THE DEVELOPMENT OF A WEB-BASED ENGLISH LEARNING MODEL FOR THE AIRLINE BUSINESS PROGRAM AT THE HIGHER EDUCATION LEVEL

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Abstract

This research had 3 purposes: (1) to study the problems, opinions about, and the needs for studying English for Airline Business through e-Learning; and (2) to develop an eLearning Model for an Airline Business Program at the Higher Education Level; and (3) to experiment with a Web-Based model for Airline Business Program.

The research instruments were (1) a needs assessment questionnaire of the model. (2) a Web-Based Model for an Airline Business Program at the Higher Education Level; and (3) a questionnaire to assess satisfaction with the model.

Research findings showed the need for self-development through the model was high. The experts consulted commented that the model was appropriate. The model met the efficiency criterion; and the post-learning achievement was higher than the prelearning at the statistically significant level of .05. The learners felt the model was useful and practical for implementation.

Keywords: Web-Based learning, Airline Business, Higher Education Level

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INTRODUCTION

The Airline business creates revenue for the country, increases economic growth, and provides employment growth. The terrorist attack on the United States of America on September 11, 2001, had the effect of causing air travel to decrease. However, since the year 2007, the global economy and international trade have regained confidence which has increased the demand for travel and cargo by air. There were many new airline operators and some airlines which had suspended their service, reopened their companies. It was found that air transportation in Asia gained 7-8% per year and a 10% growth rate was seen in Thailand for air transportation per year, especially the departure and arrival of flights to and from Bangkok. (Kasikorn Research Center: 2007)

The result of this growth in the airline business in Thailand has caused the growth of employment and a dramatic increase in demand for airline personnel. For this reason, public and private higher institutions in Thailand have begun to offer both undergraduate and postgraduate programs in Airline Business to produce quality graduates who possess the necessary knowledge about the airline business in order to meet the new demand of the aviation industry.

The Airline Business sector is an international business. This means that the airline's personnel have to serve multi-national customers and communicate among multi-national airline personnel using English as the designated language. English is used as the international language of the airline industry as determined by the International Civil Aviation Organization (ICAO). This has resulted in institutions of higher education offering airline business programs and having English for Airlines Business courses in their curriculum as compulsory subjects in those programs, in order to provide the necessary English language knowledge and sufficient English communication skills proficiency for the students before they apply for airline jobs. In reality, it has been found that Airline Business students and graduates who have had an internship, or worked with the airlines, showed a lack of English proficiency and effective communication skills. According to the TOEIC (Test of English for International Communication) results of Airline Business Students from one institution of higher education, it was found that 99.48% of the students who took the test had a score lower than 500 (Center for Professional Assessment (Thailand, 2011). The reasons why the students and graduates had relatively low English language skills was due to the students not having a good background in English language probably because the teachers who exposed them to the English language, could not attract the attention of students or motivate them to study English. As a result, the students were ignorant of the importance of the English language and lacked a vision for the society, language, and culture of the people and countries where English is used as a communication language, and many lacked sufficient motivation to study English language effectively.

An interview report from English for Airline Business lecturers and students showed the primary problem encountered while studying in traditional classrooms is that most students did not dare to ask the teacher questions if they did not understand or had doubts. This was due to not only to their shyness or fear of asking questions, but also because they thought their questions might be considered too simple a question by classmates or they were afraid

