

*A Construction and Evaluation of the Electronics Slides on Supplementary
Grammar Through E- Learning on English II Course (999042)*

Supannikar Kamlangharn

Burapha University, Thailand

0727

The Asian Conference on Education 2013

Official Conference Proceedings 2013

Abstract

English is not an official language in Thailand, it is taught as a foreign language. Most Thai undergraduate students who have studied English as a foreign language for more than ten years are at the low level of English proficiency. To be available in English, students must have comprehension of the language, especially English grammar in order to raise their English proficiency and to survive in a strong competition for any employment opportunities after they graduate.

Therefore, the purposes of this research were to construct and find out an efficiency of the electronics slides on supplementary grammar through e- learning on English II course as the standardized efficiency criterion, to compare the students' learning achievement before and after learning the electronics slides, and to find out the students' satisfaction toward studying the electronics slides. The sample of this research consisted of 96 first-year undergraduate students of Burapha University who were enrolling the course of 999042 (English II) in the second semester of the academic year 2011. The instruments employed for this research were seven electronics slides lessons, exercises aiming at assessing the students' learning performance, the achievement tests as a pre- and post-test, and a rating-scale questionnaire, a five-level Likert scale, with 43 items evaluated by the experts was used for investigating the students' satisfaction toward the lessons.

Data were analyzed by descriptive statistical analysis through Average Number and Standard Deviation.

The findings of this research revealed that the efficiency of the lessons was 98.70/90.45, the students' learning achievement after learning the lessons was significantly greater than before learning the lessons at the 0.05 significant level, and the students' satisfaction toward the lessons was found at a high level.

Key words: electronics slides, supplementary grammar, learning achievement, first-year students, efficiency of lessons

Introduction

The 21st century, the information age, almost educational institutions are turning to technology to enhance their programs and to expand their knowledge. Through the use of IT to deliver courses facilitate students instant access to information. The capabilities of technology have advanced significantly in recent years. Therefore, both students and educators view IT as an effective medium and increasingly get a number of benefits to the use of it.

The PowerPoint software is a powerful presentation tool and nowadays, it has replaced the traditionally used color slides and overheads at important conferences. It also has quickly penetrated the educational circles as well. According to Holzl (1997) PowerPoint is a user-friendly package that can be used for the creation of visually clear, dynamic and attention capturing presentations. PowerPoint, and IT in general, for the enrichment of students' learning. Its use in education has been already pioneered at many universities and colleges around the world. (A. Szabo and N. Hastings. 2000)

Burapha undergraduate students facing the difficulties and obstacles to use English, a common cross-border language, on communication. Their lack of English language proficiency in the classroom and getting accustomed with teacher-centered atmosphere make the class like passive learning. Having been teaching English more than eight years at Burapha University, the researcher found that many first-year undergraduate students get quite low grade from the English foundation courses they enrolled. Success in language acquisition is influenced by a number of interrelated factors and for EFL students, incorrect usage of grammatical structure causes obstacles to communicate in English. Therefore, this study aimed to construct the supplementary grammatical lessons on English II compulsory 3-credit-hour course, via the PowerPoint, to help the students strengthen and develop the understanding and knowledge of grammatical structure after learning through the lesson which could also help them learn more effectively, enhance their good attitudes toward grammatical structure, and eventually this may help them increase a level of proficiency in English.

OBJECTIVE OF THE STUDY

The purposes of this research were three-fold: (1) to determine the efficiency of the electronics slides on supplementary grammar through E- Learning on English II course (999042) on the 80/80 standardized criterion, (2) to compare the students' learning achievement before and after learning the electronics slides, and (3) to find out the satisfaction of students toward the study of the electronics slides.

Literature Review

Grammar : English language problems of Thai students

English and Thai are different in pronunciation, word, grammar and text (Thep-Ackrapong, 2005) those typological differences of the two languages indicate that for Thai students, English grammar is the most difficult part for them. In addition; obviously the two languages are very different between linguistic family. (Thai is in the Thai Kadai linguistic family, but English is in the Germanic family). Apart from that, there are some major grammar conceptual differences between both languages such as subject-verb agreement, topic-comment structure, passive voice, relative clause, participial phrase, and subordination. All of these grammatical differences are difficult for Thai students even for those who have studied English for more than ten years.

