

## ผลของการใช้แบบฝึกหัดทบทวนบทเรียนแบบออนไลน์ และแบบปกติในวิชาภาษาอังกฤษพื้นฐานที่มีผลต่อความสามารถ ทางภาษาอังกฤษ และผลสัมฤทธิ์ทางการเรียนของนักศึกษา

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### บทคัดย่อ

งานวิจัยนี้เป็นการวิจัยเชิงทดลอง โดยมีวัตถุประสงค์เพื่อ 1) ศึกษาผลของการใช้แบบฝึกหัดทบทวนบทเรียนแบบออนไลน์และแบบปกติที่มีต่อความสามารถทางภาษาอังกฤษ 2) ศึกษาผลของการใช้แบบฝึกหัดทบทวนบทเรียนแบบออนไลน์และแบบปกติที่มีต่อผลสัมฤทธิ์ทางการเรียนของนักศึกษาในวิชาภาษาอังกฤษพื้นฐาน และ 3) ศึกษาทัศนคติของนักศึกษาที่มีต่อแบบฝึกหัดทบทวนบทเรียนทั้งสองแบบ กลุ่มตัวอย่างคือนักศึกษาที่ลงทะเบียนเรียนวิชาภาษาอังกฤษ 1 มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ (ประมาณ 2,537 คน) โดยทำการสุ่มตัวอย่างแบบง่าย แล้วแบ่งเป็น 2 กลุ่ม จัดทดสอบด้วยแบบทดสอบก่อนเรียนเพื่อทดสอบทางสถิติว่าความสามารถทางภาษาอังกฤษของกลุ่มตัวอย่างไม่แตกต่างกัน หลังจากนั้นทั้งสองกลุ่มถูกกำหนดให้เป็นกลุ่มทดลองและกลุ่มควบคุม โดยได้รับวิธีการสอนและเนื้อหาแบบเดียวกัน แต่กลุ่มทดลองทำแบบฝึกหัดเสริม

เพื่อทบทวนบทเรียนแบบออนไลน์ และกลุ่มควบคุมทำแบบฝึกหัดเสริมเพื่อทบทวนบทเรียนแบบปกติ แล้วนำผลคะแนนสอบหลังเรียน รวมถึงคะแนนสอบกลางภาคและปลายภาคมาวิเคราะห์ทางสถิติ ผลการทดลองพบว่าคะแนนสอบหลังเรียนของนักศึกษาทั้งสองกลุ่มมีค่าเฉลี่ยไม่แตกต่างกันอย่างมีนัยสำคัญที่ระดับ .05 ส่วนค่าเฉลี่ยของผลคะแนนสอบกลางภาค และปลายภาคของทั้งสองกลุ่มแตกต่างกันอย่างมีนัยสำคัญที่ระดับ .05 จากผลการทดลองสรุปว่าแบบฝึกหัดเสริมเพื่อทบทวนบทเรียนไม่ส่งผลให้คะแนนความสามารถทางภาษาอังกฤษของทั้งสองกลุ่มแตกต่างกัน แต่ส่งผลต่อคะแนนผลสัมฤทธิ์ทางการเรียน โดยกลุ่มทดลองมีคะแนนเฉลี่ยสูงกว่ากลุ่มควบคุม

**คำสำคัญ:** แบบฝึกหัดเสริมเพื่อทบทวนบทเรียนแบบออนไลน์ แบบฝึกหัดเสริมเพื่อทบทวนบทเรียนแบบปกติ ความสามารถทางภาษาอังกฤษ ผลสัมฤทธิ์ทางการเรียน

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## The Effects of Supplemental Online and Traditional Tutorials for a Fundamental English Course on Students' English Proficiency and Learning Achievement

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### Abstract

The purposes of this experimental research were to: 1) study the effects of supplemental online and traditional tutorials on students' English proficiency; 2) study the effects of supplemental online and traditional tutorials on students' learning achievement after a fundamental English course; and 3) examine the students' attitudes toward those tutorials. The subjects used in the study were students who enrolled in the English 1 course, at KMUTNB (approximately 2,537 students). They were selected by a simple random sampling method, divided into two groups and given a pretest. After the test, the samples consisted of the experimental group that was provided with supplemental online tutorials and the control group which was assigned to do supplemental traditional tutorials. They were taught with the same instructional methods and course

contents. Scores from the posttest, the midterm and the final examinations were analyzed, using descriptive statistics. Results revealed that the posttest mean scores of the experimental and control groups were not significantly different at the level of .05. However, the means of midterm and final examination scores were significantly different at the level of .05. The conclusions overall indicate that the supplemental tutorials did not affect the English proficiency scores of the two groups. However, they caused the learning achievement scores in the experimental group to be higher than in the control group.

