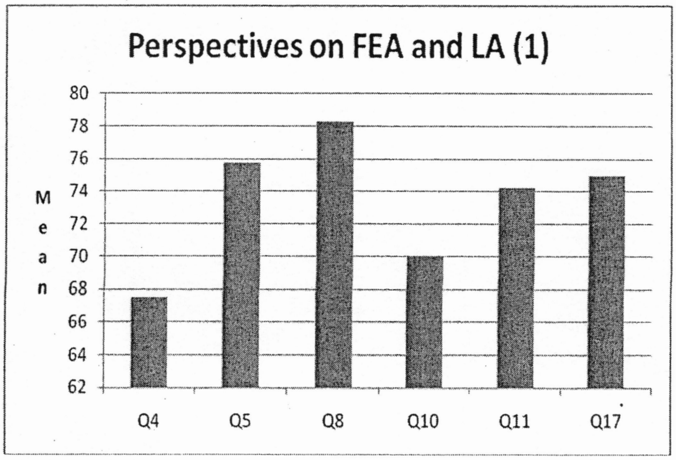


Q6 = FEA encourages me to practice listening more
Q9 = Do FEA because of 5-15% of the course grade
Q12 = Feel less anxious than using paper-based assessment
Q23 = Do reading FEA to get 10% of the course grade
Q29 = FEA does not increase my study loads 6
FEA = Formative e-Assessment
LP= Language Pedagogy

Figure 9 Perspectives of *English III* 2010 Group on FEA and LP

4.1.1.7 Perspectives on FEA and LA

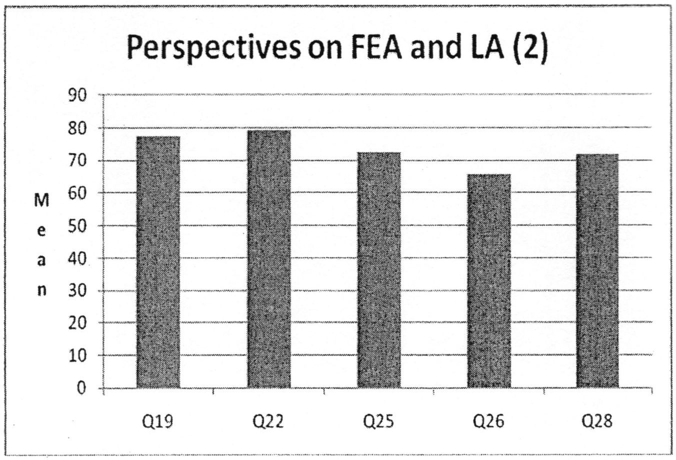
As regards the participants' standpoint toward FEA in relation to LA, as shown in Figure 10, 67.5% liked the content of listening FEA, while 75.75% of them admitted that FEA helped improve their listening skills. They (78.25%) said the online assessment was not too hard to understand, and using FEA made them feel more confident to do well in their summative exams. According to the content of FEA, 74.25% disclosed that it was relayed to what stated in the course syllabus. It was obvious for 75% of them agreed that FEA helped support self-assessment.



Q4 = Like content of listening FEA
Q5 = FEA improves my listening skills
Q8 = FEA is not too difficult
Q10 = Feel more confident in summative exams
Q11 = FEA content relates to course syllabus
Q17 = FEA helps support self-assessment
FEA = Formative e-Assessment
LA = Language Assessment

Figure 10 Perspectives of *English III* 2010 Group on FEA and LA (1)

Figure 11 also demonstrates this group's perceptions regarding FEA and LA. Over seventy-five (77.5%) of them were sure that they liked multiple-choice questions in FEA, while almost eighty percent (79.25%) were fond of reading FEA offered. That the content of listening FEA related to what mentioned in the course syllabus was confirmed by 72.5% of these participants. Meanwhile, 65.75% agreed that FEA did not increase their study loads. Finally 71.75% were satisfied with writing FEA provided.

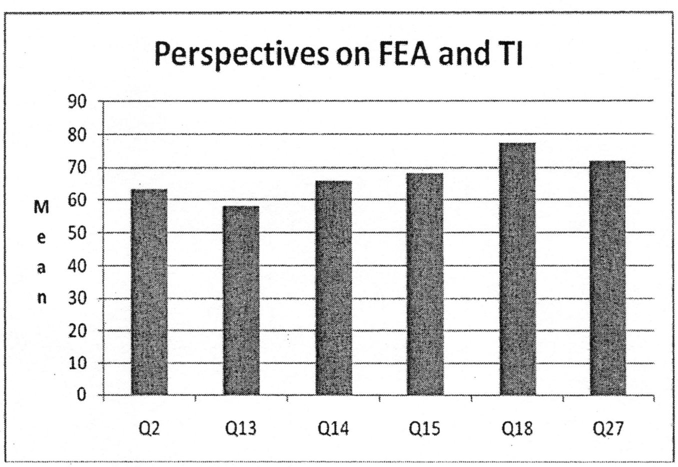


Q19 = Like question types in FEA
Q22 = Reading FEA is useful
Q25 = Uploaded listening FEA relate to course content
Q26 = FEA does not increase my study loads
Q28 = Like writing FEA
FEA = Formative e-Assessment
LA = Language Assessment

Figure 11 Perspectives of *English III* 2010 Group on FEA and LA (2)

4.1.1.8 Perspectives on FEA and TI

Figure 12 shows that 63.25% of the respondents had no computer problems while using FEA. Simply 58.25% liked e-contacts provided on FEA, and 65.75% of them used those electronic devices. That FEA should be blended with their lecture class was supported by 68.25% of them. There were 77.5% of the participants liked the prompt score reporting on FEA system. According to accessing the program, 71.75% said they had no login problems.



Q2 = No computer problems while using FEA
Q13 = Like e-contacts on FEA
Q14 = Use e-contacts provide on FEA
Q15 = FEA should be blended with this course
Q18 = Like prompt score reporting
Q27 = No login problems
FEA = Formative e-Assessment
TI = Technology Integration

Figure 12 Perspectives of *English III* 2010 Group on FEA and TI

In brief, the highest mean regarding this group's perspectives was on FEA in relation to second language acquisition theory as well, when 82.5% stated that FEA was the useful input offered to their course. The lowest mean was concerning FEA and language pedagogy theory, when simply 55% thought that they felt less anxious while doing FEA than doing paper-based assessment.

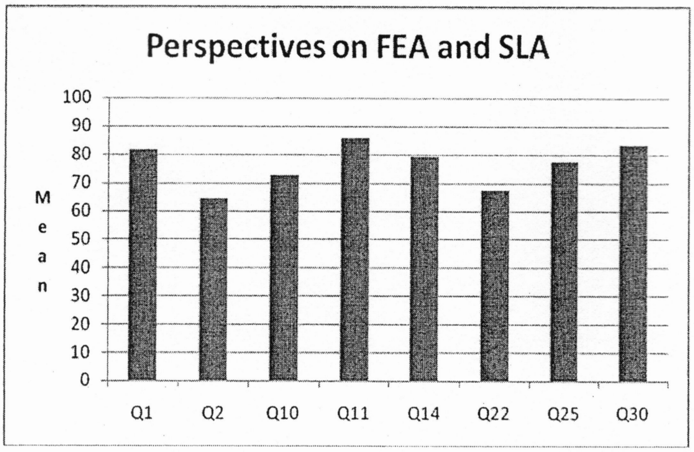
4.1.2 *English Structure* Group

There were three *English Structure* classes involved in this study. The first class enrolled in the course in the second semester of 2009 academic year (i.e., from October, 2009 to March 2010) consisting 60 undergraduate students (58 females and 2 males) from Faculty of Education. They were 53 Thai students with 5 students from the People's Republic of China. The second class contained 50 Thai students (42 females and 8 males). Most of them (n = 49) were from Faculty of Education, majoring in Teaching English. There was one male student from Faculty of Allied Health Sciences. The last class enrolled in the course in the same semester as the second class did. This class had 52 students (42 females and 10 males), also Teaching English majors; 46 were Thai nationals and the rest were Chinese students. In summary, there were 151 Thais and 11 Chinese in the *English Structure* group; all were first-year undergraduates, 152 females and 10 males, aged between 18 and 20.

The questionnaire employed to collect data in the three classes was identical, containing two parts: demographic information and 30-closed-ended items. It was piloted before data collection, and the Cronbach's alpha was .81, and the return rate was 95.1% (n = 97). Fourteen from 30 items in the questionnaire (3, 4, 12, 13, 14, 18, 20, 22, 25, 26, 27, 28, 29 and 30) were reversely coded in order to make the items in the research tool more diverse.

4.1.2.1 Perspectives on FEA and SLA

In Figure 13, the undergraduate participants (81.75%) in this group indicates that they liked websites which were linked through FEA system, while 65.25% of them preferred doing online writing assignment in FEA. Peer assessment was introduced to the course and 72.5% of these participants liked it. Most of them (85.75%) said that they always did FEA by themselves, and 79.25% reaffirmed that FEA was necessary for their course. Meanwhile 67.5% of them accepted that online assignments were as appropriate as the paper-based ones. Even though 67.5% of the participants did not own personal computers, they (83.25%) insisted that they would continue using FEA in their study.

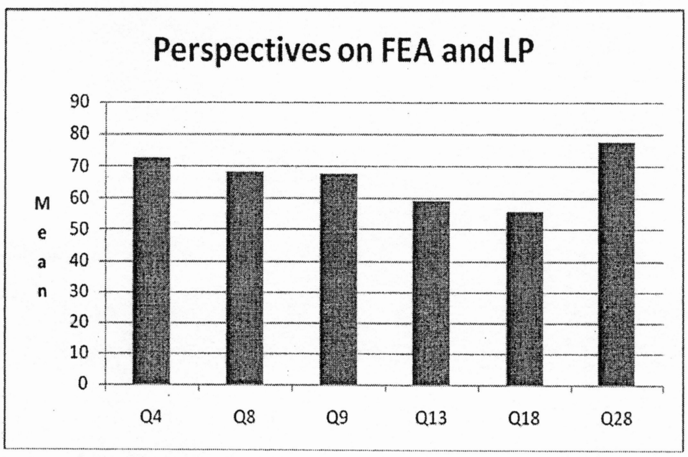


Q1 = Like websites linked with this course
Q2 = Like online writing assignments
Q10 = Like to comment classmates' work online
Q11 = Always do FEA by myself
Q14 = Online assignments are necessary for this course
Q22 = Online assignments are as good as paper-based ones
Q25 = FEA is convenient even I do not own a PC
Q30 = I continue using FEA in my study
FEA = Formative e-Assessment
SLA = Second Language Acquisition

Figure 13 Perspectives of *English Structure* Group on FEA and SLA

4.1.2.2 Perspectives on FEA and LP

Figure 14 explains how this group viewed the combination of FEA related to language pedagogy in their lecture class. Over seventy percent (72.5%) of these participants stated that FEA motivated them to study; they did not think it was boring since 67.5% thought FEA encouraged them to pay more attention in their class, and 68.25% of them liked online games linked to FEA system. They acknowledged that they (77.5%) did not like studying English grammar through a lecture method. Over fifty percent (55.75%) felt they were more relaxed when doing FEA and paper-based ones. Almost sixty percent (59.25%) insisted that they would perform FEA although they would not get any extra scores related to their course grades.