Effective use of PowerPoint in education

Studies have demonstrated that students prefer PowerPoint and respond positively to classes when it was used. Most students prefer the use of pictures and graphs, slides to be built line by line, sounds from popular media or that support the pictures or graphics on the slide, and background colors. (Apperson et al., 2006). Colleges and universities are now embracing the use of graphical presentation such as PowerPoint in the classroom. Surveys have presented consistently that students generally believed that the use of PowerPoint enables their learning develops the class organized, clear and interesting. (Apperson, Laws, and Scepanisky, 2006; Atkins-Sayre, Hopkins, Mohundro, & Sayre, 1998; Beets & Lobingier, 2001; Mantei, 2000; Rankin & Hoas, 2001; Szabo & Hastings, 2000).

Apperson et al. (2006) concluded that the use of PowerPoint will benefit greatly to the education: students like the courses better, have a more positive impression of the instructor, and therefore, have a more positive attitude toward their education.

Making delightful and effective PowerPoint presentations is an issue instructors should be concerned. Several authors establish the most effective aspects for presentation graphics slides for classrooms. Font size must be appropriate (Rickman and Grudzinski, 2000). Holzl (1997) specifies the use of a 32 point font for headings and a 24 point font for the text in classrooms with fewer than 50 seats; and a 36 point font for headings and a 28 point font for text in classrooms between 50 and 200 seats. For maximum legibility, Holzl (1997) recommends the use of the sans serif fonts (such as Arial) because their uniform line thickness makes them easier to read. He also suggests not using more than two different fonts per presentation (one for headings and one for text).

Holzl (1997) also suggests that the text should be in all lower-case letters or a combination of upper and lower-case letters, which may be easier to read. Color can also serve to organize material (Seaman, 1998). Color selection should be consistent throughout the slide presentation and the color used for text must be clearly distinguishable from the background (Seaman, 1998).

In general, the slides should be simple and also contain only one concept per display. The text in each slide should be short (Gotsick and Gotsick, 1996; Seaman, 1998). As students indicated some preference for graphics (pictures, charts, graphs) over text (Frey and Birnbaum, 2002), graphics used should be relevant to the text and contain

the meaning of the text (Bartsch and Cobern, 2003; Holzl, 1997; Mayer, 2001; Seaman, 1998). Examples should be used after concepts presented to help students remember and to tie the new knowledge to the old one (Seaman, 1998).

Some students may have a problem by copying material from the screen while trying to listen to the teacher explaining the material presented on the slide. The advantages of providing students with a copy of the slides is that it reduces the time students spend on material copying from the slides and it increases the amount of time focusing on the content of the slides, all of the benefits help them understand the material, and motivate them to pay more attention to the teacher's explanation. (Frey & Birnbaum, 2002; Mantei, 2000; Quible, 2002; Rickman & Grudzincki, 2000; Seaman, 1998).

Seaman (1998) also states that students may deeply understand the content in the slides when they focus on the teacher's elaborations. The copies of the slides serve as the initial step in improving an intensive class notes for self review (Seaman, 1998). A study revealed that 80% of students said that slide handouts helped them take notes and 91% reported the slide handouts benefit them when studying for an exam. They also pointed out that the handouts did not reduce their possibility of attending class (Frey and Birnbaum, 2002).

Participants

The sample of this research selected by using purposive sampling approach consisted of 96 first-year undergraduate students of Burapha University who were enrolling the course of 999042 (English II) in the second semester of the academic year 2011.

Methodology

This study is a quasi-experiment design (One-Group Pre- and Post- test Design) which attempted to create the electronics slides on supplementary grammar through E- Learning for English II course.

Instruments

1. The electronics slides on supplementary grammar lessons.

To create the electronics slides on supplementary grammar lessons, the researcher had studied a curriculum for university level of English II course and then reviewed related literature on the course to create the appropriate content for all lessons. After that, the researcher studied on how to create the lessons by using PowerPoint program and developed the design, explanation, and illustrations corresponding to the lesson content. The lessons were then examined by the experts. Finally, the lessons were revised by the researcher before being used in the try-out steps.

The purpose of each trial was to improve the lessons. To evaluate the efficiency of the lessons, the examination was done in three steps of trials. The subjects for the trials studied the lessons, did the exercises, and took the tests. The subjects' achievement scores from both exercises and the tests were calculated for the efficiency of the lessons. The three steps of trials are as follows;

An Individual Test

The first step was an individual test. Three students with different levels of English proficiency, which represented able, moderate, and less able students, participated in this step. All of them were asked to do a pre-test. After studying the electronics slides on supplementary grammar lessons and completing all exercises, the students did a post-test. The researcher asked the participants' feedback and opinions about the lessons and finally, the data from the exercises and test scores were analyzed.

