

## The Effect of a Weblog-Based Electronic Portfolio on Thai EFL Undergraduate Students' English Writing Skills

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### Abstract

An electronic portfolio is an ideal tool for meeting the needs of established and emerging pedagogy and approaches to learning, and many educators see E-portfolios as vital to learning, teaching and assessment. The participants in this quasi-experimental study were forty-five undergraduate students who were studying the English IV course at Suranaree University of Technology, Thailand. The purposes of this study were to investigate the effects of a Weblog-based E-portfolio on the English writing skills of Thai EFL undergraduate students before and after learning; and to find out their opinions of learning through a Weblog-based E-portfolio to improve their English writing skills. The participants writing skills were assessed by means of a pre-test, and a post-test was administered after they had studied writing using the Weblog-based E-portfolio. The participants expressed their opinions by means of reflective journals and a questionnaire regarding improvements in their writing skills through the use of the Weblog-based E-portfolio. The results of the study showed that the Weblog-based E-portfolio was effective based on the 80/80 standard criterion; and the post-test results of the participants' writing skills were significantly higher than the pre-test results. In addition, the results obtained from the questionnaire and reflective journals showed that the participants had positive opinions towards learning through the Weblog-based E-portfolio.

**Keywords:** Electronic Portfolio, Weblog, Writing Skills, Teaching English as a Foreign Language, Technology Enhanced Language Learning

### Introduction

In Thailand, English is considered as the most important foreign language and is the first foreign language that Thai students learn in school (O'Sullivan & Tajaroensuk, 1997), being taught at all educational levels. The major goal of EFL teaching in Thailand is to develop the four integrated skills: listening, speaking, reading and writing. However, writing is thought to be the most difficult skill for students. Writing skills are important for communicating and they are seen as a developmental process of many aspects of learning, such as inquiring and problem solving, rather than simply resulting in a product (Wennerstrom, 2006). In order for students to develop their writing skills, they need to have background knowledge of the language concerning rhetorical organization, proper language use or specialist vocabulary that writers want to communicate to their readers (Tangpermpoon, 2008). Writing is recognized as the most

difficult skill for Thai students (Tangpermpoon, 2008; Watcharapunyawong & Usaha, 2013; Wimolmas, 2013). Thus, learners need to spend a considerable amount of time practicing their writing.

At Suranaree University of Technology (SUT), a large number of students have a low proficiency in English writing skills, and in fact score quite low in reading and writing on their University Entrance Examination (Suppasetsee, 2005). The students at SUT have little opportunity to use and apply their English writing skills, whether it is inside or outside the classroom. Wannaruk (2008) stated that the low English proficiency level of the students may result from their limited exposure to an English environment. Most students at SUT also have a very limited knowledge of vocabulary in English (Ward, 2000) and have little opportunity to develop their writing skills in the English language classroom. Udomyamokkul (2004) claimed that when SUT students have to perform a writing task, they have problems with writing sentences in terms of both vocabulary and grammar. Moreover, writing skills are given little attention. Teachers may not have sufficient time to cover the teaching material or explain details from the textbook concerned with improving English skills, especially writing skills (Linh & Suppasetsee, 2016). Therefore, SUT students need to have more opportunity to practice and use their English writing outside the classroom. Considering the problems mentioned above, the researchers became aware that SUT students still struggle with their writing skills, and that these problems need to be fully investigated and resolved.

Technology enhanced language learning (TELL) is one method for encouraging students to learn language skills both inside and outside the classroom. Using unusual and exciting activities instead of textbooks can motivate learners to study the English language (Geoffrion & Geoffrion, 1983). Access to ICT has become widely available and affords various methods of instruction to assist students to communicate (Prapphal, 2004). Among many popular social media sites, Weblogs are popular in an educational context. Weblogs have been shown to have a positive impact on the teaching of writing (Tu, Chen, & Lee, 2007) and the development of EFL students' English writing competency. An E-portfolio can also improve EFL students' writing skills (Meyer et al., 2010). An electronic portfolio uses electronic technology that allows the users of a portfolio to easily collect pieces of work in many formats such as text, audio, video, and pictures (Barrett, 2000). One advantage of such an E-portfolio is that it is easy to access, organize and search. An E-portfolio also helps students to become involved in the assessment process. It can also promote the exchange of ideas and provide feedback, with students getting feedback regularly and quickly through various media channels.