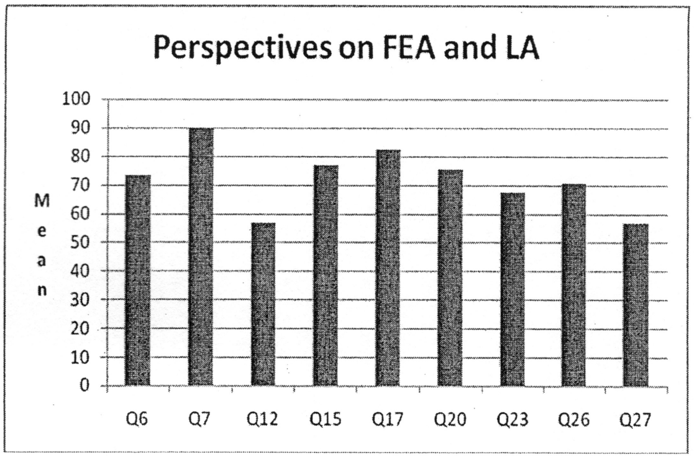


Q4 = FEA is motivating
Q8 = Like games linked on FEA
Q9 = FEA encourages more attention in my study
Q13 = I do FEA even I am not awarded any scores
Q18 = Feel more relaxed than doing paper assessment
Q28 = Do not like a lecture method
FEA = Formative e-Assessment
LP = Language Pedagogy

Figure 14 Perspectives of *English Structure* Group on FEA and LP

4.1.2.3 Perspectives on FEA and LA

This group's perspectives on FEA related to language assessment was illustrated in Figure 15. Ninety percent claimed that FEA improved their writing skills and 82.5% admitted that writing FEA increased their knowledge in English grammar, while 79.25% confirmed that FEA helped support self-assessment. With reference to another benefit of using FEA, 76.75% of the participants ensured that FEA made them do better in their summative assessment. Regarding FEA content, 73.25% of the group liked it and 70.75% also liked their peer assessment on FEA system; 56.75% said FEA was not too difficult for them. More than half of the participants (56.75%) suggested that their English grammar should be evaluated through writing instead of only via the multiple-choice questions, while 55% though they did not think that FEA was their study barrier.

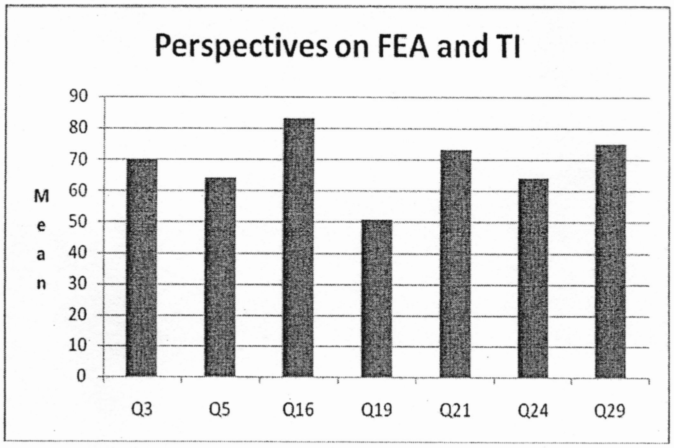


Q6 = Like FEA content
Q7 = FEA improves my writing skills
Q12 = FEA is not too difficult
Q15 = Doing FEA helps me perform better in summative exam
Q17 = Writing FEA improve my English grammar
Q20 = There are not too many online assessments
Q23 = FEA helps support self-assessment
Q26 = I like peer assessment
Q27 = English grammar should be tested through writing not MCQs
FEA = Formative e-Assessment
LA = Language Assessment

Figure 15 Perspectives of *English Structure* Group on FEA and LA

4.1.2.4 Perspectives on FEA and TI

Figure 16 demonstrates the participants' standpoints over using FEA and technology integration. More than eighty percent (83.25%) admitted that using FEA could reduce their spelling mistakes and it was revealed that 75% of this group insisted that they honestly did FEA by themselves. In their responses, 73.25% thought that FEA should be integrated in their course, while 70% of these participants did not experience computer problems when they logged in to use FEA. Hence, 64.25% stated that they had no problems when submitting their online assignments. When they wanted to contact their teacher online, 64.25% used e-mail, while simply 50.75% said they liked e-contacts provided on FEA system.



Q3 = No computer problems while using FEA
Q16 = Using computers reduces spelling mistakes
Q21 = It is good idea to mix FEA with face-to-face teaching
Q29 = I never cheat when submitting online assignments
FEA = Formative e-Assessment
Q5 = Submitting online assignments is easy
Q19 = Like e-contacts on FEA
Q24 = Like using email to contact my teacher
TI = Technology Integration

Figure 16 Perspectives of *English Structure* Group on FEA and TI

In a word, the undergraduate participants in *English Structure* group responded most positively on using FEA in relation to language assessment when 90% of them answered in the questionnaire that FEA helped improve their writing skills. Their lowest (50.75%) mean went to their preference of e-contacts offered on FEA which was concerning to FEA and technology integration.

In the next subsection, findings with respect to the *English for Sciences and Technology* group's perceptions toward FEA are reported.

4.1.3 *English for Sciences and Technology* Group

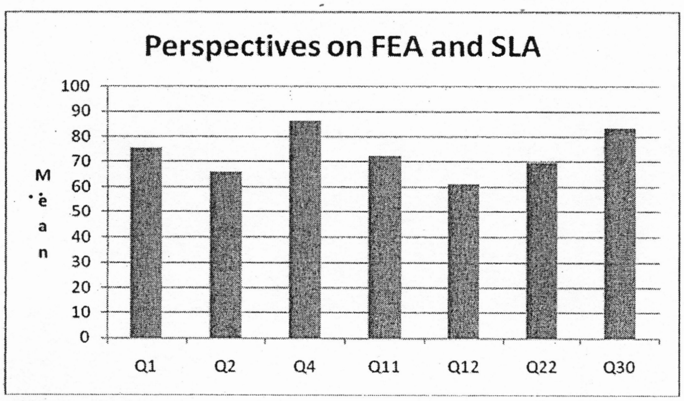
This subsection reports results from the undergraduate participants *English for Sciences and Technology* (n = 346) group who enrolled in this English for Specific Purposes (ESP) course between the first semester of 2010 (i.e., from June, 2010 to October, 2010) and the first semester of 2011 academic years (i.e., from June to October, 2011). The majority of the group (n = 344) were Thai nationals; the rest were two Cambodian students. These second-year students were from three main faculties: Faculty of Science (n = 166), Faculty of Informatics (n = 105), and Faculty of Geoinformatics (n = 70). The last five were from Faculty Management and Tourism (n

= 3), Faculty of Education (n = 1), and Faculty of Political Science and Law (n = 1). Among the 346 participants, there were 240 females and 106 males, aged between 19 and 20; 272 of them were full-time students, while 74 were part-time students.

The questionnaire used to collect the data was a four-point Likert rating scale, containing two parts: demographic information and 30 closed-ended items asking their perspectives on using FEA which was underpinned by second language acquisition theory, language pedagogy theory, language assessment theory, and the conceptual framework of technology integration. The questionnaire was piloted prior to the data collection, and the Cronbach's alpha was .93. It was administered to the participants at the end of their course by the researcher, and the return rate was rate = 62.43% (n = 216).

4.1.3.1 Perspectives on FEA and SLA

In Figure 17, responses from the questionnaire show that 86.5% of these participants were fond of using FEA and almost seventy percent (69.75%) stated that FEA was appropriate for them to use in their course. In addition, 83.75% found blending e-learning with the course was useful. Most of them (75.5%) liked using listening FEA, while 72.5% thought FEA was not too difficult for them to understand. They (66%) responded that they liked writing FEA, and 61.25% of these participants thought FEA was as good as paper-based assessment.

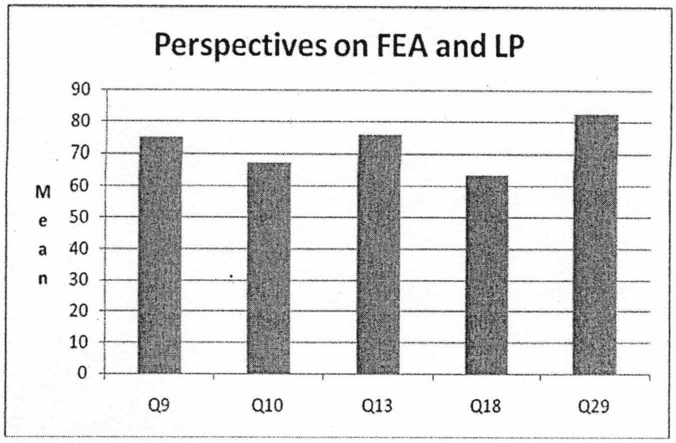


Q1 = Like listening FEA
Q2 = Like writing FEA
Q4 = Prefer using FEA in the course
Q11 = FEA is comprehensible
Q12 = FEA is as good as paper-based one
Q22 = FEA is useful for studying the course
Q30 = E-learning useful for this course
FEA = Formative e-Assessment
SLA = Second Language Acquisition

Figure 17 Perspectives of *English for Sciences and Technology* on FEA and SLA

4.1.3.2 Perspectives on FEA and LP

With regards to the participants' perspectives on feedback provided on FEA (see Figure 18), they suggested that they (82.5%) needed more feedback than correct answers. Meanwhile, 76% admitted that they perform FEA because they wanted to get 5% of the course grade, and 75% of them found that using FEA encouraged them to practice language skills (listening) more. Over sixty-seven percent (67.25%) also stated that FEA made them practice writing skills more than before. Additionally, 63.75% responded that they felt less anxious when they performed FEA.