A Small Group Test

The following trial was a small group test, consisting of nine students with different levels of English proficiency. There were three able, three moderate, and three less able students. The same procedures were done with this group.

A Field Study Test

The last step was a field study test. This step included 30 students with different levels of English proficiency. There were ten able, ten moderate, and ten less able students. The same procedures were done with this group.

Students' achievement scores of the exercises and the test scores from the three trials were determined for the efficiency of the lessons based on criteria of the 80/80 standard level.

2. Pre-test and Post-test

Tests constructed by the researcher were employed as a pre-test and post-test to assess students' learning achievement. Through students' learning achievement score of tests, the researcher could see whether students improve their learning. The researcher conducted the test by studying a curriculum and related literature of the course and setting the objectives of the test corresponding to the learning objectives in the lessons. Next, the researcher studied about the testing principles and procedures of test construction. The researcher wrote a multiple-choice test with four alternatives for 118 items. Then, the tests were sent to the experts who were academically qualified for content validity check. The content of the tests was then adjusted to their advice. And a pilot study was conducted with 90 first-year students at Burapha University who were not the samples in the study. Based on the data obtained from the pilot study, an item analysis was carried out. Each question was analyzed for the level of difficulty (d) and discrimination index (r). The criteria used to selected the test items were $p = 0.20-0.80$ and $r \geq 0.2$. Finally, 70 test items were selected as a pre-test and post-test.

3. Questionnaire

To explore the students' attitudes toward learning on the electronics slides on supplementary grammar, a questionnaire was used to collect the data. The researcher designed a rating-scale questionnaire, a five-level Likert scale, with 43 items which were divided into three parts: personal information of participants was the first part, the second part of the questionnaire was a five-level of satisfaction statements in five categories, and the third part was opened for any opinions and suggestions toward the lessons. The researcher conducted the questionnaire by studying academic methods used to design the questionnaire and then constructed statements in the questionnaire.

All of these statements were examined by the experts for content validity check. Finally, 43 items were chosen to be the questionnaire.

Findings

1. The results of an efficiency of the electronics slides on supplementary grammar through e- learning on English II course (999042)

The participants did the exercises after finishing all lessons and the average point from the correct answer from each items of the exercises presented in term of percentage. The participants took a post-test to determine the average point from the correct answer of all post- test items, presented in term of percentage. The results in Table 1 showed that the efficiency of the electronics slides on supplementary grammar on English II course (999042) were high.

Tables

Table 1. Efficiency of the electronics slides on supplementary grammar on English II course

Tests	N	Score	Mean	(SD)	The efficiency value
Process effectiveness (E1)	96	72	71.06	0.880	98.70
Performance effectiveness (E2)	96	70	63.31	1.276	90.45

Table 1 shows that the efficiency value (E1/E2) of the electronics slides on supplementary grammar on English II course (999042) was 98.70 / 90.45 which was higher than the given criterion of 80/80.

2. The results of participants' learning achievement

The participants took the pre-test before studying the lessons and the post-test after studying the lessons to determine their learning achievement. The results showed that the learning achievement of the participants increased. The comparison of data on the pre-test and the post-test mean of the experimental group were presented in Table 2

Table 2. The participants' learning Achievement for Experimental group

Test	N	Mean	(SD)	Sig.	Remarks
Pre-test	96	16.13	4.587		
Post-test	96	63.31	1.276	0.05	Significant

Table 2 shows the comparison of data on the pre-test and the post-test mean of the participant group. In a 70-item test, the participants got a pre-test mean score of 16.13. The result revealed that the participants did poorly on the test. This was because they had not previously studied any lessons. After administering the post-test, the group increased their mean score to 63.31. This result showed that the participants, after learning the lessons improved their grammatical performance.

3. The results of participants' satisfaction toward learning the lesson

To find out the participants' satisfaction toward learning the lesson, the researcher collected all data by using a five-rating scale questionnaire. The results of the analysis were presented in Table 3 below.