Because of the problems of teaching and learning writing skills for Thai EFL students, the researchers realized that learning writing by using an E-portfolio could help students learn to write more effectively. It was hoped that an E-portfolio would provide more opportunities for students to practice writing skills via technology and improve their writing skills, which have largely been ignored. Therefore, this research study was designed to investigate the efficacy of a Weblog-based E-portfolio to improve EFL students' writing skills with the purpose of answering the following research questions:

1. What is the effect of a Weblog-based E-portfolio on the English writing skills of Thai EFL undergraduate students?
2. What are Thai EFL undergraduate students' opinions toward learning English writing skills through a Weblog-based E-portfolio?

## **Review of the Literature**

The literature review provides background information and reviews of related literature about process writing, writing assessment, Technology Enhanced Language Learning, technology in writing instruction and E-portfolios.

### **Process Writing**

The process writing approach focuses on the writer rather than the text, concentrating on a writer-based approach. The concept of this approach is that writing is a process of discovering meaning and developing organization (Matsuda, 2003). Writing is a recursive process in which the writer often moves back and forth during the process. To create a writing product, writers generally follow the process by organizing, drafting, revising, editing and publishing (Sokolik, 2003). Process writing involves several steps to guide the students from the beginning of writing to creating a final product. Jones (2006) stated that generally there are five stages in the process writing approach which consist of prewriting, drafting, revising, editing and publishing. Teachers who believe in the process writing approach try to help their students improve fluency rather than accuracy. The students evaluate their own process by showing evidence of the process and final products (Barbera, 2009). Self-assessment keeps the students involved in the process and it encourages them to take on responsibility for their work and to be more motivated. Hedge (2002) claimed that in the writing class, teacher and peers can be the readers, exchanging ideas which help the writer to be clear and accessible to other readers. The feedback system in the process writing approach is considered as one of its most significant benefits. Therefore, many research studies, including this study, prefer the process writing approach. Another important point is how to assess writing and this is reviewed in the next section.

### **Writing Assessment**

Writing assessment relates to the evaluation of a writer's ability or performance in a writing task. Writing assessment can help students with guidelines for use both inside and outside the classroom, for example, giving a grade, placing students in proper places and evaluating programs. Perceptions of writing are shaped by the methods used to assess writing. One of the problems for the teacher is being a guide and a rater at the same time. To solve this problem, some researchers have developed another way to assess writing which is by using portfolio assessment. The portfolio is a collection of writings produced over a period of time in a particular context (Hamp-Lyons, 1991). Thus, by using portfolio assessment the teacher can be both a guide and a rater at the same time. An E-portfolio assessment is an electronic version of the portfolio assessment which can also be used to develop the process writing approach. Modern access to computer technology can make this step more convenient. An overview of technology enhanced language learning is reviewed in the next section.

### **Technology Enhanced Language Learning**

As the use of technology in language classrooms has increased rapidly over the past years, language teachers have recognized and acknowledged its value for teaching and learning. Language learners can learn about language anywhere and anytime by using a portable electronic device. Yang and Chen (2007) claimed that during the past two decades, multimedia technology for foreign language instruction has been used widely. Technology enhanced

language learning (TELL) includes every type of technology used in the classroom such as videos, audio language labs. TELL is the use of all technologies in language instruction both inside and outside the classroom. The main purpose of TELL is to assist and enhance language learning. Many teachers use technology instruction to replace traditional classroom instruction and to analyze student performances. In addition, technology can make students more independent by giving them the option to work at any time and at their own pace (Jonassen, 1996).

### **Technology in Writing Instruction**

With the implementation of technology new ways of teaching and learning writing have emerged. A large number of technology tools have been created and employed for developing language skills, especially writing skills such as drill and practice, automated essay scoring, and web-based peer reviews (Kelley, 2008). The use of technology tools such as word processing, computer writing systems, and computer-assisted writing software increased the quantity and quality of student writing more than traditional instructional methods (Jones, 2006). Teachers of writing skills in English also have positive attitudes toward the potential of word processing and other computer-based writing tools to facilitate students' writing processes and improve their end products (Ferris & Hedgcock, 2005). Technology can make many dimensions of the writing process easier and improve students' attitudes, offering opportunities to create new types of documents. One technology tool that is frequently used for writing instruction and provides students with a different environment for actively practicing writing is the Weblog.