they might suffer ridicule and humiliation by classmates or the teacher. Moreover, some teachers express dissatisfaction when students ask questions or express their opinions. As a result, most students do not ask questions or express their opinions in classrooms. Studying English for Airline Business via web based e-Learning helps students gain more knowledge without studying in the conventional classroom. This format has some limitations that affect the teaching and learning process, such as the number of students in the classroom, the teacher's experience and teaching skills, education media, the students' backgrounds, timing, environment, location, and classroom regulations. These may cause students to not be able to follow up on the lesson or lose learning motivation. With the accessibility of technology today, learning activities can occur anywhere, anyplace, and anytime. Argaugh and Stelzer (2003) mentioned that the "research on learning styles strongly suggests that web-based courses can address learning style differences as well or better than the tradition classroom. Hiltz, Coppola, Rotter, Turoff, and Benbunun-Fich (2000) suggested that web-based supportive collaborative approaches might be better than traditional classroom courses. Thailand National ACT (1999) provides a framework for the citizens of Thailand in that it specifies that they should have equal opportunity for Lifelong Learning with quality access to the whole process (Ministry of Education, 1999). With the characteristics of web-based distance education, the students can learn the lesson any time and any place which gives an opportunity to the students to gain knowledge, abilities, and skills, for example if a student studies English for Airline Business online, it will be advantageous to their study and future career. The Web-Based English Learning Model for the Airline Business Program at the Higher Education Level will help students learn the lessons by themselves together with studying in the classroom. It also improves students' self-directed learning behavior and attitudes towards learning the English language. The research objective is, to develop a model of learning English for the Airline Business program for higher education through web-based distance education by creating new content based on the English for Airline Business course content that are actually used in the airline business in response to the learners' needs.

OBJECTIVES

1) to study the problems and opinions about studying English for Airline Business through an e-Learning system, and the needs for studying English for Airline Business via a website;

2) to develop a Web-based English Learning Model for Airline Business Program at the Higher Education Level;

3) to implement a Web-Based model for Airline Business Program.

METHODOLOGY

Sample groups: With cluster random sampling, the participants in this research were 30 undergraduate students in an Airline Business program

Variables: The Independent variable was a Web-Based English Learning Model for a Airline Business Program at the Higher Education Level. Dependent variables were measured learning achievement.

Contents of the Research

The Web-Based English Learning Model for the Airline Business Program at the Higher Education Level was implemented on the Learning Management System called Moodle. The model consisted of the following 5 chapters:

Chapter 1: Reservation and Ticketing
Chapter 2: Ground Passenger Service
Chapter 3: Onboard Service
Chapter 4: Safety and Emergency Procedure
Chapter 5: Dealing with problems.

The components of the module in each chapter were divided into 4 parts; 1) Pretest 2) Learning content 3) Learning activities, and 4) Post-test.

Research Instruments

The instruments used for this study were:

1) The needs assessment of the Web - Based English Learning Model for the Airline Business Program at the Higher Education Level questionnaire. The questionnaire was developed and checked for its content validity and reliability by 5 experts.

2) The Web-Based English Learning Model for the Airline Business Program at the Higher Education Level. The model was developed with 5 chapters, and checked for its content validity, language usage, and content analysis by 13 experts.

3) The satisfaction of using the Web-Based English Learning Model for the Airline Business Program at the Higher Education Level Questionnaire. The questionnaire was developed and checked for its content validity by 5 experts and its reliability using Cronbach's Alpha.

Data Analysis

1) Calculating for the efficiency of the model according to the standard criterion 80/80, (E1/E2) (Chaiyong Brahmawong, 1997).

2) The data were analyzed using the percentage, mean, standard deviation, t-test, and content analysis.

The development of a Web-Based English Learning Model for the Airline Business Program at the Higher Education Level was divided into 5 phases:

Phase 1: Studying the needs for a Web-Based English Learning Model for the Airline Business Program at the Higher Education Level: The needs assessment questionnaires were sent to 339 undergraduate Airline Business students in 15 higher education institutes in order to collect the needs and use them to develop the model.

Phase 2: Developing the Web-Based English Learning Model for the Airline Business Program at the Higher Education Level: The model was constructed based on the needs of learners and experts' comments. 3 steps were carried out in this stage:

Step 1: Content Analysis: The Brainstorm Chart, Concept Chart, and Content Network Chart were designed according to the learners' needs.