Table 3. Total average satisfaction of five areas

Statement	()	SD	Interpretation
1. The lesson content	4.47	0.59	Very satisfied
2. Techniques for presentation of the lesson	4.37	0.62	Very satisfied
3. The exercises provided after learning the lessons	4.37	0.64	Very satisfied
4. Achievement test	4.42	0.57	Very satisfied
5. Effectiveness of the lessons toward English II course	4.48	0.56	Very satisfied
Total average of five areas	4.42	0.60	Very satisfied

Table 3 showed that the participants had the very high satisfaction toward learning through the electronics slides on supplementary grammar on English II course (\bar{X} =4.42). Considering for each area, it was demonstrated that the participants were very satisfied respectively on the effectiveness of the lessons toward English II course (\bar{X} =4.48), the lesson content (\bar{X} =4.47), achievement test (\bar{X} =4.42), Techniques for presentation of the lesson (\bar{X} =4.37), and the exercises provided after learning the lessons (\bar{X} =4.37).

Discussion

The results of the research presented above showed that the research itself achieved its objectives.

The efficiency value (E1/E2) of the electronics slides met 80/80 standardized efficiency criteria, as the 1st 80 criterion reached an average value of 98.70 % while the 2nd 80 criterion reached an average value of 90.45 % which was significantly greater than the 80/80 standardized efficiency criteria. The three try-outs: an individual, a small group, and a field study trial experiment were used to test the basic quality of the lessons and to find out the defects of each lesson, all of these helped develop the lessons. This high efficiency value reflected the progress of the participants through the understanding in the content of the lessons which helped them get good scores in the exercises. A combination of the lessons and the exercises might motivate and encourage the participants to do the achievement test well.

The results of learning achievement demonstrated that after learning through the lessons, the participants had an average post-test score of 63.31 while the mean score in the pre-test was 16.13. It was concluded that the participants' mean scores after studying the lessons have risen and shown improvement and achievement in the course.

The participants' satisfaction toward learning through the lessons was generally high. It can be concluded that the clarity and effectiveness of the lesson content facilitated and developed independent learning atmosphere.

CONCLUSION

After the participants studying through the electronics slides on supplementary grammar for English II course, the process effectiveness represented 98.70 % and the effective performance represented 90.45% which shows that the lessons are effective (E1/E2) and also reports an academic improvement and achievement as stated in the results of learning achievement. According to the efficiency and the effectiveness in the lessons, learners were very satisfied with the lessons and this helps them gain a higher knowledge and the understanding in grammar usage. Therefore, it can be said that this tool could effectively be used to help students to achieve their goals in any English courses.

References

- Apperson, J. M., Laws, E. L., & Scepansky, J. A. (2006). The impact of presentation graphics on students' experience in the classroom. *Computers and Education*, 47(1), pp.116–126.
- Atkins-Sayre, W., Hopkins, S., Mohundro, and Sayre, W. (1998). *Rewards and liabilities of presentation software as an ancillary tool: Prison or paradise?* Paper presented at the National Communication Association Eighty Fourth Annual Convention, New York, NY.
- Bartsch, R. A. and Cobern, K. M. (2003). Effectiveness of PowerPoint presentations in lectures. *Computers and Education*, 41(1), pp.77–86.
- Beets, S. D. and Lobingier, P. G. (2001). Pedagogical techniques: student performance and preferences. *Journal of Education for Business*, 76, pp.231–235.
- Frey, B.A. and Birnbaum, D.J. (2002). *Learners' perceptions on the value of PowerPoint in lectures*. ERIC Document Reproduction Service: ED 467192.
- Gotsick, J. E. and Gotsick, P. S. (1996). Multimedia in the classroom. *Behavior Research Methods, Instruments, and Computers*, 28(2), pp.291–294.
- Holz, J. (1997). Twelve tips for effective PowerPoint presentations for the technologically challenged. *Medical Teacher*, 19, pp.175-179.
- Mantei, E. J. (2000). Using internet class notes and PowerPoint in the physical geology lecture. *Journal of College Science Teaching*, 29, pp.301–305.
- Mayer, R. E. (2001). *Multimedia learning*. New York: Cambridge University Press.
- Rankin, E. L. and Hoas, D. J. (2001). The use of PowerPoint and student performance. *Atlantic Economic Journal*, 29, p.113.
- Rickman, J., & Grudzinski, M. (2000). Student expectations of information technology use in the classroom. *Educause Quarterly*, 1, pp. 24–30.
- Seaman, M. A. (1998). Developing visual displays for lecture-based courses. *Teaching of Psychology*, 25(2), pp.141–145.
- Szabo, A., & Hastings, N. (2000). Using IT in the undergraduate classroom: should we replace the blackboard with PowerPoint?. *Computers and Education*, 35, pp.175–187.
- Thep-Ackrapong T. (2005). Teaching English in Thailand: An Uphill Battle. *Journal of Humanities Parithat*, Srinakharinwirot University, 27, pp.51-62.