### **Weblog**

Weblog refers to an ongoing log of written commentaries which is posted on a website, providing a channel for people to write stories in a public space and receive reader comments. Weblogs have changed the way people use the Internet, from consumers to creators of information. Learning online with various sources of technology focuses particularly on collaboration and two-way communication at present. Teachers have to discover the potential of Weblogs, social networking, and other software that can encourage students' learning and various ways of thinking. This study uses the Weblog as a tool for creating an E-portfolio. The portfolio system is built on a blogging platform.

### **E-portfolio**

One technology tool that is frequently used in writing instruction is an E-portfolio. The users of an e-portfolio can collect their pieces of work in many formats such as text, picture, audio, and video. The E-portfolio allows students to demonstrate their performance, knowledge, abilities, and also improve their work by themselves (Milman & Kilbane, 2005). There are numerous advantages of using E-portfolio in classroom because it is easy to share, access, organize and search. The finding of Erice (2008) and Meyer et al., (2010) studies showed significant developments in the writing skills of the students who used the E-portfolio.



Figure 1. Weblog-based E-portfolio

Figure 1 shows the first screen of the Weblog-based E-portfolio for improving English writing skills. In the next section, a theoretical framework is presented. This shows a particular perspective for examining a research topic.

### Research Theoretical Framework

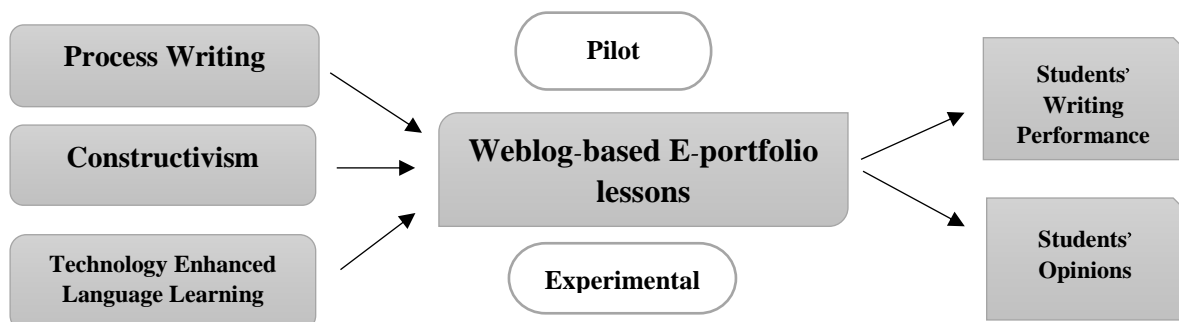


Figure 2. Research Theoretical Framework

This study aims to investigate the effects of the Weblog-based E-portfolio on the English writing skills of Thai EFL undergraduate students. The research theoretical framework in Figure 2 illustrates the development process of the Weblog-based E-portfolio.

In the development process, it is important that the theoretical framework should be used as the foundation for the learning materials. The concepts include a process writing approach, constructivist theory, and technology enhanced language learning which were integrated in developing the Weblog-based E-portfolio lessons. Then, the lessons were tested on the students through a three-step pilot to determine their efficiency. The Weblog-based E-portfolio lessons were implemented with the participants in the experimental phase to improve the participants' writing skills and to investigate their attitudes towards learning through the Weblog-based E-portfolio.

## Research Methodology

### Research Design

The present study was conducted with one group for the pre- and post-test design. The study included forty-five participants. The experiment with the Weblog-based E-portfolio aimed to improve the students' writing skills in English over a period of ten weeks. All participants took a writing pre-test in order to measure their writing skills before they used the Weblog-based E-portfolio. In order to make sure that all the participants could create and use the Weblog-based E-portfolio, a training session was provided. The training also explained process writing step by step and the scoring rubrics used for the writing assessment. Then, the participants completed lessons and exercises designed by the researchers, which consisted of a first draft and then subsequent drafts of writing assignments and a reflective journal using the Weblog-based E-portfolio. After using the Weblog-based E-portfolio, all of the participants were given a writing post-test. Then, the results of the writing pre-test and the writing post-test were compared. After that, a questionnaire was administered to the participants to explore their opinions toward learning through the Weblog-based E-portfolio.