Step 2: Developing Pilot Model: The pilot model was designed according to the Brainstorm chart, Concept Chart, and Content Network Chart. The researcher arranged the content, identified the behavioral objectives, selected a Learning Management System: LMS, and prepared resources for

the model. The tests were designed to evaluate the behavioral objectives based on Bloom's taxonomy then evaluate the test's quality by finding its Index of Consistency: IOC, Difficulty Index (p), Discrimination (r), and Reliability. The questionnaire was developed and checked for its content validity and reliability by 5 experts.

Step 3: Consideration of the model's appropriateness: The appropriateness of the model and content analysis were checked by 13 experts in a focus group discussion.

Phase 3: The model pilot test: The model pilot test was conducted to validate the model's efficiency. The validation consisted of the following steps:

Step 1: The sample was classified into the following groups:

- Single subject sample (1:1) consisting of 3 Airline Business students;
- Small group sample (1:10) consisting of 10 Airline Business students.
- Field sample (1:100) consisting of 30 Airline Business students.

Step 2: The researcher calculated for the efficiency of the model according to the standard criterion 80/80 (E1/E2).

Phase 4: The implementation of the Model (Trial run): After the model was piloted test and validated. The model was corrected and improved according to the results. The implementation consisted of the following steps:

Step 1: The learners were informed that they were selected to use the model.

Step 2: A Face-to-face orientation was conducted to give the guidelines of learning through the LMS and to answer the learners' queries.

Step 3: Learners registered for a username and password by themselves within 7 days.

Step 4: After closing the registration, the researcher advised the learners to complete the online Pre-test.

Step 5: The learners completed the online Pre-test within 7 days.

Step 6: The learners learnt English for Airline Business and completed the learning activities assigned by the researcher through the LMS within 14 days.

Step 7: The learners completed the online Post-test within 7 days.

Step 8: The learners completed the satisfaction survey about using of the Web-Based English Learning Model for the Airline Business Program at the Higher Education Level Questionnaire.

DATA COLLECTION

The efficiency test of the model was conducted by doing a trial run with airline business undergraduate students. The tryout consisted of a Single Subject tryout (1:1), a small group tryout (1:10), and a field tryout (1:100).

The Single Subject Tryout (1:1) The trial run was conducted with 3 Airline Business Postgraduate students. The students were assigned to access the LMS and complete the activities in the online course. The time allotted for this step was 2 weeks. The researcher analyzed the results of the tryout to find out the efficiency of the model based on the 80/80 efficiency criterion. The purpose of the tryout was to find out the

quality of the model in terms of content, difficulty level, and language. The researcher also collected comments from students for the model's improvement.

The Small Group Tryout (1:10) The researcher improved the model according to the students' comments from the first trial run and then tried out the model with 10 Airline Business Postgraduate students. The students were assigned to access the improved online system and complete the activities in the LMS within 2 weeks. The purpose of the tryout was to find out the quality of the model in terms of contents, difficulty level, and language. The researcher also collected comments from students for additional improvements to the system.

The Field Tryout (1:100) This tryout was conducted with a sample of 30 selected airline business undergraduate students. The time allotted for the field tryout was 2 weeks. The results of the tryout were analyzed to find the efficiency of the model based on 80/80 efficiency. The purpose of the tryout was also to find out the model's quality in terms of contents, difficulty level, language, and learners' comments. The researcher collected the related data for further improvement of the system.

The implementation of the model The implementation of the improved model was conducted with 30 volunteer Airline Business students. The time allotted for the implementation period was 2 weeks. The results of the implementation were analyzed to find the learners' learning achievement.

RESEARCH FINDINGS

During the development of a Web-Based English Learning Model for the Airline Business Program at the Higher Education Level, the concepts and theories concerning the development of the Web-Based model, the results of the learners' needs assessment were applied in the developing the model as follow:

1. The needs of the model: According to the needs assessment, it was found that 55.46% of sampled students felt that they lacked listening skills, 70.04% lacked speaking skills, 61.65% lacked reading skills, and 69.61% lacked writting skills. Sampled students agreed that learning English for Airline Business through e-Learning was useful and could help them develop their knowledge and skills. It was also found that the needs of learning English for Airline Business through a web-based system was high in the area of the needs of self-development of English for Airline Business via e-Learning.