**Keywords:** Supplemental Online Tutorials, Supplemental Traditional Tutorials, English Proficiency, Learning Achievement

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## 1. Introduction

The English language has played a main role in global communication and has been taught in hundreds of countries around the world. Although it is not the official language in Thailand, it is contained in university and school curricula. The learners' English language skills development can be evaluated by their levels of ability when they use the language which reflects their proficiency and learning achievement.

At KMUTNB, English 1 is a mandatory course for first-year undergraduate students. Integrated skills are focused so that they should be able to listen, speak, read and write effectively as well as communicate efficiently. Moreover, regular lesson reviews are useful and affect learning, achievement and knowledge enhancement. Likewise, in an English course, working on a supplemental tutorial after class helps students understand lessons better. Supplemental tutorials is available in documents, CD-ROM or contents on the Internet which have benefited the current education and learning in various ways, such as effective teaching, new styles of instruction, learning convenience and motivation [1]. Therefore, using these types of tutorials may increase their learning achievement and English proficiency. In an English 1 course, commercial textbooks have been used as a core for instruction with supplementary lessons provided by the publisher. However, teacher has the discretion to use these supplements or set lessons besides the textbook. Therefore, the students have not been encouraged to do the supplementary lessons intensively or regularly. Hence, three research questions are organized in this study: 1) Do supplemental online and traditional tutorials bring about different learners' English language proficiency?; 2) Do supplemental online and traditional tutorials bring about different learning achievement?; and 3) What are the learners' attitudes toward the supplemental online and traditional tutorials? Moreover, the hypotheses were specified as follows:

1) Students who use supplemental online tutorials probably gain statistically significantly different average English proficiency test scores from those who use supplemental traditional tutorials, at .05. ( $H_1 : \bar{X}_{online} \neq \bar{X}_{traditional}$ )

2) Students who use supplemental online tutorials probably gain a statistically significantly different average learning achievement scores from those who use supplemental traditional tutorials, at .05. ( $H_1 : \bar{X}_{online} \neq \bar{X}_{traditional}$ )

## 2. English Proficiency

In the era of globalization, it is certainly true that English plays an important role in communication, variety of circumstances, professions, and other fields. Therefore, it is a necessity that students have good English proficiency in order to use the language in various situations to communicate effectively and appropriately. English proficiency refers to an individual's ability to perform or use the English language knowledge which can be assessed by using a standardized or a proficiency test.

English proficiency is probably affected by various factors. For example, the familiarity of contents was found to have significantly influenced the students' overall comprehension performance [2]. Prior knowledge, experience and efficient instruction also plays an important role to assist learners to be able to read, write, listen or speak [3]. Moreover, in past years including computer technology in class has been able to increase effectiveness and efficiency of learner's education potential. In addition, it has caused learning to be more interesting and easier to memorize [4]. It can be seen that motivation and satisfaction to apply the language are key factors affecting the language ability [5]. Furthermore, modern network technology enhanced people's ability in communicating and accessing information unlimitedly. The online and multimedia contents offer interesting learning, flexible time and place, which helps learners be able

to organize their learning program autonomously [6]. Hence, computer technology is also a vital tool for current learning, not only for computer science, but also in other fields [7]. These factors attribute learners' desire to achieve the goal and favorable attitudes toward learning the language [8].

### 3. Learning Achievement

Learning achievement is stated as the success or failure in learning, and pertains to intellectual and non-intellectual factors which play an important role on it. Besides these factors, efforts, learning methods and environment are vital. Other than intellectual factors, health, family, culture and effective pedagogical methods also affect learning achievement [9], [10].

Learning achievement is also defined as performance of English skills that are learned, including knowledge which is used in solving problems, creativity, or self-access. Moreover, it relates to cerebral ability, feeling, values, and ability of knowledge utilization in problem-solving and furthering studies. The achievement is derived from learning, practice and training in various subjects and can be assessed by a test constructed by a teacher in each course [11]. Achievement test could be used as a tool to evaluate learning achievement [10]-[12].