### Research Participants

A group of forty-five undergraduate students who studied the English IV course (203204) at Suranaree University of Technology (SUT), Nakhon Ratchasima, in the first trimester of the academic year 2016 was selected as the participants for this study using convenience sampling. The researchers randomly chose one class of the English IV course. The English IV course is a compulsory English course at SUT which focuses on text-based tasks involving integrated skills. However, the teachers usually have insufficient time to cover all the integrated skills in detail, especially the writing skills.

### Research Instruments

**Weblog-based E-portfolio.** The Weblog-based E-portfolio was created by both the researchers and the participants. For the English IV's Weblog-based E-portfolio, the researchers posted the lessons, exercises, and information for the participants. The lessons were based on the topics of the English IV textbook (Read This! Fascinating Stories from the Content Areas Book 3 by Alice Savage). The researchers chose two of the units: Unit 3 (Sport and Fitness) and Unit 5 (Automotive Technology) for creating two Weblog-based E-portfolio lessons. Each lesson consists of lesson contents, exercises, and assignments. The contents in each lesson were mostly about paragraph writing such as topic sentences, supporting sentences, and concluding sentences. For the participants' Weblog-based E-portfolio, the participants were required to learn all the contents and do the online exercises and writing assignments provided. The participants had to create a Weblog-based E-portfolio themselves for improving their English writing skills. Figure 3 and 4 show the screen of the lessons and the writing tasks on the Weblog-based E-portfolio for improving English writing skills, respectively.

### Lesson 1-Sentence

## Sentence

**Objective:**  
Students will be able to know about sentence structure and types of sentences. Then they can use these information for writing.

We are going to learn how to write sentence. Writing sentence is a basic skill for writing.

▶ Please watch this video about Sentence Structure !

ESLgold.com Basic Sente...

**Learning Basic Sentence Structure for ESL Students**

ESLgold.com

Subject-Verb relationship is very important in every sentence. There are five basic patterns of English sentences.

S-V	Subject-Verb	Usain Bolt runs.
S-V-O	Subject-Verb-Object	She loves her bicycle.
S-V-Adj	Subject-Verb-Adjective	The bad athletes are lazy.
S-V-Adv	Subject-Verb-Adverb	Lionel Messi plays smartly.
S-V-N	Subject-Verb-Noun	He is my teammate.

▶ Please do the Sentence Exercise 1 - click link below  
<http://www.quia.com/quiz/5858021.html>

### ▶ Composition of paragraph

- 1. Topic** is the subject that the paragraph is about.  
*Examples*  
- Usain Bolt  
- My favorite sport
- 2. Topic sentence (Main idea)** is a key concept of paragraph. It sums up the writer's primary message.  
*Examples*  
- Usain Bolt is the fastest man in the world.  
- My favorite sport is Football.

Figure 3. Lessons on Weblog-based E-portfolio

### Your Assignment!

Thinking about your favorite athlete in the world. Write a paragraph about him/her at least 40 words.  
**A paragraph must have**

- Topic,
- Topic sentence,
- Supporting sentences, and
- Concluding sentence

Do not copy the information from the others. You must use your own words.

You can use the following question as your outline

- Introduce who he/she is? (his/her picture or video)
- Information about his/her
  - What does he/she look like?
  - What kind of sports does he/she play?
  - What has been his/her sport success?
  - Why do you like him/her?
  - and other information.

You have to write and post **on your Weblog-based E-portfolio following the Process writing step by step.**

- 1) Pre-writing**  
Write and post your ideas by Outline
- 2) Drafting** (Write and post your 1<sup>st</sup> draft)
- 3) Revising**
  - 3.1 Self-assessment < Click and do it.
  - 3.2 Friend comment - You need to give a feedback to your friend at least 1 person (Teacher will tell you who you will comment)
  - 3.3 Teacher feedback - Teacher will give feedback to your work.
- 4) Editing**
  - 4.1 Check the comments from your friends and teacher
  - 4.2 Check the following: grammar, structure, word choice, punctuation, capitalization, spelling, and citation
- 5) Publishing** (Write and post your 2<sup>nd</sup> draft)  
**After you post your 2nd draft, you are required to write and post a Reflective journal**