2. The Web-Based model: The model was designed according to the learners' needs and experts' comments. It was developed according to a learner-Centered approach to assist learners gain English knowledge and skills specifically for the airline industry and to meet the learning objectives of the course. It was also checked for its content validity, congruency, and language usage by 13 experts. The results showed that the system was appropriate and ready for implementation.

3. The learning activities: The model used several of interactive activities. The interaction among learners and researcher, including formal interaction, was conducted through the LMS and informal interaction through e-mail and social networks.

Table 1: The comparison of learning's achievement before and after learning by using the model

N	Pre-test		Post-test		t	f	p-value
	Mean	SD.	Mean	SD.			
30	66.57	2.11	79.23	2.22	22.62	58.00	0.00

*p < .05

4. Results of Efficiency Analysis of the Web-Based English Learning Model based on the 80/80 Efficiency Criterion.

Results of Single Subject Tryout Efficiency Test (1:1) In the single subject tryout, the obtained E1/E2 efficiency indices of the 5 chapters of the model were as follows:

Chapter 1 78.33/71.69
Chapter 2 71.67/77.50
Chapter 3 78.33/77.50
Chapter 4 75.83/78.33
Chapter 5 77.50/80.83

Results of Small Group Tryout Efficiency Test (1:10) In the small group tryout, the obtained E1/E2 efficiency indices of the 5 chapters of the model were as follows:

Chapter 1 83.50/85.00
Chapter 2 79.00/81.00
Chapter 3 86.00/87.50
Chapter 4 81.50/82.50
Chapter 5 73.00/76.50

Results of Field Tryout Efficiency Test (1:100) In the field tryout, the obtained E1/E2 efficiency indices of the 5 chapters of the model were as follows:

Chapter 1 83.50/84.00
Chapter 2 80.33/82.67
Chapter 3 82.50/83.33
Chapter 4 80.50/82.33
Chapter 5 82.67/82.83

The efficiency analysis results of the model showed that both the exercise scores and the Post-test scores of the 5 chapters met the 80/80 efficiency criterion.

5. Results of the Comparison of Pre-Learning and Post-Learning achievement scores

Comparison of the Pre-Learning and Post-Learning achievement scores of a sample of 30 volunteer undergraduate Airline Business students showed that the learners' Post-Learning achievement scores were significantly higher than their Pre-Learning counterpart achievement at the 0.5 level of significance. (Table 1)

6. Result of the analysis of learners' satisfaction

The results of the participant satisfaction survey showed that the overall of learners' satisfaction towards the model was high. The learners felt the model was useful and appropriate for them as they could learn the content in the model whenever they needed. They felt that they did not hesitate to express their opinions and questions during learning through the selected communication channels. They also felt comfortable to interact, and to do the assignments and activities with the researcher, and other learners through the online communication channels. (Figure 1)