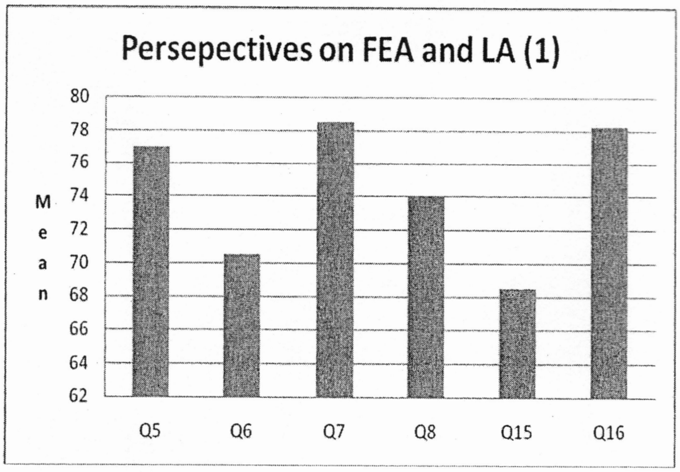


Q9 = FEA encourage to practice listening more
Q10 = FEA encourage to practice writing more
Q13 = Doing FEA even no 5% of the course grade
Q18 = Feel less anxious than doing paper-based assessment
Q29 = Need more feedback than correct answers
FEA = Formative e-Assessment
LP = Language Pedagogy

Figure 18 Perspectives of *English for Sciences and Technology* Group on FEA and LP

4.1.3.3 Perspectives on FEA and LA

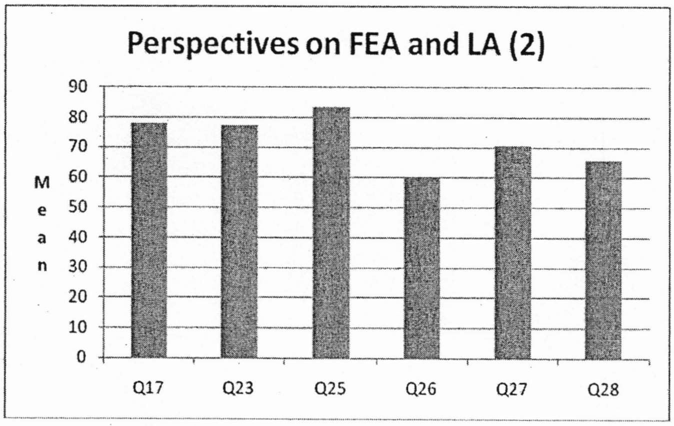
Figure 19 shows that 78.5% of these participants accepted that using FEA improved their language skills (listening), while, 78.25% confirmed that the content of FEA related to what was stated in the course syllabus and 77% liked the content of listening FEA. Regarding other language skills, 74% of this group said that their writing skills improved after using FEA, and 70.5% liked the content of writing FEA.



Q5= Like content of listening FEA
Q6 = Like content of writing FEA
Q7 = FEA improves listening skills
Q8 = FEA improves writing skills
Q15 = 68.5 FEA helps perform better in listening quizzes
Q16 = Content of listening FEA relates to course syllabus
FEA = Formative e-Assessment
LA = Language Assessment

Figure 19 Perspectives of *English for Sciences and Technology* Group on FEA and LA (1)

According to the results shown in Figure 20, 83.5% of the participants favored multiple-choice questions in FEA while 60% liked fill-in questions, and 78% found that FEA content related to what was in the course syllabus. Besides, 77.5% of this group confirmed that FEA helped support self-assessment. With respect to FEA materials uploaded, 70.75% preferred listening while watching videos to simply listening to audio files. For writing skills, 65.75% of the participants wanted to practice writing through paragraph writing rather than unscrambling sentences provided on FEA.

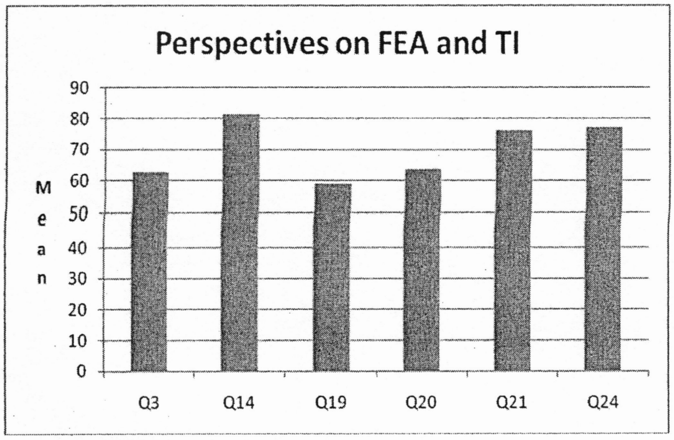


Q17 = Content of writing FEA relates to course syllabus
Q23 = FEA helps support self-assessment
Q25 = Like MCQs on FEA
Q26 = Like fill-in questions on FEA
Q27 = Prefer watching videos to listening files on FEA
Q28= Prefer paragraph writing to unscrambling sentences on FEA
FEA = Formative e-Assessment
LA = Language Assessment

Figure 20 Perspectives of *English for Sciences and Technology* Group on FEA and LA (2)

4.1.1.4 Perspectives on FEA and TI

With regard to these undergraduate participants' perspectives on FEA as displayed in Figure 21, 81.5% responded that this technology integration was necessary for the course as 77% liked the prompt score reporting on FEA. Hence, 76.25% thought FEA should be merged with face-to-face teaching in their course. More than sixty percent (62.75%) reported that they had no computer problems while using FEA. When they wanted to contact their teacher online, 63.75% used e-contacs provided on FEA system; however, 59% liked those electronic devices.



Q3 = No computer problems while using FEA
Q14 = FEA is necessary for this course
Q19 = Like e-contacts on FEA
Q20 = Use e-contacts on FEA
Q21 = FEA should be blended with face-to-face teaching
Q24 = Like prompt score reporting
FEA = Formative e-Assessment
TI = Technology Integration

Figure 21 Perspectives of *English for Sciences and Technology* Group on FEA and TI

In brief, the undergraduate participants in *English for Sciences and Technology* group responded most positively on using FEA in relation to second language acquisition theory when 86.5% of them answered in the questionnaire that they enjoy using FEA, as a comprehensible input, in their course. Their lowest mean was about FEA and language assessment theory when 60% of this group reported that they did not favor the fill-in questions in FEA.

The following section reports results regarding postgraduate participants' perceptions on FEA in relation to second language acquisition, language pedagogy, language assessment, and technology integration, respectively.

4.2 Postgraduate Participants' Perspectives on FEA

This section consists of two subsections: *Reading* Group (4.2.1) and *Research Methodology on English* Group (4.2.2). These participants were both master's degree students and PhD students from various fields of study. They all enrolled in *Reading*, a required foundation course for postgraduates and *Research Methodology on English*, a required course for master students majoring in English for Communication. Both courses were taught by the researcher.

4.2.1 *Reading* Group

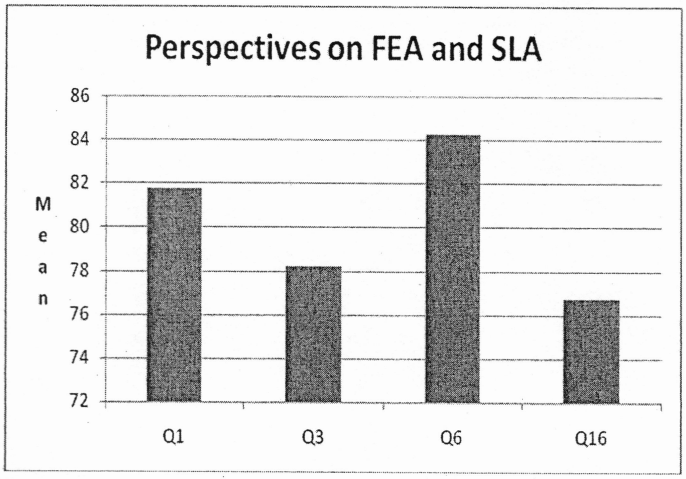
This subsection is categorized into two parts because the participants responded to different form of questionnaires. The first part reports the results from the postgraduates (n = 68) who enrolled in the course between the first and second semesters of 2009 academic year (i.e., from June, 2009 to March, 2010). There were 27 master and 41 doctoral students; 66 were Thai nationals and two were Chinese students. There were 26 master students from Faculty of Education and one from Faculty of Humanities and Social Sciences, and there were 18 PhD students from Faculty of Education, 13 from Faculty of Humanities and Social Sciences, and 10 from College of Research Methodology and Cognitive Science. Most of master participants were in their thirties, while most of the doctoral participants were in their forties, Among the 68 participants, there were 45 females and 23 males; 42 of them were full-time students, while 26 were part-time students.

The questionnaire used to collect the data was a four-point Likert rating scale, containing two parts: demographic information and 20 closed-ended items asking their perspectives on using FEA which was underpinned by second language acquisition theory, language pedagogy theory, language assessment theory, and the conceptual framework of technology integration. The questionnaire was piloted prior to the data collection, and the Cronbach's alpha was .89. It was administered to the participants at the end of their course by the researcher, and the response rate was 61.786% (n = 46). To make items in the questionnaire mire assorted, five from 20 items (2, 12, 16, 26 and 28) were reversely coded.

4.2.1.1 Perspectives on FEA and SLA

Figure 22 shows the group's viewpoints toward FEA in relation to second language acquisition theory; 84.25% stated that FEA, as a comprehensible input, encouraged them to study by themselves. This was confirmed by 81.75% who responded that they enjoyed using FEA, and

78.25% of the group thought that they liked having FEA in their reading course. In addition, 76.75% of the group admitted that FEA was as good as paper-based assessment.

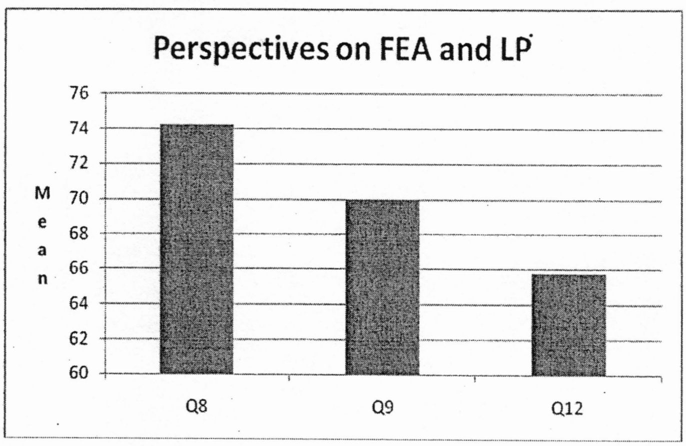


Q1 = Enjoy using FEA
Q3 = Like using FEA in reading course
Q6 = FEA encourage self-study
Q16 = FEA is as appropriate as paper-based one
FEA = Formative e-Assessment
SLA = Second Language Acquisition

Figure 22 Perspectives of *Reading* 2009 Group on FEA and SLA

4.2.1.2 Perspectives on FEA and LP

With regard to the group's perspectives in line with the language pedagogy theory (as shown in Figure 23), 74.25% of these participants accepted FEA was a good motivation since they needed more FEA test sets than given. Furthermore, 70% of the group reported that they repeated doing FEA until they got what they wanted, and 65.75% stated that they felt less anxious when doing FEA compared with doing pencil-and-paper assessment.