**You need to write and post 4 things on your Weblog-based E-portfolio**

1. Outline
2. 1<sup>st</sup> draft
3. 2<sup>nd</sup> draft
4. Reflective journal

Figure 4. Writing Tasks on Weblog-based E-portfolio

**Writing Pre-test and Post-test.** A writing pre- and post-test were set up to analyze and compare the participants' writing skills before and after learning writing through the Weblog-based E-portfolio. The results of the writing pre-test and post-test were compared. Participants were asked to write on a topic for 60 minutes. The writing pre-test and post-test were not exactly the same but they were based on the same topic of the English IV course syllabus. The participants were not allowed to use a dictionary or any online support during the tests. The researchers and one teacher of the English IV course, who has been teaching English for at least five years, were the raters who evaluated the participants' writing using the scoring rubrics. The scales were classified into five main aspects of writing which were topic sentences, supporting sentences, concluding sentences, organization, and grammar/mechanics. Three aspects (topic sentences, supporting sentences and concluding sentences) were adapted from the Rubric for a Well-Written Paragraph. Two aspects (organization and grammar/mechanics) were adapted from the Rubric for Elementary Paragraph Writing. The Pearson product-moment correlation coefficient was also used for analyzing inter-rater reliability.

**Questionnaire.** To explore the participants' opinions toward learning through a Weblog-based E-portfolio, a questionnaire was used to collect the data. The researchers created 18 questions (see Appendix A). The participants were required to express their opinions according to a five-point Likert scale. To ensure that the participants understood the statements and instructions correctly, the questionnaire was in Thai. The questionnaire was administered to the participants after the experiment. Before it was used, the questionnaire was evaluated by three experts in the English Language Teaching field who had experience in evaluating questionnaires.

**Reflective Journal.** The participants were required to write a reflective journal in the spaces in their Weblog-based E-portfolio using a series of guided questions to express their opinions toward learning writing through the Weblog-based E-portfolio (see Appendix B). The guided questions were evaluated by three experts in the field of English Language Teaching who had experience in evaluation. To ensure that the participants understood the guided questions correctly, they were written in Thai. The participants also wrote their reflective journals in Thai.

## Data Collection

Data collection for this present study was conducted as follows:

- (1) In the 1<sup>st</sup> week, an orientation on the Weblog-based E-portfolio was organized for the participants. The writing pre-test was also administered.
- (2) In the 2<sup>nd</sup> week, there was a training session for the participants on how to construct and use their personal Weblog-based E-portfolio. The training explained how the participants should write their opinions in their reflective journals. Furthermore, the researchers also described the process writing step by step and the scoring rubrics used for the writing assessment.
- (3) From the 3<sup>rd</sup> to the 9<sup>th</sup> weeks, the participants studied and completed the exercises, and wrote the first and subsequent drafts of their writing assignments. If the assignments could not be finished within the class time, they had to be completed in the participants' free time out of class through Weblog-based E-portfolio. They also wrote their reflective journals after each writing assignment and submitted them to the teacher through their Weblog-based E-portfolio.
- (4) In the 10<sup>th</sup> week, the writing post-test was administered, and the participants were requested to do the questionnaire afterwards.



## Data Analysis

The data obtained from the different instruments were analyzed and interpreted both quantitatively and qualitatively. The quantitative data analysis was carried out with the data obtained from the writing tests and the questionnaire. The statistical method employed to compare the participants' writing tests was the t-test to measure the participants' improvement in writing skills after using the Weblog-based E-portfolio. The researchers and one teacher of the English IV course who has been teaching English for at least five years were the raters who evaluated the participants' writing tests by using the scoring rubrics (see Appendix C). The Pearson product-moment correlation coefficient was also used for analyzing inter-rater reliability. The quantitative data from the five-point rating scale in the questionnaire was calculated for the arithmetic means, while the qualitative data analysis was obtained from the reflective journals. The data obtained from the reflective journals were translated and transcribed from Thai to English, coded, categorized and interpreted to explore the participants' opinions toward learning English writing skills through the use of the Weblog-based E-portfolio.