Variables which considerably affect students' learning achievement include their previous grades, motivation, personality, family atmosphere, internal academic atmosphere, teacher's instruction, learning attitude, learning styles, and time for self-access learning [10].

### 4. Supplemental Tutorials

Tutorials is defined as a chapter of a book or manual, or a section of a computer program, designed to provide instruction or training by the use of exercises and assignments [13]. It can be computer-aided instruction for teaching lesson

contents. It may be used as a teaching aid in class or for tutoring outside the classroom [14].

Tutorials have two advantages [15], that is, information is presented or skills are modeled in an organized way, and learners are guided through previous use of information or skills. Moreover, tutorials are appropriate for presenting facts and learning rules, principles and problem-solving strategies, and are useful in almost every subject. They are also types of multimedia learning in which students can learn better from words and pictures than words alone. The other principles are that students learn better when corresponding words and pictures are presented near each other on the page and simultaneously, with the design effects stronger for below average learners. Multimedia-form tutorials result in better transfer performance, especially when learners are able to control the pace of presentation [15]. Moreover, the medium, which is generally used for learners to interact with the tutorials, can be paper-based (e.g. workbooks or booklets) and computer-based (e.g. websites or computer software). The paper-based format is usually portable and provided with still illustrations, exercises, and answer keys. It does not require computer facilities or the internet connections. But students may need the teacher's feedback when they have queries on the tasks. Meanwhile, the computer-based format can increase learners' motivation and enjoyment [16] resulting in their gaining new learning experience. It encourages learning new vocabulary and makes learners interested in accompanying animations and sound. Moreover, students can save individual data or scores which shows their simultaneous progress. Also, a computer is like an instructor that learners can interact with and receive immediate feedback from answering questions [17]. This may be more effective than doing exercises in a workbook to develop learners' language skills [18].

## 5. Traditional vs. Online Methods

The traditional classroom teaching method has always been used in English teaching. The traditional method exposed the learners to face-to-face environment which contained teaching aids e.g. Power Point slides, whiteboard, worksheets, etc. During lectures, students have an opportunity to be exposed to concepts, examples, in-class lessons, or homework. Moreover, at the lecture, students could ask questions or could be assisted by the teacher when they have some difficulties of working on in-class lessons. For homework tutorials, learners probably wait for another day or the next period to be clarified or given an answer key. Hence, the notable advantages of a traditional classroom are the interaction between teachers and individuals or the class, elaborating ambiguities, as well as immediate satisfactory feedback provided to learners in solving problems and contents. However, the limited time is an obvious disadvantage, that is, the period might be extended because of a problem discussion or answering students' queries, especially in large classes with some limitations, such as place, suitable grouping, and time [19].

Meanwhile, the online method has its own advantages. The computer-based supplemental lessons can be used with a large number of students as in-class techniques to help motivate and enhance EFL students' learning [20]. Its flexibility can allow learners to access the contents or tutorials anytime or anywhere. That is, it allows teachers to be free from exhaustion in repeating the class contents. Using computer does not involve human emotional factor [21]. Although a study found that most online learners gained an equal and/or better learning than campus students [22], an outstanding disadvantage of learning via the computer network is the absence of individual or social interaction. Therefore, the pros and cons of using online or traditional methods should be taken into consideration to suit each learner [23].

## 6. Methodology

### 6.1 Subjects

In experimental studies, the minimum number of subjects recommended is 30 individuals per group [24]. After defining the population as first-year undergraduate students who were enrolled in an English 1 course (approximately 2,537 students), two sections of those in the registration system (76 sections) were randomly selected. They contained approximately 60 students in each section. Then, all sample students took the pretest to prove whether their English language proficiency was not different from each other before the experiment. The pretest results obtained are shown in tables 1 and 2 (see overleaf) the pretest scores proved that their English proficiency was not statistically and significantly different at the level of .05. However, the mean scores of both treatment groups were quite low, compared to the total marks of 80. The subjects were, then, randomly assigned to a control group and an experimental group by a simple random sampling method. During the study in that semester, some students dropped out of the course or did not complete the proficiency test, midterm and final examinations, as well as exercises in the tutorials. Finally, both groups contained 52 students each.