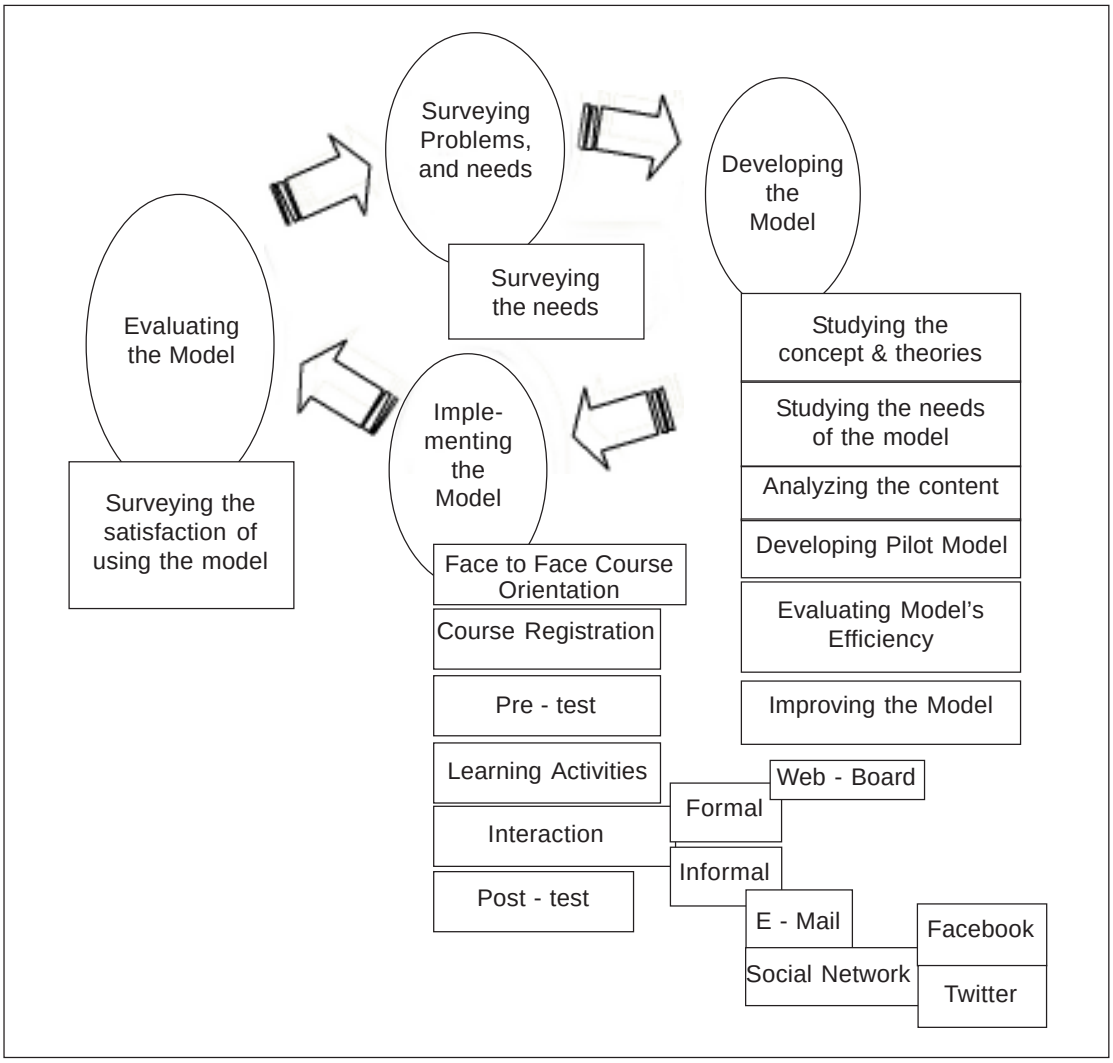

Figure 1: Web-based English Learning Model for the Airline Business Program at the Higher Education Level

CONCLUSIONS

According to the research findings, the researcher can conclude that the model was tested for efficiency based on the hypotheses and met the predetermined 80/80 efficiency criterion. Additionally, the Post-Learning achievement was significantly higher than its Pre-Learning counterpart. Therefore, the model was found to be an effective instructional tool and suitable for wider implementation. The result of this research showed the positive outcome of learners who studied English for Airline Business using the online system.

As the model was designed for the experimental purpose of research, it did not cover all the English for Airline Business topics. The experts suggested that the online course should be expanded to cover all the topics in the future as it could benefit all learners who study in the Airline Business program and learners who want to work in the airline industry.

Based on the opinion of the learners, the model should cover more topics of En-

glish for Airline Business as they felt the model could help them improve their knowledge and skills which will benefit their study and future career. They also recommended that the model should be implemented together with more traditional classroom study.

The researcher intends to design a complete version of the system to cover all English for Airline Business topics according to the experts' recommendations and learners' needs in the near future.

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