## Weblog-based E-portfolio Pilot Phase

To evaluate the efficiency of the Weblog-based E-portfolio, three steps of a pilot were conducted: Individual Testing, Small Group Testing, and Field Testing, respectively. The students' scores for the exercises and assignments from the three steps of the pilot were calculated in order to determine the efficiency of the Weblog-based E-portfolio based on the criteria of the 80/80 standard proposed by Brahmawong (2013). The first 80 or E1 is the efficiency of the process and the second 80 or E2 is the efficiency of the learning outcomes. In this study, E1 was the scores from the exercises and E2 was the scores from the writing assignments. After the end of each pilot step, the Weblog-based E-portfolio evaluation was conducted to revise and improve its efficiency.

**Individual Testing.** The first step of the pilot was individual testing with three students at different English proficiency levels (able, moderate, less able) who were not participants in the final part of the study. The three students were assigned to study and practice two lessons through the Weblog-based E-portfolio for studying English IV. In the first step of the pilot, the E1/E2 scores for each lesson were 77.78/76.39 in lesson 1, and 75.56/73.61 in lesson 2. The E1/E2 scores did not reach the 80/80 standard criterion. The researchers asked the students for their feedback on their experiences in using the Weblog-based E-portfolio. Then, the researchers revised the lessons on the basis of the results and feedback received.

**Small Group Testing.** Small group testing, the second step, was conducted with six students with different proficiency levels of English (2 able, 2 moderate, 2 less able) and they did not participate in the final study. The same procedure as for the individual testing was used with this step. The overall scores in the small group testing were 78.89/78.47 in lesson 1 and 77.78/77.08 in lesson 2. The participants were unable to reach the 80/80 standard criterion in both lessons. Therefore, the researchers had to revise the lessons.

**Field Testing.** The last step of the pilot was field testing with forty-five students at different English proficiency levels in one classroom who did not participate in in the final study. The same procedure was conducted with this group. In the last step, the efficiency of the process

and product in both lessons reached the 80/80 standard criterion. The E1/E2 scores were 81.63/81.11 in lesson 1, 80.59/80.28 in lesson 2. However, the Weblog-based E-portfolio had to be revised based on the suggestions and feedback from the students before implementation in the experimental phase. The Weblog-based E-portfolio successfully reached the 80/80 standard criterion because several revisions were made with regard to the exercises, assignments, vocabulary and content. The results of the E1/E2 scores of the three steps of the pilot are presented in Figure 5.

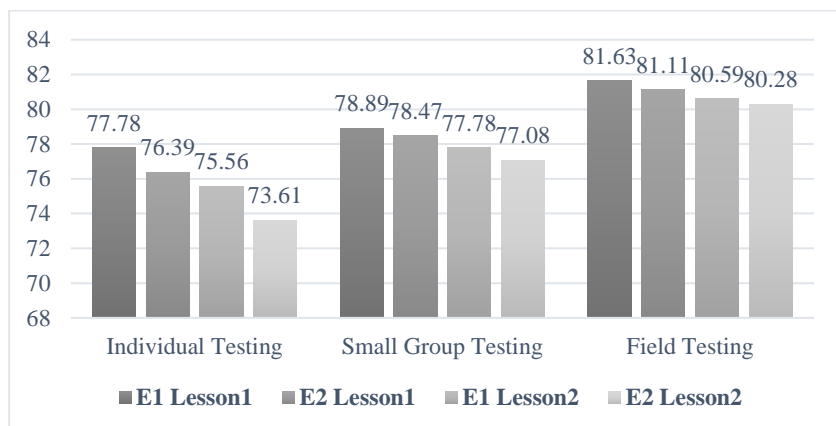


Figure 5. The E1/E2 scores of the Weblog-based E-portfolio Pilot Phase

### The Efficiency of the Weblog-based E-portfolio of the Experimental Phase

After the Weblog-based E-portfolio was revised and modified in the three steps of the pilot phase, it was implemented in the experimental phase. It was conducted with forty-five science-oriented students who were the participants of this study. They were required to learn and do the exercises and assignments through the Weblog-based E-portfolio. The E1/E2 scores of the experiment in both lessons reached the 80/80 standard criterion. The E1/E2 scores were 82.52/82.22 in lesson 1, 81.63/81.39 in lesson 2. The Weblog-based E-portfolio was successfully developed and implemented to reach the 80/80 standard criterion. Thus, the Weblog-based E-portfolio was demonstrated to be suitable for improving the participants' writing skills. The results of the E1/E2 scores for the experiment are shown in Figure 6.