**Table 1** Mean and S.D. of Pretest Scores

Group	N	Mean	S.D.
Experimental	52	19.42	5.20
Control	52	18.55	4.82

### 6.2 Research Tools

#### 6.2.1 English Language Proficiency Test

The English language proficiency test used in this research was adapted from a previous research study [25]. The test originally contained 150 multiple-choice type items which were divided into four parts: listening comprehension (50 items), semi-speaking (30 items), semi-writing (30 items) and reading comprehension (40 items). This English language proficiency test

**Table 2** Independent Samples t-test of Pretest Scores

Pretest	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.123	.727	.879	102	.382	.8654	.98471	-1.08778	2.81855
Equal variances not assumed			.879	101.424	.382	.8654	.98471	-1.08792	2.8168

$P \leq .05$

was constructed and used for the entrance exam with 249 medical students, Chulalongkorn University, on March 9, 1998. After that item analysis was used to analyze the test quality. The results revealed that the test contained good quality. The test was considered to be appropriate for university-level students.

To suit purposes of the present research, the test was employed as the pretest and posttest. The contents were mainly about general English which was different from the contents in the prescribed textbook. The number of items was reduced to 80 and consisted of three sections: speaking (30 items), semi-writing (30 items), reading comprehension (20 items).

#### 6.2.2 Midterm and Final Examinations

Midterm and final examinations were used to assess the students' learning achievement. Both tests were constructed according to the contents of the prescribed textbook the English 1 course (i.e. *New Inside Out*) [26], [27]. They consisted of four main parts: reading, grammar, vocabulary and functional language, with totally 100 multiple-choice and written items.

#### 6.2.3 Supplemental Online and Traditional Tutorials

Both supplemental online and traditional tutorials contained the same contents, but they were available differently in document and online formats. Students in each treatment group were assigned to do each kind outside the classroom. The tutorials contents were divided into two main parts: A and B. Part A

contained vocabulary, grammar, and useful phrases for conversations. Part B comprised pronunciation, listening, and reading exercises. For the supplemental traditional tutorials in the document format, the control group was asked to complete the exercise by themselves. The answer key was provided by the teacher in the classroom in the following period. The online format was available at <http://insideouttutorials.net> and the experimental students were given accounts and passwords to log in. They were able to spend unlimited time doing the exercises, but the system allowed them to complete the lessons only once. After each exercise was completed, the answer key and feedback were shown. The score records and message boards were also provided. Examples of both supplemental tutorials are shown in Figures 1 and 2 on the next page.

#### 6.2.4 Questionnaire

Two 5-Likert scale questionnaires were made to measure the students' attitudes toward the supplemental online (for the experimental group) and traditional (for the control group) tutorials. Before the questionnaires were used with the students, questions in the questionnaires were investigated by three specialists to indicate the Index of Item-Objective Congruence (IOC) [28], [29]. There were 50 items divided into three main aspects: attitudes toward doing the supplemental tutorials in the English 1 course (items 1-14),



**New Inside Out Pre-intermediate Unit 1 Tutorial**

ID No. \_\_\_\_\_ Name \_\_\_\_\_ Score \_\_\_\_\_/50

**Part A**

Vocabulary: Family

1 Complete with family words.

Male	Female
(1) _____	aunt _____
brother _____	(2) _____
(3) _____	grandmother _____
son _____	(4) _____
(5) _____	wife _____

(5 points)

2 Complete with family words.

a) My brother's wife is my \_\_\_\_\_.

b) My aunt's son is my \_\_\_\_\_.

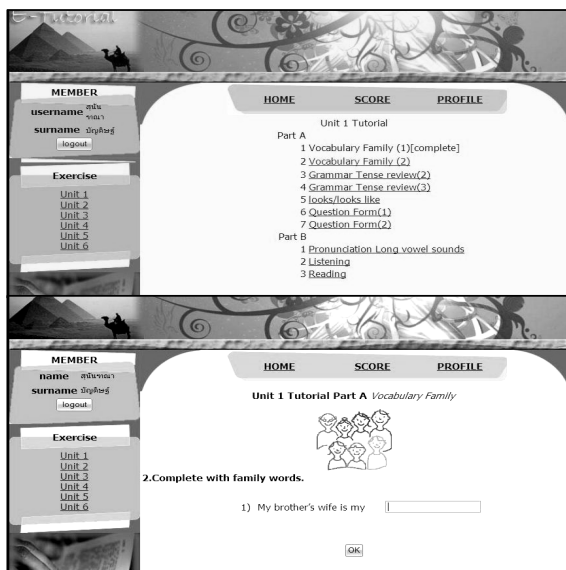
c) My brother's son is my \_\_\_\_\_.

d) My parents are divorced. My father remarried. His wife is my \_\_\_\_\_.

e) My mother remarried and had two girls. They are my \_\_\_\_\_.