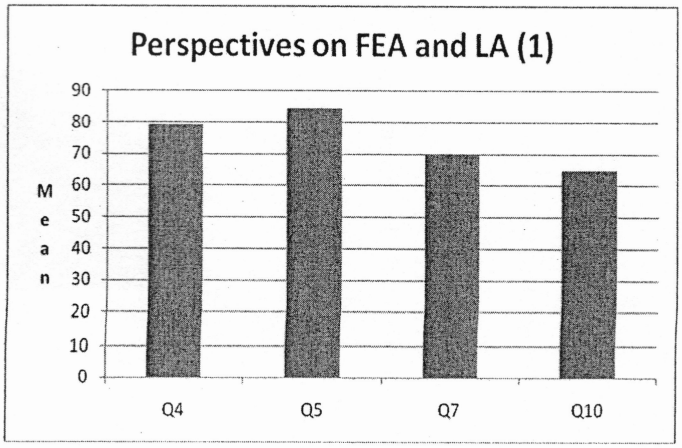


Q8 = Need to do FEA more often
Q9 = Repeat doing FEA till getting good scores
Q12 = Feel less anxious than doing paper assessment
FEA = Formative e-Assessment
LP = Language Pedagogy

Figure 23 Perspectives of *Reading* 2009 Group on FEA and LP

4.2.1.3 Perspectives on FEA and LA

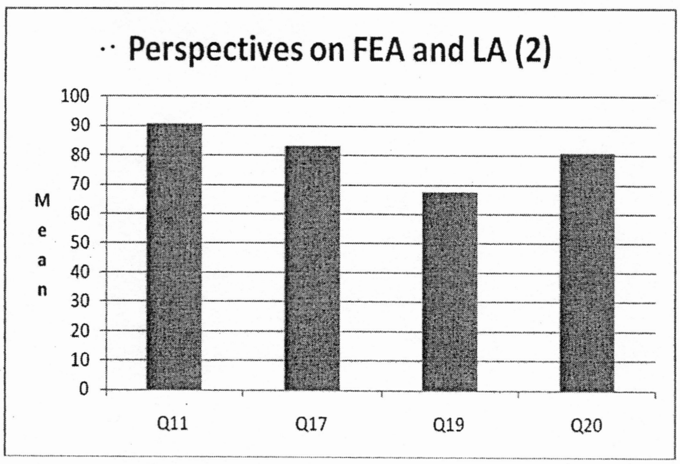
Figure 24 demonstrates what the participants reacted respecting FEA guided by the language pedagogy theory; 84.25% of the entire group answered that FEA helped improve their reading skills. This was reaffirmed by 79.25% of the group responding that they liked the content of FEA. At the same time, 70% thought that FEA helped improve their course grade, and 65% added that FEA made them feel more confident when doing their summative assessment.



Q4 = Like the content of FEA
Q5 = FEA helps improve reading skills
Q7 = FEA helps improve course grade
Q10 = FEA increases confidence for summative assessment
FEA = Formative e-Assessment
LA = Language Assessment

Figure Perspectives of 24 *Reading* 2009 Group on FEA and LA (1)

In Figure 25, 90.75% of these participants were certain that FEA content related to what was in their course syllabus, while 83.25% thought that FEA helped support self-assessment. Concerning the question types on FEA, 67.5% of the participants were satisfied with multiple-choice questions provided, while 80.75% requested for adding other question types on FEA.

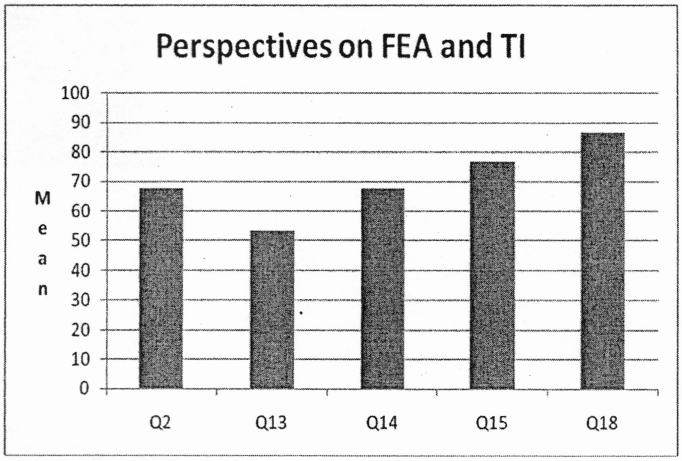


Q11 = FEA content relates to course syllabus
Q17 = FEA helps support self-assessment
Q19 = Like question types on FEA 67.5
Q20 = Prefer other question types on FEA 80.75
FEA = Formative e-Assessment
LA = Language Assessment

Figure 25 Perspectives of *Reading* 2009 Group on FEA and LA (2)

4.2.1.4 Perspectives on FEA and TI

Pertaining to the participants' perceptions on FEA underpinned by the conceptual perspective of blending technology to face-to-face teaching (see Figure 26), one benefit of FEA was that it was machined marked; therefore, 86.75of this group favored its prompt score reporting, and 76.75% suggested that FEA should be merged with their lecture class. Concerning technological problems, 65.5% said they had no problems at all and used e-devices, for example, e-mail when they wanted to contact their teacher online. However, simply 53.23% stated that they liked those electronic tools.



Q2 = No computer problems while using FEA
Q13 = Like e-contacts on FEA
Q14 = Use e-contacts on FEA
Q15 = FEA should be blended with the course
Q18 = Like prompt score reporting on FEA
FEA = Formative e-Assessment
TI = Technology Integration

Figure 26 Perspectives of *Reading* 2009 Group on FEA and TI

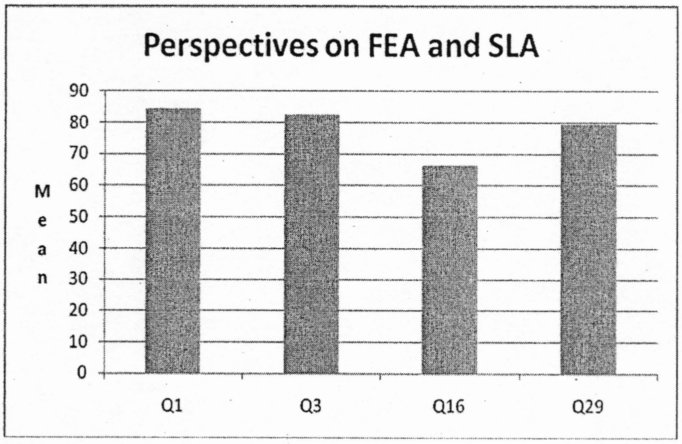
In a few words, the first part of postgraduate participants in *Reading* group responded most positively on using FEA in relation to language assessment when 90.75% of them answered in the questionnaire that they agreed that the FEA content was certainly related to their course syllabus. Another highly positive rate was pertaining to the benefit of technology integration when 86.75% of these postgraduates were satisfied with the prompt score reporting on FEA. However, the lowest mean involved their limited preference e-contacts provided on FEA system.

The second part of the *Reading* group involves a larger number of both Thai and international students (n = 122) from Faculty of Education, Faculty of Humanities and Social Sciences, Faculty of Nursing, Faculty of Science, and College of Research Methodology and Cognitive Science. They were 69 master students and 53 PhD students (24 males, 98 females). Most of the master students were in their thirties, and most of the doctoral students were in their forties. Most of them were Thai nationals (n = 116) and 6 international master students (5 Vietnamese and 1 Bhutani) from Faculty of Nursing. Fifty-nine of this group (48.36%) were full-time students, while 63 (51.64%) were part-time students. These participants enrolled in this postgraduate required course taught by the researcher between the first semester of 2010 (i.e., from June to October, 2010) and the first semester of 2011 (i.e., from June to October, 2011) academic years.

The research tool was a questionnaire, a four-point Likert rating scale, developed by the researcher, containing two parts: participants' demographic information and 30 closed-ended items asking about their perspectives toward FEA guided and underpinned by the second language acquisition theory, language pedagogy theory, language assessment theory, and a concept of technology integration. The questionnaire was piloted prior to the data collection, and its Cronbach's alpha was .83. At the end of the course, this questionnaire was administered to the participants by the researcher, and the return rate was 71.31% (n = 87). Seven from 30 items (2, 12, 16, 21, 26. 28 and 30) were reversely coded in order to ensure great variety of the questionnaire items.

4.2.1.5 Perspectives on FEA and SLA

Figure 27 illustrates the findings involving the group's standpoint on FEA and SLA. Most of the participants (84.5%) enjoyed using FEA which was designed as the comprehensible input, and 82.5% of the group favored having FEA blended with the lecture reading course. Almost eighty percent (79.5%) insisted that they always performed FEA on their own pace and 66.25% agreed that FEA should be combined with the face-to-face teaching in their course.