Figure 6. The E1/E2 scores from the Experiment

## Results

This section presents the findings organized in two sections according to the two research questions of the study.

### Results of the Effect of the Weblog-based E-portfolio on the Participants' Writing Skills Before and After Learning

The pre-test mean scores for the 45 were 10.56, 11.00 and 11.27, respectively. The mean scores increased from 10.56, 11.00 and 11.27 for the pre-test to 14.83, 15.06 and 15.17 for the post-test. The Pearson product-moment correlation coefficient showed that there was a positive correlation between the three raters' scores.

Table 1  
*Results of a Comparison of the Pre-test and Post-test Scores*

T-Test								
	Mean*	S.D.	Mean Difference	95% Confidence Interval of the Difference		T	Df	Sig. (2-tailed)
				Lower	Upper			
Pre-test	10.94	2.114	-4.08	-4.671	-3.477	-13.746	44	.000
Post-test	15.02	2.413						

\*The maximum mean score possible is 20

The participants' scores in the writing pre-test and post-test were compared. The results of the comparison are presented in Table 1. It was found that the mean scores of the post-test ( $\bar{x}=15.02$ ) were higher than the pre-test ( $\bar{x}=10.94$ ). It was also revealed that there was a highly significant difference ( $p<.01$ ) between the mean scores of the writing pre-test and post-test of the participants. The results of the T-test indicated that the participants made progress in their writing skills after learning through the Weblog-based E-portfolio.

### Results of the Participants' Opinions toward Learning Writing Skills through a Weblog-based E-portfolio

The questionnaire and the reflective journals were used to collect the data of the participants' opinions toward the Weblog-based E-portfolio. The following sections report the results obtained from the questionnaire and the reflective journals.

**Results of the Opinions toward the Weblog-based E-portfolio from the Questionnaire.** The questionnaire statements were analyzed and calculated using descriptive statistics. Table 2 presents the results of the second part of the questionnaire regarding participants' opinions toward the use of the Weblog-based E-portfolio.

Table 2  
*Results of the Opinions toward the Weblog-based E-portfolio*

Statement	$\bar{x}$	S.D.
1. The Weblog-based E-portfolio was useful for practicing writing inside the classroom.	4.02	.722
2. The Weblog-based E-portfolio was useful for practicing writing outside the classroom.	4.36	.679
3. The Weblog-based E-portfolio helped the participants to understand the stages of process writing better.	4.22	.559
4. Learning process writing through the Weblog-based E-portfolio helped the participants to improve the quality of their writing.	4.11	.775
5. It was not difficult for the participants to create and use the Weblog-based E-portfolio by themselves.	4.16	.520
6. The contents and exercises in the Weblog-based E-portfolio were easy to understand and not confusing.	4.18	.575
7. The Weblog-based E-portfolio helped the participants to acquire more information about the topic they were writing about.	4.11	.611
8. The participants could search for other useful information for their writing through the Internet while they were writing through the Weblog-based E-portfolio, such as information about the topic that they were writing about or any other information.	4.27	.653
9. The Weblog-based E-portfolio could reduce writing anxiety.	3.98	.656
10. The participants were not afraid to ask the teacher if they didn't understand something about writing.	4.09	.556
11. Suggestions and comments from peers helped the participants to improve the high quality of writing.	3.73	.687
12. The participants had more chance to discuss or consult about writing problems with the teacher.	4.00	.674
13. The participants had more responsibility to follow their tasks assigned by the teacher.	3.91	.633
14. The participants had more time to learn, think, and practice their writing skills on their own.	4.16	.672
15. The participants enjoyed writing when they wrote through the Weblog-based E-portfolio.	4.04	.520
Statement	$\bar{x}$	S.D.
16. The participants were satisfied with their writing on the Weblog-based E-portfolio.	4.13	.786
17. The participants liked English writing more than before, after they had practiced writing through the Weblog-based E-portfolio.	4.07	.617
18. After the participants had practiced writing through the Weblog-based E-portfolio, they felt that writing in English was not as difficult as they had thought previously.	4.20	.625
<b>Total</b>	<b>4.10</b>	<b>0.640</b>

The overall mean score ( $\bar{x} = 4.10$ ) of the participants' opinions toward using the Weblog-based E-portfolio was interpreted as 'agreed' from the criteria for interpretation, indicating positive opinions towards learning through the Weblog-based E-portfolio.