(5 points)

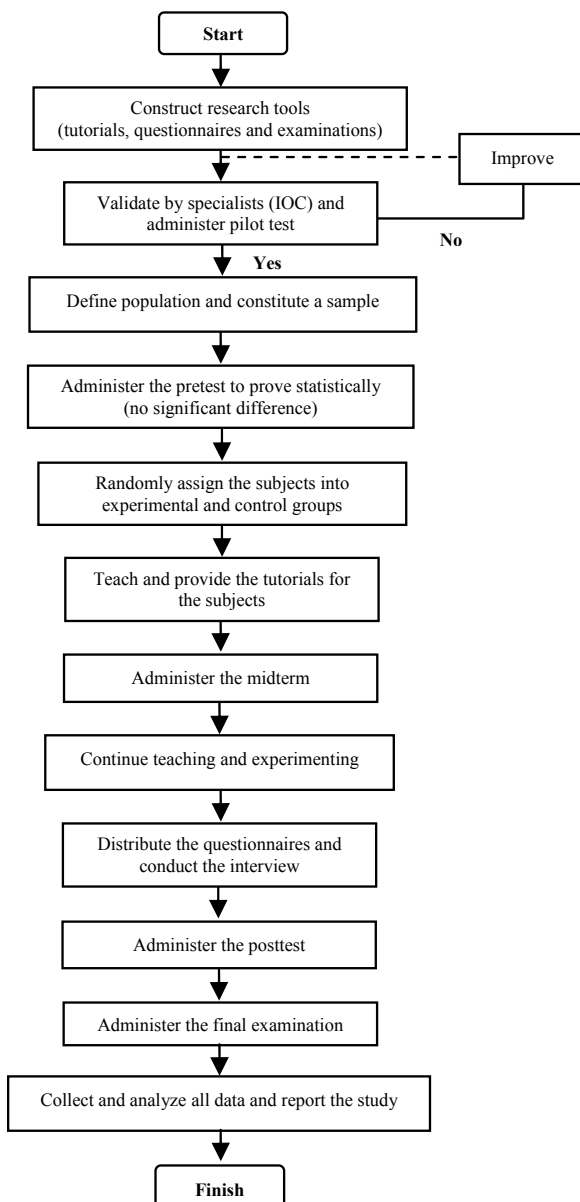
**Figure 1** Example of traditional supplemental tutorials.



**Figure 2** Example of web pages of online supplemental tutorials.

attitudes toward the supplemental tutorials (items 15-37) and attitudes toward the tutorials' formats (items 38-50). The item statements were, for example, "Doing the tutorials encourages you to

learn English." "You are satisfied with the supplemental tutorials." and "You request more illustrations in the tutorials."



**Figure 3** Procedures of the study.

### 6.2.5 Interview

Interviews were made at the end of the course in order to confirm the attitude results from the questionnaires. Five students from each treatment group were randomly assigned by a simple random sampling method. They were interviewed with 30 questions based on the three main aspects of attitudes described in the questionnaires.

### 6.2.6 Procedures

This study was conducted as described in the following framework (see Figure 3).

## 7. Results

### 7.1 English Proficiency

When both experimental and control groups finally took the English proficiency test, their posttest scores were calculated by mean, *S.D.* and independent samples *t*-test.

**Table 3** Mean and *S.D.* of Posttest Scores

Groups	N	Mean	<i>S.D.</i>
Experimental (Online Tutorials)	52	23.03	5.77
Control (Traditional Tutorials)	52	24.69	8.73

Table 3 shows the total number of subjects in experimental and control groups which had 52 students for each. Moreover, the mean of their posttest scores

were averaged at 23.03 and 24.69. While *S.D.* was at 5.77 and 8.73.

Table 4 shows the posttest scores of experimental and control groups analyzed by mean and *S.D.*, with their scores proven by independent samples *t*-test with Sig. (2-tailed) to compare the difference between two groups. The result shows that it was rated at .258. This reveals that they were not statistically and significantly different at the level of .05.

## 7.2 Learning Achievement

### 7.2.1 Midterm Examination Results

When both experimental and control groups took the midterm examination, their midterm scores were calculated by mean, *S.D.* and independent samples *t*-test.