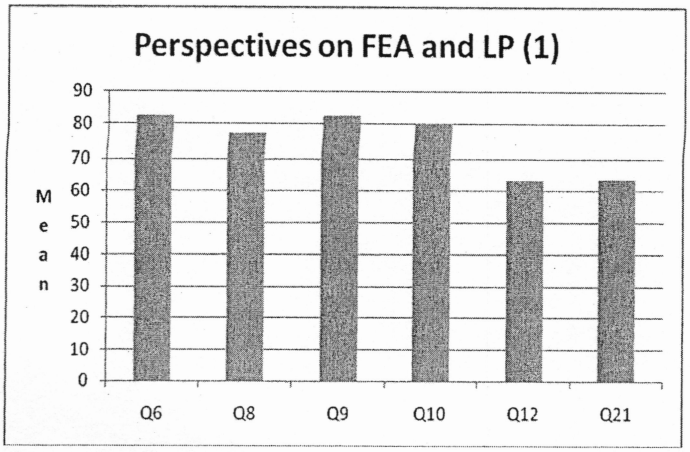


Q1 = Enjoy using FEA
Q3 = Like using FEA in reading course
Q16 = FEA should be blended in the course
Q29 = Always do FEA by myself
FEA = Formative e-Assessment
SLA = Second Language Acquisition

Figure 27 Perspectives of *Reading* 2010-2011Groups on FEA and SLA

4.2.1.6 Perspectives on FEA and LP

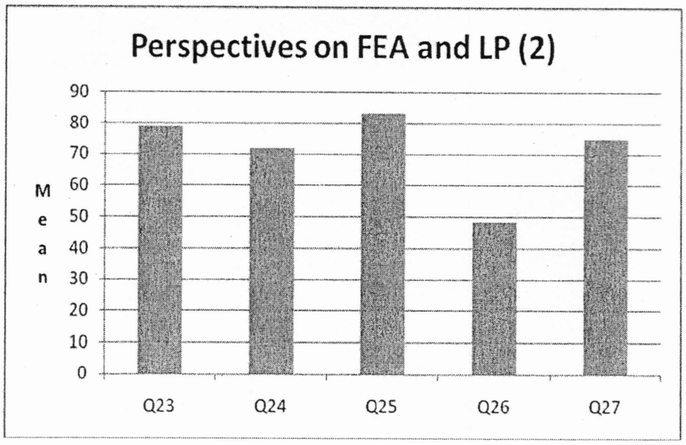
In accordance with the group's viewpoints on FEA and language pedagogy (as shown in Figure 28), 82.5% of these postgraduate participants expressed that FEA was a good motivation; it stimulated them to seek correct answers by themselves; hence, they repeated doing FEA till they got what they wanted. As a result, 80% ensured that FEA made them feel more confident in their final examination, and 77% wanted to do more FEA in their reading course, and 63.75% of them did not think that FEA was threatening or increased their study loads. It might be the reason that 63.25% responded that they felt more relaxed when doing FEA than doing paper-based assessment.



Q6 = FEA encourages me to learn by myself
Q8 = Like to do more FEA in the course
Q9 = Repeat doing FEA till getting good scores
Q10 = FEA makes me feel more confident in final exam
Q12 = Feel less anxious than doing paper-based one
Q21 = FEA does not increase my study loads
FEA = Formative e-Assessment
LP = Language Pedagogy

Figure 28 Perspectives of *Reading* 2010-2011Groups on FEA and LP (1)

Figure 29 also reveals results in relation to FEA and LP. According to the feedback provided on FEA, 83.25% reported that they needed more feedback because they wanted more explanations why their answers were incorrect, while 78.75% asked for more test sets of FEA in the course. Corresponding to the time limit provided for doing each test set on FEA, 75% stated that it was suitable. It should be noted that merely 48.28% requested for providing correct answers on FEA.

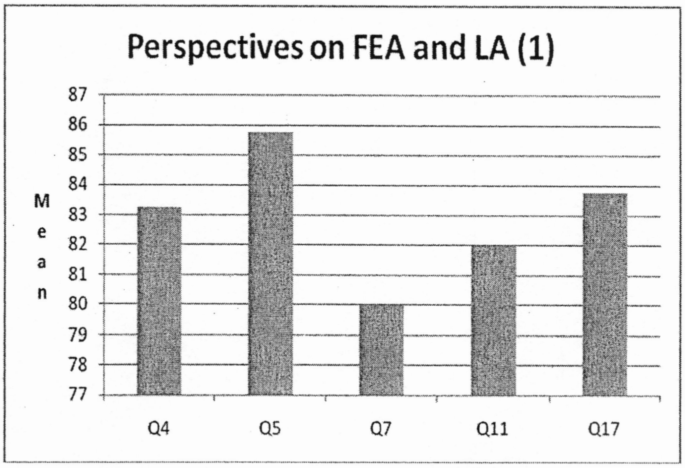


Q23 = It should be more FEA in the course
Q24 = Do FEA because of 10% of the course grade
Q25 = Need more explanation on my incorrect answers
Q26 = All correct answers should be given on FEA
Q27 = Time provided for doing FEA is appropriate
FEA = Formative e-Assessment
LP = Language Pedagogy

Figure 29 Perspectives of *Reading* 2010-2011Groups on FEA and LP (2)

4.2.1.7 Perspectives on FEA and LA

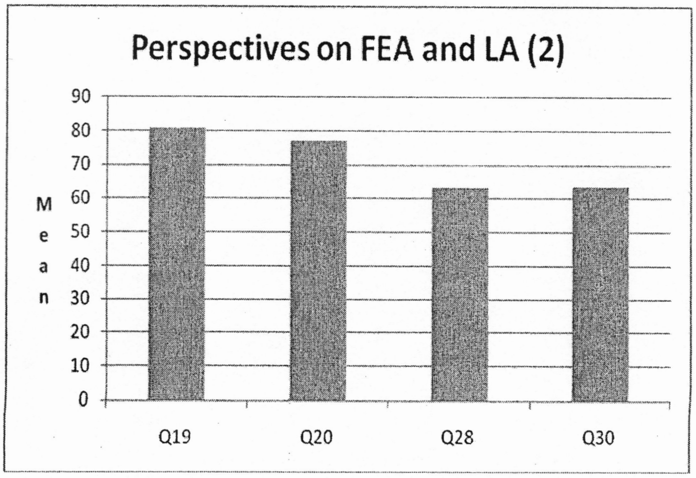
In Figure 30, most participants in this group responded highly positive toward FEA and language assessment, as 85.75% admitted that FEA helped them to improve their reading skills; 83.75% thought that FEA supported self-assessment, and 83.25% were fond of the FEA content. Consequently, 82% of the group confirmed that FEA content was related to what was stated in the course syllabus and 80% accepted that FEA helped improve their course grade.



Q4 = Like content of FEA
Q5 = FEA helps improve reading skills
Q7 = FEA helps improves my course grade
Q11 = Content of FEA relates to course syllabus
Q17 = FEA helps support self-assessment
FEA = Formative e-Assessment
LA = Language Assessment

Figure 30 Perspectives of *Reading* 2010-2011Groups on FEA and LA (1)

Figure 31 also shows the group's perspectives on FEA and LA. Consistent with the question types on FEA, 80.75% of these postgraduates said that they were satisfied with what was there (mainly in a multiple-choice format). Nevertheless, 77% preferred to have more varieties of question types on reading FEA. In the meantime, 63.75% demanded that the FEA content should be focused on what was in their textbook, and 63.25% agreed that FEA was explicable.

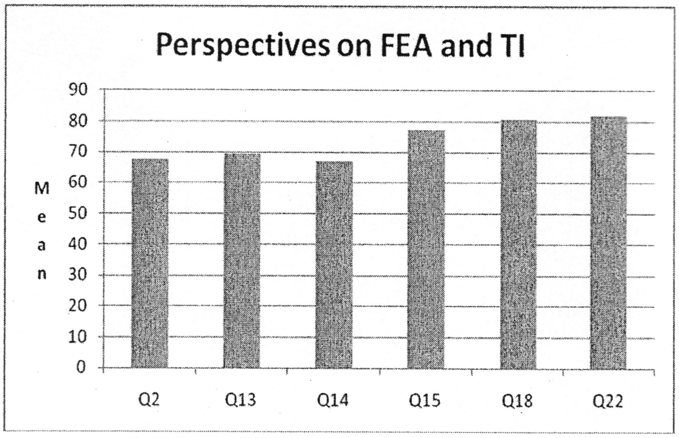


Q19 = Like questions types on FEA
Q20 = Prefer more questions types on FEA
Q28 = FEA is too difficult
Q30 = Content of FEA should be focused on textbook
FEA = Formative e-Assessment
LA = Language Assessment

Figure 31 Perspectives of *Reading* 2010-2011Groups on FEA and LA (2)

4.2.1.8 Perspectives on FEA and TI

In connection with their angle on FEA and technology integration (Figure 32), 82% of this cohort favored the websites which were linked to FEA; likewise, 80.75% were pleased with the prompt score reporting on FEA. That was why 77.5% of these MA participants asked that FEA should be blended with their lecture course. While using FEA, 67.5% of the group reported they did not have any technological problems; 69.5% of them liked e-contacts on FEA, and 67% of the group stated that they used them while studying their course.



Q2 = No computer while using FEA
Q13 = Like e-contacts on FEA
Q14 = Use e-contacts on FEA
Q15 = FEA should be integrated in the course
Q18 = Like prompt score reporting on FEA
Q22 = Like websites linked to FEA
FEA = Formative e-Assessment
TI = Technology Integration

Figure 32 Perspectives of *Reading* 2010-2011Groups on FEA and TI

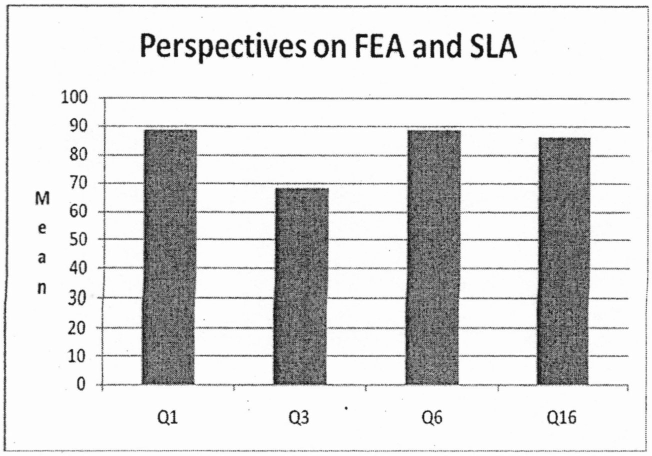
To sum up, the second postgraduate participants in the *Reading* group responded most positively on using FEA in relation to language assessment theory when 85.75% of them answered in the questionnaire that FEA helped improve their reading skills. The lowest mean was regarding FEA and language pedagogy theory when simply 48.25% of the group stated that correct answers should be given on reading FEA.

4.2.2 *Research Methodology on English* Group

The last group, *Research Methodology on English*, involved a small number of MA students (n = 13), majoring in English for Communication, who enrolled in this required course in the first semester of 2009 academic year (i.e., from June to October, 2009). They were all part-time students (10 females and 3 males). Most of them were in their thirties. FEA in the course was mainly used as peer assessment concerning evaluating and exchanging feedback on each of their research proposal which was the core of the course. A questionnaire consisted of two part: participants' demographic information and 20 closed-ended items underlined by four conceptual frameworks (second language theory, language pedagogy theory, language assessment theory, and the idea of technology integration). The research tool was piloted before the data collection procedure, and its Cronbach's alpha was .82. It was administered to the group at the end of their semester; the return rate was 84.62% (n = 11). Six from 20 items in the questionnaire (2, 8, 12, 14, 16 and 17) were reversely coded. This was to ensure that the questionnaire items would not be monotonous.

4.2.2.1 Perspectives on FEA and SLA

Figure 33 gives a picture of this postgraduate group's views toward FEA and SLA. Most participants (88.85%) viewed that FEA as a comprehensible input in the study encouraged them to search correct answers by themselves and also stated that they enjoyed using it in their research course. Hence, 86.25% of the group found that FEA was useful for the course, and 68.25% liked to exchange ideas among their peers via peer assessment through FEA system.

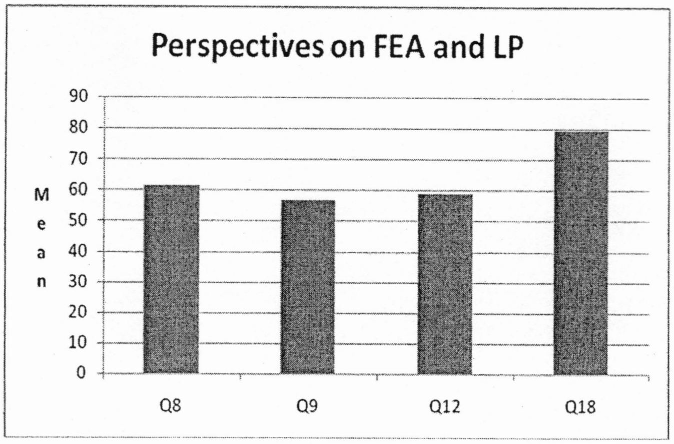


Q1 = Enjoy using FEA in the course
Q3 = Like to communicate with peers via FEA 68.25
Q6 = FEA encourages me to learn by myself
Q16 = FEA is useful for the course
FEA = Formative e-Assessment
SLA = Second Language Acquisition

Figure 33 Perspectives of *Research Methodology on English* Group on FEA and SLA

4.2.2.2 Perspectives on FEA and LP

With regard to the group's perception on FEA and LP (Figure 34), 79.5% of these participants agreed that FEA make their study in the course more flexible, and 59% of them said that it was less stressful than performing paper-based assessment. FEA was seen as a good motivation for this research group as 61.25% responded that they wanted to have more FEA test sets to perform in their course, and 56.75% of them answered that they used FEA every day during their study.

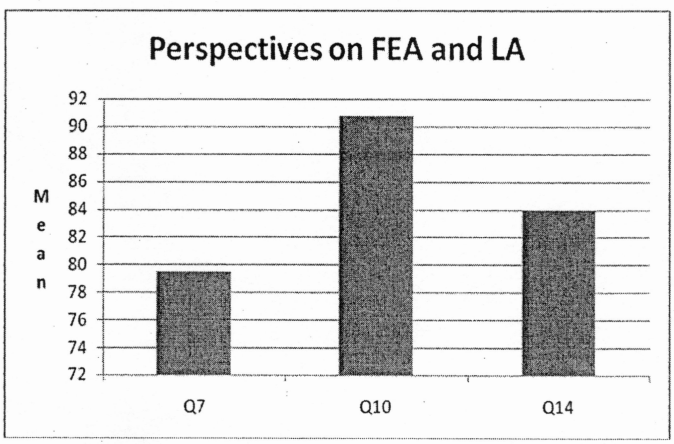


Q8 = Want to use FEA more often
Q9 = Use FEA every day
Q12 = Feel less anxious than using paper-based assessment
Q18 = FEA makes my study more flexible
FEA = Formative e-Assessment
LP = Language Pedagogy

Figure 34 Perspectives of *Research Methodology on English* Group on FEA and LP

4.2.2.3 Perspectives on FEA and LA

In line with this postgraduate group's point of view toward FEA and LA (see Figure 35), 90.75% of the participants who used FEA as a peer assessment in their research course accepted that FEA helped them keep good records of their progress, and 84% liked to submit their writing assignments concerning their research proposals through FEA system. Consequently, almost eighty percent (79.5%) reported that FEA helped improve their course grade.

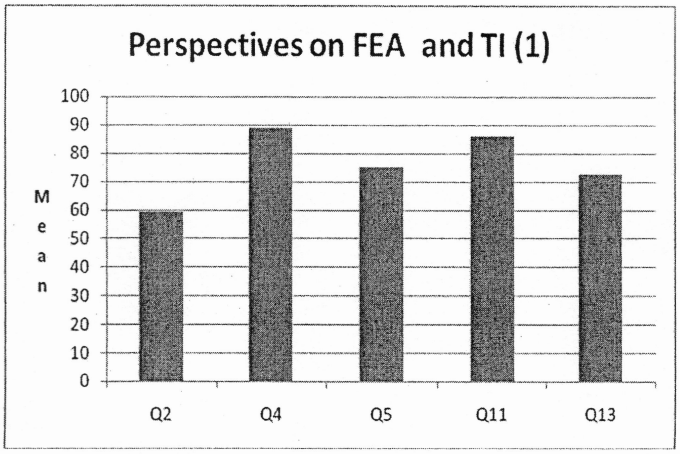


Q7 = FEA improves my course grade
Q10 = FEA keeps good records of my progress
Q14 = Like to submit assignments online
FEA = Formative e-Assessment
LA = Language Assessment

Figure 35 Perspectives of *Research Methodology on English* Group on FEA and LA

4.2.2.4 Perspectives on FEA and TI

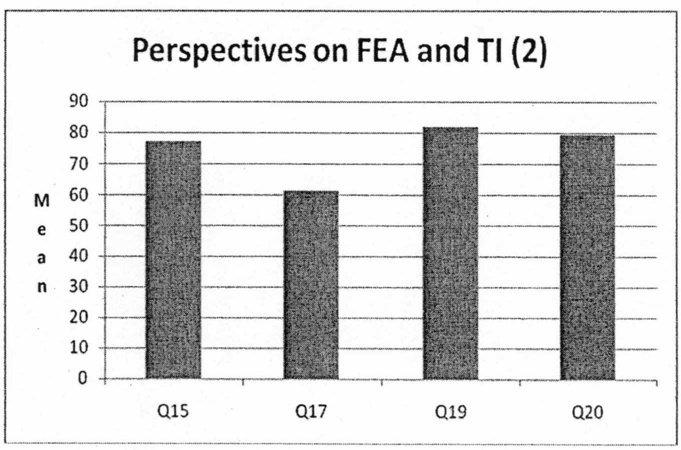
Figure 36 demonstrates this group's stance regarding FEA and TI. Since it was their first time to receive their course syllabus online instead of the paper one, 89% were satisfied with this innovation. In addition, 86.25% of these research participants liked the online feedback upon their research proposal from their peers and their teacher. Moreover, 75% confirmed that using FEA helped improve their computer skills, and 72.25 preferred e-contacts provided on FEA; 59% said they did not experience any technological problems while using FEA.



Q2 = No computer problems while using FEA
Q4 = Like online course syllabus
Q5 = Using FEA helps improve my computer skills
Q11 = Like online feedback
Q13 = Like e-contacts on FEA
FEA = Formative e-Assessment
TI = Technology Integration

Figure 36 Perspectives of *Research Methodology on English* Group on FEA and TI (1)

Figure 37 also shows another set of findings corresponding to FEA and technology integration. That using technology made their study more convenient was supported by 81.75% of the group, and 61.25% viewed that using FEA did not need a lot of computer skills. As FEA could be accessed anytime and anywhere, 79.5% were pleased with this benefit. As a result, 77.25% of these participants agreed that FEA should be blended with their research course.



Q15 = FEA should be blended with the course
Q17 = Using FEA does not need a lot of computer skills
Q19 = FEA is convenient
Q20 = FEA can be used regardless of time and place
FEA = Formative e-Assessment
TI = Technology Integration

Figure 37 Perspectives of *Research Methodology on English* Group on FEA and TI (2)

In a nutshell, the postgraduate participants in the *Research Methodology on English* group responded most positively on using FEA in relation to technology integration when 88.75% of them answered in the questionnaire that they liked online course syllabus linked to FEA system as it was more convenient than the paper ones. In addition, 88.75% stated their perception that FEA encouraged them to search correct answers or construct knowledge by themselves. The lowest mean was concerning FEA and language pedagogy theory when 56.75% of this group reported that FEA motivated them to use it every day.

4.3 Summary

Results from the data analysis regarding undergraduate participants in *English III* group disclosed their viewpoint toward FEA that the majority (85%) of this cohort responded positively to the merging of FEA in their required foundation EFL course. Meanwhile, the participants in the *English Structure* group related FEA to their writing skills as 90% of the group replied in the questionnaire that FEA helped improve their language skills. The last undergraduate group, *English for Sciences and Technology*, positively reacted toward the blending of FEA in their face-to-face lecture class when over 86% of these students were satisfied with using the e-assessment in their ESP course. In addition, the postgraduate participants in the *Reading* group expressed their preference to the content of FEA provided on FEA. More than 90% agreed that it was related to their course syllabus. And over 85% proved that FEA helped improve their reading skills. In conclusion, more than 88% of the postgraduates in the *Research Methodology on English* group verified that FEA encouraged them to construct their knowledge by themselves as it was linked to tremendous amount of online information to them.

Chapter 5 Discussion and Conclusions

This chapter consists of four sections. The first section (5.1) pertains to discussion on the EFL students' perspectives on FEA in relation to second language acquisition theory, language pedagogy theory, language assessment theory, and the concept of technology integration. In the second section (5.2) the limitations of the present research are addressed while the third section (5.3) relates to recommendations for the further development of FEA and future research. The final section (5.4) presents the conclusions.

5.1 EFL Students' Perspectives on FEA

5.1.1 Perspectives on FEA in relation to Second Language Acquisition

This section discusses the research findings in relation to the perspectives of EFL students on FEA in relation to SLA. This discussion relates to the first research question: *What are the EFL students' perspectives on formative e-assessment in relation to second language acquisition theory?*

In this study, FEA was used as a comprehensible input to enhance these EFL students to increase their achievement scores and to promote self-assessment to solve the problems related to large-sized classes. This was conceptualized in relation to a learner-centered approach aiming to encourage students to construct and obtain new knowledge by themselves. It focused on this approach because it is consistent with the constructivist's pedagogical theory (Vygotsky, 1962), as noted by Wilson and Lowry (2000), which highlighted the students' responsibility in building their own knowledge as opposed to simply receiving the information by means of transmission from their EFL lecturers. By using the FEA, students could learn mostly by themselves how to find their answers and correct their own mistakes. Furthermore, this is related to the implementation of a communicative approach to encourage students to learn from more real-life activities than what they did inside their large, traditional EFL classes.