Table 5 presents the mean and *S.D.* of the

**Table 5** Mean and *S.D.* of Students' Midterm Examination Scores

Groups	N	Mean	<i>S.D.</i>
Experimental (Online Tutorials)	52	18.05	5.38
Control (Traditional Tutorials)	52	13.43	6.68

subjects' midterm examination scores. After they took the midterm examination in the 9th week, the scores from both groups were analyzed. Results show that

**Table 4** Posttest Scores Analyzed by Independent Samples *t*-test

Posttest	Levene's Test for Equality of Variances		t-test for Equality of Means						
	<i>F</i>	Sig.	<i>t</i>	<i>df</i>	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	5.279	.024	-1.139	102	.257	-1.6538	1.45197	-4.53382	1.22613
Equal variances not assumed			-1.139	88.420	.258	-1.6538	1.45197	-4.53914	1.23145

$P \leq .05$



**Table 6** Midterm Scores Analyzed by Independent Samples *t* - test

Midterm	Levene's Test for Equality of Variances		t-test for Equality of Means						
	<i>F</i>	Sig.	<i>t</i>	<i>df</i>	Sig (2-tailed)	Mean Differ-ence	Std. Error Differ-ence	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	1.276	.261	3.882	102	.000	4.6204	1.19012	2.25979	6.98098
Equal variances not assumed			3.882	97.572	.000	4.6204	1.19012	2.25851	6.98226

$P \leq .05$

the mean of their midterm scores in experimental and control groups were averaged at 18.05 and 13.43, respectively. Furthermore, *S.D.* was at 5.38 and 6.68. It is observed that the mean scores of students who did the supplemental online tutorials were higher than those who did the supplemental traditional tutorials.

Table 6 shows the significant difference value of the students' midterm examination scores. After the midterm examination scores of the experimental and control groups were analyzed by mean and *S.D.*, their scores were proven by independent samples *t* - test with Sig. (2-tailed) to compare the difference between the two groups. Results reveal that it was rated at .000 and that they were statistically and significantly different at the .05 level.

### 7.2.2 Final Examination Results

At the end of the semester (17<sup>th</sup> week), both treatment groups took the final examination and their scores were calculated by mean, *S.D.* and independent samples *t*-test

Table 7 represents the mean and *S.D.* of subjects' final examination scores. After they took the final examination in the 17<sup>th</sup> week, the scores from both groups were analyzed statistically. It is observed that the mean of their final examination scores in experimental and control groups averaged at 18.57 and 15.15, respectively. Also, *S.D.* was at 5.158 and 8.06.

It is observed that the mean scores of the subjects who did the supplemental online tutorials were higher than those of the other group who used the supplemental traditional tutorials.

**Table 7** Mean and *S.D.* of the Final Examination Scores

Groups	N	Mean	<i>S.D.</i>
Experimental (Online Tutorials)	52	18.57	5.15
Control (Traditional Tutorials)	52	15.15	8.06

Table 8 (see overleaf) shows the significant difference value of the students' final examination scores. After the final examination scores of experimental and control groups were analyzed by mean and *S.D.*, their scores were analyzed by independent samples *t* - test with Sig. (2-tailed) to compare the difference between the two groups. Results reveal that a .012 rate found to be statistically and significantly different at the level of .05.

### 7.3 Attitudes toward Supplemental Online and Traditional Tutorials

Each questionnaire contained 50 questions which were grouped into three sections as presented in the Tables 9 and 10.

**Table 8** Final Examination Scores Analyzed by Independent Samples *t*-test

Final	Levene's Test for Equality of Variances		t-test for Equality of Means						
	<i>F</i>	Sig.	<i>t</i>	<i>df</i>	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	13.722	.000	2.576	102	.011	3.4181	1.32687	.78624	6.04991
Equal variances not assumed			2.576	86.672	.012	3.4181	1.32687	.78064	6.05551

$P \leq .05$

**Table 9** Items Concerning Supplemental Online Tutorials

Items	Aspects	Mean	<i>S.D.</i>	Interpretation
1-14	Attitudes toward doing supplemental tutorials in English 1 course	3.42	0.746	Agree
15-36	Attitudes toward supplemental online tutorials	3.68	0.728	Agree
37-50	Attitudes toward the format of supplemental online tutorials	3.54	0.787	Agree

Table 9 represents three aspects of all 50 items, with mean and *S.D.* and their interpretation. The mean values of all aspects were in “agree” level, rated at 3.42, 3.68, and 3.54, respectively. The results also reveal that their opinions were not much different.