The findings from the quantitative method revealed that the application of SLA through the learner-centered approach, constructivism, and communicative approach via the use of the FEA yielded beneficial impacts on both students' achievement and their attitudes toward EFL learning. Over seventy percent of one undergraduate group, *English III*, agreed that using FEA was favorable; 80% stated that FEA encouraged them to learn and seek correct answers by themselves. In another undergraduate group, *English Structure*, more than 80% of them responded that they liked websites linked to FEA system. When peer assessment was introduced to the group, over 72% of these participants liked it. More than 85% replied that they always did FEA by themselves, and over 83% insisted that they would continue using FEA in their study. In an ESP class, *English for Sciences and Technology*, over 86% of these participants were fond of using FEA, 83.75% found that blending e-learning with the course was useful. In a postgraduate group, *Reading*, more than 84% stated that FEA encouraged them to study by themselves; 81.75% responded that they enjoyed using FEA. In addition, over 76% of the group admitted that FEA was as good as paper-based assessment, and 82.5% of the group favored having FEA blended with the lecture reading course. Almost eighty percent stated that they always performed FEA on their own pace. In the last postgraduate group, *Research Methodology on English*, more than 88% viewed that FEA as a comprehensible input in the study encouraged them to search correct answers by themselves and also stated that they enjoyed using it in their research course as more than 86% of the group found that FEA was useful.

5.1.2 Perspectives on FEA in relation to Language Pedagogy

This section discusses the research findings in relation to the perspectives of EFL students on FEA in relation to LP. This discussion relates to the second research question: *What are the EFL students' perspectives on formative e-assessment in relation to language pedagogy theory?*

The students stated that a major benefit of FEA was that it provided them with faster feedback. This is supported by Dalziel (2001) who discovered that instant feedback could supply students with an opportunity to test their emergent understanding and immediately identify their problem areas during the learning process. By this means, the students had the potential to improve the cognitive skill of self-assessment to correct specific mistakes. As a result, regular self-assessment and prompt feedback during learning via the use of FEA was considerably helpful in increasing students' learning outcomes. It was anticipated that FEA would better motivate students to have more productive learning outcomes. One reason was that FEA offered students with a non-threatening atmosphere and prompt feedback, which was not possible in the traditional/lecture learning environment. The FEA allowed students to communicate via web-board and chat room. These communicative language use strategies were intended to promote communication for real-life purposes and lead to positive attitudes and more fruitful learning outcomes for the students.

The results from the quantitative research disclosed that in the postgraduate *Reading* group, more than 82% expressed that FEA was a good motivation; it stimulated them to seek correct answers by themselves. It should be noted that merely 48% requested for providing correct answers on FEA, and more than 78% asked for more test sets of FEA in the course. In the *Research Methodology on English* group, almost 80% agreed that FEA made their study in the course more flexible. In the undergraduate group, almost eighty percent of *English III* students were fond of the feedback provided on FEA. Around 72% affirmed that used FEA because they wanted to. According to their course syllabus, they would receive 5% of the course grade once they completed each FEA test set. But they would do FEA even they were not offered the score, and more than 55% agreed that they felt more relaxed while doing FEA than doing paper-based assessment. It should be noted that 82.5% of the students in the English for Sciences and Technology group needed more feedback than correct answers.

5.1.3 Perspectives on FEA in relation to Language Assessment

This section discusses the research findings in relation to the perspectives of EFL students on FEA in relation to LA. This discussion relates to the third research question: *What are the EFL students' perspectives on formative e-assessment in relation to language assessment theory?*

In relation to language assessment theory (Bachman & Palmer, 1997), the formative assessment applied through the implementation of the FEA program involved students in the process that allowed them to know their strengths and to identify and address their weaknesses. It was anticipated that employing FEA would help students to focus more on self-improvement through independent, flexible self-assessment. With formative purposes, the FEA program would help students to realize their weaknesses and strengths. It would assist them to have more achievement scores because the assessment offered students with appropriate level of difficulty with relevant content to the lessons in the course. This assessment aimed to support students, not to judge them.

The majority of respondents in the questionnaire had positive attitudes toward FEA. Their positive perceptions included preference of the question formats used in FEA (i.e., multiple-choice, fill-in, and true/false) and the FEA content. They also felt that FEA helped support self-assessment. In addition, they agreed that FEA helped make them well-prepared for their summative assessment. For instance, over 78% in *English III* group accepted that using FEA made them feel more confident in preparation for the following final exam; more than 76% revealed that FEA helped support self-assessment; over 77% of the participants liked the multiple-choice questions provided on FEA. Ninety percent of undergraduate *English Structure* group claimed that FEA improved their writing skills and over 79% confirmed that FEA helped support self-assessment. More than 83% of the participants in *English for Sciences and Technology* group favored multiple-choice questions in FEA, while 60% liked fill-in questions, and over 78% preferred the content of FEA.

In the postgraduate *Reading* group, 80% ensured that FEA made them feel more confident in their final examination; around 90% of these participants were certain that FEA content related to their course syllabus, and over 83% thought that FEA helped support self-assessment. About 80% of these postgraduates were satisfied with multiple-choice questions provided. More than 90% of the participants in *Research Methodology on English* group accepted that FEA helped them keep good records of their progress.

5.1.4 Perspectives on FEA and Technology Integration

This section discusses the research findings in relation to the perspectives of EFL students on FEA in relation to LA. This discussion relates to the last research question: *What are the EFL students' perspectives on formative e-assessment in relation to technology integration?*

As noted by Heinemann (2003), technology integration engaged students in active, constructive, intentional and cooperative learning. It helped shift from an old to a new educational paradigm. Technology integration would link students to updated information sources and learning tools. It also provided students with rich sources of information. It contributed many benefits to this study. Firstly, technology caused students to construct knowledge about the English language at their own rate. Secondly, students found technology more motivating because it brought students into contact with more authentic materials and more real-life learning activities. Thirdly, it was a more interactive approach to EFL pedagogy compared with the standard approach that students had experienced before since FEA could be performed anywhere and at anytime via the Internet. Fourthly, with swift automatic marking, FEA was able to give students instant feedback on completion of each test set. This was a tremendous benefit for reducing lecturers' marking loads in the large enrolment EFL classes involved in this research. Finally, the FEA increased students' computer skills, which they needed to learn to use in their future workplaces.

Findings relevant to this concept show that more than 77% of the *English III* participants liked the prompt score reporting on FEA system. More than 83% of *English Structure* students admitted that using FEA could reduce their spelling mistakes. However, 50.75% preferred e-contacts provided on FEA system. Likewise, 77% of students in *English for Sciences and Technology* group responded that they liked the prompt score reporting on FEA, and more than 62% reported that they had no computer problems while using FEA.

The results from the postgraduates demonstrated that more than 86% of this group favored its prompt score reporting, 65.5% said they had no problems at all and used e-devices, for example, e-mail when they wanted to contact their teacher online. However, simply 53.23% stated that they liked those electronic tools. In the *Research Methodology on English* group, since it was their first time to receive their course syllabus online instead of the paper one, 89% were satisfied with this innovation. In addition, over 86% of these research participants liked the online feedback upon their research proposal from their peers and their teacher. Moreover, 75% confirmed that using FEA helped improve their computer. As FEA could be accessed anytime and anywhere, 79.5% of these postgraduates were pleased with this benefit.

5.2 Limitations

In this study, there were some limitations occurred. First, there was no speaking FEA involved according to the limited technological capabilities of the researcher. Hence, FEA employed in the study emphasized simply on listening, reading and writing. Second, since there were a large number of students selected as the participants in the study, it was not applicable to collect in-depth data through qualitative research. Third, as a matter of time to construct FEA question items, there were not sufficient items for enthusiastic students to perform throughout their semester. Most of FEA contained about 100 items for the entire course, around 10 to 20 items for each study unit in each course. Fourth, it was concerning the second problem mentioned earlier that there were not many training sessions to train EFL teachers to construct online assessment regularly; therefore most EFL teachers in the university who were interested in FEA had to train themselves. Fifth, it could be seen from the results of the study that not many students tried to use e-mail, web-board, etc. provided on FEA to contact their peers or their teachers, especially in peer assessment. Students should have been more stimulated to use these e-devices more as these would encourage them to use the language more often and made their communicative skills improved. Finally, the research tool was developed solely by the researcher. If there were more EFL teachers involved to brainstorm ideas to create the questionnaire and even FEA question items, it would be of greater benefit to both teaching and learning EFL in the university.

5.3 Recommendations for Future Research

As mentioned in the limitations, it will be great if there is some research engaging using speaking FEA blended with the face-to-face teaching in EFL classes since it is a good motivation for students to practice and to be more confident about expressing their language for communication with the world outside their class. Research on using more types of questions rather than MCQs on FEA is another suggestion for future research. Questionnaires should be administered to EFL teachers as well to investigate their perspectives toward this assessment. In addition, it is a good idea to do a comparative study between Thai and international students in the university on their perspectives on FEA in their EFL class. Research on the effect of merging FEA with other course, for example, research, business English, English literature, etc. is worth considering. Another is the idea of investigating the impact of e-assessment on summative purposes. Finally, more research on online peer assessment is also recommended.

5.4 Conclusions

The evidence-based findings revealed that the majority of EFL students in the study had positive viewpoints on FEA. The quantitative results indicated high means of their perspectives on the e-assessment in relation to second language acquisition, language pedagogy, language assessment and technology integration. The study was a preliminary research attempt to expand and provide information to both students and teachers in EFL classes in particular. It wanted to foster students to be more autonomous, focusing on lifelong self-learning and self-assessing. In addition, promoting technology integration in face-to-face teaching for EFL university teachers was also a reason because the blending method tended to improve students' problem-solving skills and provided good motivation to them. Positive responses from the participants might ensure teachers and students in tertiary education in Thailand, in particular, regarding the benefits of FEA in EFL classes. In a word, this FEA project was successful in terms of student's feedback.

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Appendices

Appendix A: Sample of Student Informed Consent Form

STUDENT INFORMED CONSENT FORM

Effects of Formative e- Assessment on First-Year Undergraduate Students' Listening Achievement and Attitudes in Burapha University

The study aims to investigate whether the formative e-assessment (FEA) would help elevate your listening abilities and to determine your attitudes towards integrating e-learning program in an undergraduate foundation course, 222103 English III. Participation in the study will occur naturally as part of your course assignments. At the end of the semester, your performance and practice on e-learning and listening activities stated in the course syllabus will be correlated with your survey responses.

There are no known risks or discomforts associated with the study. You will be helping to improve knowledge of using e-learning to motivate your study in the course.

Participation in the study is entirely voluntary and anonymous. Any information obtained during the study that could identify you will be kept strictly confidential.

Print Name: ____

"I have read the "Student Informed Consent Form" and agree to allow Mr. Somboon Chetchumlong to use the information I provide to conduct his research."