Table 10 presents three aspects of all 50 items, with mean and *S.D.* and their interpretation. The mean values of all issues were in “agree” level, rated at 3.44, 3.75, and 3.96, respectively. As shown in the table, their opinions were at a similar level.

**Table 10** Items Concerning Supplemental Traditional Tutorials

Items	Aspects	Mean	<i>S.D.</i>	Interpretation
1-14	Attitudes toward doing supplemental tutorials in English 1 course	3.44	0.772	Agree
15-37	Attitudes toward supplemental traditional tutorials	3.75	0.768	Agree
38-50	Attitudes toward the format of supplemental traditional tutorials	3.96	0.748	Agree

doing the supplemental tutorials. Moreover, all of them provided positive feedback on both tutorials, for example, they helped review the lessons and do their examinations, and it would be good if they became part of the course evaluation. They also increased their confidence in learning English. However, some of them felt stressed, while others felt happy and neutral during doing the tutorials. The activity they did during the tutorials was consulting the textbook or dictionary and their classmates. The skills they found to be mostly developed were listening and reading, including the knowledge of grammar and vocabulary. Furthermore, all participants were satisfied with the formats and layouts of the tutorials, but they required more illustrations on the exercises. The major problem

#### 7.4 Interview Reports

The contents analysis of the interview from both groups was made. Results revealed that the majority of participants spent time outside the classroom

that the experimental group found while doing the tutorials was the slow Internet connection or crashes. They also requested to repeat the lessons because the system allowed the user to complete the exercises only once. However, most of them, from the experimental group, favored the supplemental online tutorials due to its convenience, immediate feedback and score records. All interviewees from the control group viewed that the tutorials document offered them time flexibility or convenience to study for the examination. They had a positive attitude toward the tutorials in a document format due to the problem of lacking computer facilities, and internet connections. Some answers from the students are exemplified in the following quotations:

“...it’s better than using the student’s book only. And I can review the lessons.”

“It gives more experience when doing the tutorials regularly.”

“Sometimes I felt a little bit stressed, but sometimes I didn’t.”

“I like the feedback provided in the tutorials. It lets me know what’s right or wrong, with explanation.”

“Both supplemental online and traditional tutorials could be used, but the online lessons are more convenient.”

“I like it because I can review what I have learned in class.”

## **8. Conclusions and Discussions**

### **8.1 English Proficiency**

Based on the first research question, “Do supplemental online and traditional tutorials bring about different learners’ English language proficiency?” The posttest results revealed that their scores were not statistically and significantly different at the level of .05. According to the result of the research conducted by Al-Shumaimeri who studied the reading comprehension performance of low-and high-ability of tertiary students [2], he found that contents familiarity significantly affected the students’

overall comprehension performance. The contents of the tutorials in the present study were totally different from the contents in the English proficiency test. The test mainly contained the knowledge outside of the textbook. In other words, the supplemental tutorials might not considerably affect their language proficiency. In addition, learners’ language proficiency level may be an important factor. The proficiency level of both treatment groups was not high as witnessed by the pretest’s mean scores. Therefore, this may cause their post-course level of language proficiency between the two groups to be of no difference. Moreover, their low proficiency scores would also seem to stem from the difficulty of the test. In order to increase their English proficiency level, students should have background knowledge and experience relating to the test [3]. In addition, motivation and satisfaction to apply the language are also key factors affecting the language ability [5].

### **8.2 Learning Achievement**

The midterm and final examination scores have a statistically significant difference (at the significant level of .05). This is because the tutorials content familiarity possibly affected their learning achievement scores as the contents of the tutorials were from the student’s book lessons and similar to those in the examinations. Furthermore, the means of these scores in the experimental group were higher than the mean scores of the control group. When compared to the traditional tutorials, the online supplementary lessons improved the students’ knowledge and increased students’ enjoyment in learning English 1 [16]. Students who participated in the supplemental online tutorials obviously received immediate feedback. Unlike the traditional tutorials which students did outside the classroom and needed to hand in to the teacher and received the answer key and feedback in the following week. According to the Hawthorne Effect, any special attention elicits an improvement in