____

Signature Date

Appendix B: Sample of Course Syllabus

Course Syllabus
Faculty of Humanities and Social Sciences
Burapha University

1. **Faculty / Department:** Humanities & Social Sciences/ Department of Western Languages
2. **Semester / Academic Year:** 1/2010
3. **Subject Code / Subject:** 222203 English for Sciences and Technology
4. **Credits:** 3(3-0-6)
5. **Course Status:** ○ General Education ○ Minor ○ Major ◉ Required Foundation Course
6. **Instructor:** ....
7. **Office:** ....
8. **Office Hours:** ....
9. **Course Description:**

Students practice listening, speaking, reading and writing English through various sources of information which is related to scientific and technological terms and structures. In addition, they do their research and present their projects relevant to their study fields and further education.

10. **Objectives:**

On completion of this course, students will be able to

1) read and understand scientific and technological texts and articles,
2) listen to and comprehend articles and texts related to sciences and technology,
3) orally interact to the questions asked by their instructor at the beginning, in between, and at the end of each activity,
4) apply vocabularies and language structures in their scientific writings, and
5) perform their oral presentations.

11. **Teaching and Learning Methods:**

1) Pre-activity phase: Discussion based on material types and language skills.
2) Teaching phase: Teaching and learning activities following material types and language skills.
3) Feed-back phase: Doing exercises or activities assigned at the end of each chapter.

12. **Textbooks / Materials:**

1) A complied Textbook: *222203 English for Sciences and Technology for Classroom Use Only*
2) References: Campbell, Simon. (2009). *English for the Energy Industry Express Series*. Oxford: Oxford University Press.
Glendinning, Eric H. (2007) *Oxford English for Careers Technology 1 Student's Book.* Oxford: Oxford University Press.
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Grussendorf, Marion. (2009). *English for Logistics Express Series*. Oxford: Oxford University Press.
3) Audio files, Videos, e-learning program

13. **Assignments:**

1) Students are required to perform four listening tasks online (individual work) via the Website: http://ncourse.buu.ac.th/. See No.16 (Tentative Teaching Schedule) for the due dates to complete the tasks.
2) Students must submit writing assignments online (individual work) through the Website: http://ncourse.buu.ac.th/. See No.16 (Tentative Teaching Schedule) for the due dates to complete the tasks.
3) Students (10 groups for each class) are assigned to perform their oral presentation (group work).

14. **Evaluation Criteria**

1. Attendance & in-class activities		5 %
2. Four online listening assignments		5 %
3. Two listening quizzes		10 %
4. Online writing assignments		10 %
5. Oral presentation		10 %
6. Midterm exam		30 %
7. Final exam		30 %
	Total	**100 %**

15. Grading Criteria

A	**80 – 100**	**C**	**60 – 64**
B+	**75 – 79**	**D+**	**55 – 59**
B	**70 – 74**	**D**	**50 – 54**
C+	**65 – 69**	F	0 – 49

Notes: Examination Components

Midterm Examination	**Final Examination**
1. Vocabulary 15 items 2. Structure 20 items 3. Reading Comprehension seen passages 25 items **Total 60 items (MCQs)**	1. Vocabulary 15 items 2. Structure 20 items 3. Reading Comprehension seen passages 25 items **Total 60 items (MCQs)**

16. Tentative Teaching Schedule

Week	Topic-Content	Activity
1 **1-6 June 10**	**Introduction to the course syllabus**	- Distribute course syllabus and clarify the overall teaching and learning activities, evaluation, test component, and grading criteria.
2 **7-13 June 10**	**Unit 1** **Information technology**	- Ask students to look at the topic then discuss what they think. - Read the main text for main idea and detail. - Check up textual comprehension with exercises.
3 **14-20 June 10**	**Unit 2** **Telecommunications**	- Ask students to look at the topic then discuss what they think. - Read the main text for main idea and detail. - Check up textual comprehension with exercises.
4 **21-27 June 10**	**Unit 3** **Logistics services**	- Ask students to look at the topic then discuss what they think. - Read the main text for main idea and detail. - Check up textual comprehension with exercises.
5 **28 June-4 July 10**	**Unit 3** **Logistics services**	- Ask students to look at the topic then discuss what they think. - Read the main text for main idea and

		detail. - Check up textual comprehension with exercises.
6 **5-11 July 10**	**Unit 4** **Mass transportation**	- Ask students to look at the topic then discuss what they think. - Read the main text for main idea and detail. - Check up textual comprehension with exercises.
7 **12-18 July 10**	**Unit 4** **Mass transportation** (Due date for completing the first two listening and the first two writing tasks)	- Ask students to look at the topic then discuss what they think. - Read the main text for main idea and detail. - Check up textual comprehension with exercises.
8 **19-25 July 10**	**Revision & Listening Quiz 1**	
9 **26 July-1 Aug. 10**	**Midterm Examination**	
10 **2-8 Aug. 10**	**Unit 5** **Alternative energy**	- Ask students to look at the topic then discuss what they think. - Read the main text for main idea and detail. - Check up textual comprehension with exercises.
11 **9-15 Aug. 10**	**Unit 6** **Ways in to technology**	- Ask students to look at the topic then discuss what they think. - Read the main text for main idea and detail. - Check up textual comprehension with exercises.
12 **16-22 Aug. 10**	**Unit 7** **Plastics**	- Ask students to look at the topic then discuss what they think. - Read the main text for main idea and detail. - Check up textual comprehension with exercises.
13 **23-29 Aug. 10**	**Unit 7** **Plastics**	- Ask students to look at the topic then discuss what they think. - Read the main text for main idea and detail. - Check up textual comprehension with exercises.
14 **30 Aug. -5 Sep. 10**	**Unit 8** **Protecting the environment**	- Ask students to look at the topic then discuss what they think. - Read the main text for main idea and detail. - Check up textual comprehension with exercises.
15 **6-12 Sep. 10**	**Unit 8** **Protecting the environment**	- Ask students to look at the topic then discuss what they think. - Read the main text for main idea and detail. - Check up textual comprehension with exercises.
16		

13-19 Sep. 10	**Oral Presentation 1 (Groups 1-5)**
17 **20- 26 Sep. 10**	**Oral Presentation 2 (Groups 6-10)** **&** **Listening Quiz 2** (Due date for completing the last two listening and the last three writing tasks)
18 **27 Sep. – 10 Oct. 10**	**Final Examination**

Notes to All 222203 Students:

1. Your class attendance will be counted for the total 45 hours as 100%.
2. According to the University regulation, you must attend class at least 80%. In other words, you can be absent from class only 9 hours (3 weeks) during the semester.
3. If you are absent more than 9 hours (3 weeks) without proper reason(s), you will get an **F** automatically. Your sick leave with a doctor's certificate, or your personal business leave endorsed by your advisor/supervisor can only be considered as a proper reason for your absence.
4. The schedule can be changed subject to the University's announcement and/or upon the agreement (approved by the Department) between you and your instructors.

Appendix C: Sample of Reliability Statistics

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.925	.926	30

Item Statistics

	Mean	Std. Deviation	N
q1	3.0667	.36515	30
q2	2.4333	.50401	30
q3	2.7667	1.00630	30
q4	3.1667	.74664	30
q5	3.1333	.77608	30
q6	2.9333	.73968	30
q7	3.0333	.66868	30
q8	2.9333	.69149	30
q9	2.9333	.58329	30
q10	2.6667	.54667	30
q11	2.8667	.62881	30
q12	2.5667	.81720	30
q13	3.1333	.89955	30
q14	3.2667	.73968	30
q15	2.3667	.61495	30
q16	3.3000	.65126	30
q17	3.2000	.66436	30
q18	2.9333	.73968	30
q19	3.0333	.66868	30
q20	2.9333	.69149	30
q21	2.9333	.58329	30
q22	2.6667	.54667	30
q23	2.8667	.62881	30
q24	2.5667	.81720	30
q25	3.1333	.89955	30
q26	3.2667	.73968	30
q27	2.3667	.61495	30
q28	3.3000	.65126	30
q29	3.2000	.66436	30
q30	2.4667	.68145	30

Appendix D: Sample of Questionnaire

QUESTIONNAIRE

Student Perspectives on Formative e-Assessment (FEA)

The questionnaire will investigate students' attitudes toward the use of FEA in a postgraduate reading course at Burapha University, Chon Buri, Thailand. The responses will be beneficial for the improvement of the program as well as for students, instructors, educators, and administrators regarding large enrolment English courses in the country.

There are two sections in the questionnaire. Please complete this survey by following each section directions. Your responses will be confidential and ultimately only aggregated data from this survey will be used.

Section A: Student Information
Directions: Please write your information in the blank boxes provided below.

Student Faculty
Student ID
Student Gender (Male/Female)
Do you own a computer with the Internet access?
How many years have you used the World Wide Web?
How long have you ever used this kind of e-learning?·

Section B: Attitudinal Statements
Directions: Please tick the mark (√) in the boxes below to select "Strongly Agree, Agree, Disagree," or "Strongly Disagree" in response to each of the following statements.

	Strongly Agree	Agree	Disagree	Strongly Disagree
1.I enjoy using FEA.				
2. I have computer problems when using FEA.				
3. I like using FEA in this reading course.				
4. I like the content of FEA.				
5. FEA helps improve my reading skills.				
6. FEA encourages me to learn by myself.				
7. FEA helps improve my course grade.				
8. I should have performed more FEA.				
9. I like to repeat doing FEA till I get a good score.				
10. Using FEA makes me feel more confident to do better in the final exam.				
11. The content of FEA is related to the course syllabus.				
12. I feel more anxious when I use FEA than when I do paper-based assignments.				
13. I like e-contacts (e.g., Web board, chat room, etc.) provided on FEA.				
14. I use e-contacts (e.g., Web board, chat room, etc.) provided on FEA.				
15. It would be a good idea to integrate FEA with face-to-face teaching in the course.				

16. FEA is not as appropriate to be used in the course as paper-based assessment.				
17. FEA helps support self-assessment.				
18. I like prompt score reporting on FEA.				
19. I like the question types provided on FEA.				
20. I need more various question patterns on FEA.				
21. FEA increases my study loads.				
22. I like Websites linked to FEA.				
23. There should be more items for each FEA test set.				
24. I will do FEA more often if I am offered 10 % to the course grade.				
25. I need explanations relevant to my incorrect answers.				
26. All correct answers should be given in FEA.				
27. Time provided for each FEA test set is appropriate.				
28. FEA is too difficult.				
29. I always do FEA by myself.				
30. The content of FEA should be focused on only what is in the textbook.				

Thank you so much for your cooperation.