productivity or performance, and could play a role in the results [4]. Using computer-based tutorials benefits individualized learning and reviewing the lessons, learning effectiveness, learner's autonomy, flexible schedule and place, and inner responsibility. This is so because this type of tutorials provides immediate feedback and answer key with graphics, sounds and amusement, and encourages active learning and problem-solving skills. Students can also receive their learning progress and evaluation automatically, and students could have good attitudes toward the subject [17]. Moreover, it benefits class instruction because it reduces learner's boredom, provides computing students' score data, is easy to edit the lessons, and teaches or trains the learners authentically or from simulations. More importantly, computer-based supplemental tutorials can be used with a large number of students and can supplement as in-class techniques to help motivate and enhance EFL students' learning [20]. To sum up, using computer technology can increase effectiveness and efficiency to learner's language potentials because it causes learning to be more interesting [4].

### **8.3 Attitudes toward Supplemental Online and Traditional Tutorials**

According to the results, the students mostly agreed that the tutorials were useful and helped them learn and use English better. They viewed that tutorials were necessary for the English course. This might be related to motivation they received after using the tutorials which gave them a desire to achieve the goal of learning the language plus favorable attitudes toward learning the language [8]. Moreover, according to the attitudes toward the formats and styles of the tutorials, the students' opinions were generally at satisfactory levels. Regarding the attitudes toward the tutorials, both treatment groups were only exposed to their supplemental tutorials, particularly assigned by the researcher. Both types of tutorials

were not swapped between the two groups. That is, they did not experience doing the tutorials of the other group. This may cause their positive attitudes toward their tutorials. Those who liked the supplemental traditional tutorials said that they were convenient due to insufficient facilities (e.g. computer access, internet connections and computer skills). Some favored the online tutorials because of the convenience in doing the computer-based lessons which provided multimedia method for more interesting learning, flexible time and place, as well as learning at one's own pace. In other words, online learners are able to organize their learning program autonomously and are more motivated [6]. This also lends support to a comparative study [4] which investigated the validation of supplemental online tutorials that were used as a website supplementary for Nutrition students with the exposure to traditional classrooms. Results showed that the students had a positive attitude toward using the supplemental online tutorials to support classroom instruction, which is similar to the students' attitudes from this research.

In short, although learners who did the traditional tutorials waited for the next period to be clarified or given the answer key, traditional methods bring the interaction between teachers and individual students or the whole class, clarifying ambiguities, as well as immediate satisfactory feedback to learners in contents and problem solving. However, the limited time is an important disadvantage. That is, the period might be extended because of a problem discussion or answering questions in order to satisfy everyone, especially in a large class [19]. While the advantages of online methods are, for example, the flexibility which learners can access the contents or tutorials anytime or anywhere, individual learning responsibility, and relief of doing lessons through a computer network. These discard the emotional factor, for instance, when teachers sometimes are exhausted from having to repeat the class contents. [21].

## 9. Recommendations

The conclusions and discussions show that to increase the students' language proficiency, the contents in the tutorials should be more general, not content-specific and the learners should be offered a long-time practice. Furthermore, it is noted that the supplemental online tutorials can be a better or optional way for reviewing the lessons and bring more positive effects [30].

Using tutorials should provide students a learning opportunity, understanding the lessons, motivation, good attitudes toward the course and instruction, and should increase students' interest in English. Furthermore, it certainly develops teaching quality, for example, receiving advice, class participation, reinforcement from teacher, mistake correction and giving feedback to learners [11]. However, paper-based tutorials may be a simple way for students to review lessons and convenient for those who lack infrastructures (e.g. computers or network, and computer literacy).

Recommendations for future studies are drawn into three issues. Firstly, there should be an opportunity for the experimental and control groups to get exposed to both types of tutorials in order to receive obvious investigation on their attitudes toward the exact supplemental tutorials they would prefer. Secondly, facilities, such as computers and fast internet access, should be ready for the study which pertains to technology in order to eliminate technical problems and for the students to do online supplementary lessons conveniently and efficiently. Finally, supplemental tutorials can probably be part of the course evaluation. This is because the interviews' results revealed that doing the tutorials with extra marks from the teacher could motivate the students to learn actively and pay attention to review the lessons.

## 10. Limitations of the Study

Limitations of this study included the lack of

computer facility and Internet connection problem which probably affected the students' convenience in doing the supplemental online tutorials. Furthermore, the lack of self-access learning skills among Thai learners had considerable effects on encouraging them to do both tutorials.

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