### **Results of the Opinions toward the Weblog-based E-portfolio from the Reflective Journal.**

The results of the reflective journals were divided into 3 sections: 1) the benefits of the Weblog-based E-portfolio, 2) the participants' preferences toward practicing the process writing through the Weblog-based E-portfolio, and 3) the suggestions about the Weblog-based E-portfolio.

***The Benefits of the Weblog-based E-portfolio.*** Although the Weblog-based E-portfolio was a completely new concept for the participants, all of them had positive opinions toward learning English writing skills through the Weblog-based E-portfolio. One hundred percent of the participants agreed that it helped them to produce a higher quality writing product. According to their opinions, learning English writing skills through the Weblog-based E-portfolio was helpful for three reasons: it was convenient to learn and make contact with teacher or friends, it had useful information for writing, and the contents and exercises were interesting.

***The Participants' Preferences toward the Process Writing.*** All of the participants also had positive opinions toward practicing process writing through the Weblog-based E-portfolio. One hundred percent of them mentioned that they liked practicing process writing through the Weblog-based E-portfolio. Practicing process writing through a Weblog-based E-portfolio was meaningful to them for two reasons: there were well-organized stages in the process writing and they received feedback from the teacher and their peers.

***The Suggestions for the Weblog-based E-portfolio.*** The suggestions for practicing writing through the Weblog-based E-portfolio can be classified into three main categories: 1) more examples, contents, and exercises should be added, 2) more guided instructions were needed, and 3) the teacher should be aware of technical problems about the Internet or computer devices.

## **Discussion**

The discussion about the effects of the Weblog-based E-portfolio on the participants' English writing skills and their opinions toward learning through the Weblog-based E-portfolio are presented in the following sections.

### **The Effect of the Weblog-based E-portfolio on English Writing Skills Before and After Learning**

Based on the pre-test/post-test results of the study, the participants' English writing skills improved after using the Weblog-based E-portfolio. This improvement may be due to the fact that the participants were encouraged to learn writing using E-portfolio technology, supporting the findings of Erice (2008) and Meyer et al. (2010). Joshi (2012) stated that students' performances can be improved using multimedia in the process of teaching and learning. The use of multimedia such as text, audios, pictures and videos was a highlight for the participants in this study. One of the participants stated in the reflective journals that there were many useful videos and audios in the lessons. The use of multimedia has the potential to motivate him to learn.

Another reason that may account for the participants' improvement in English writing skills was that they encountered various topics and vocabulary items from lessons posted by the teacher. Moreover, the teacher and their peers had important roles to play in this study. This can be explained by the Zone of Proximal Development (ZPD) theory proposed by Vygotsky (1978). Learners improve their abilities through guided information from the teacher or interaction with competent peers. Both teacher and peers provide the learners with scaffolding. Scaffolding is an effective learning support to provide comprehensible input to EFL learners. Lower level English learners can use scaffolding to develop their language learning skills (Yang

& Chen, 2007). The participants' opinions from question 10 in the questionnaire confirmed that the suggestions and comments from the peers help them improve the quality of their writing.

### **Participants' Opinions toward Learning English Writing Skills through the Weblog-based E-portfolio**

Both the results obtained from the questionnaire and the reflective journals reveal that the participants found the Weblog-based E-portfolio to be appropriate and they had positive opinions toward it. With regard to the participants' opinions, they included the benefits and also some suggestions toward learning through the Weblog-based E-portfolio.

**Benefits of Using the Weblog-based E-portfolio.** The participants believed that the Weblog-based E-portfolio was convenient for learning. It was useful for practicing writing both inside and outside the classroom. Winter (2002) stated that web-based instruction is a truly flexible method for learning. The responses from the reflective journals confirmed that the Weblog-based E-portfolio was a meaningful tool for learning writing because it was convenient for the participants to learn. They liked to learn by themselves after class. Hughes (2004) and Han (2008) also stated that students have more opportunities to study inside and outside the classroom by using technology to enhance their language learning. The responses from the participants were similar to those in Tumsaduak's study (2014). She stated that learning through technology promotes positive attitudes, particularly those of students who have heavy demands on their time because they can access the lessons when it is convenient.

The participants also agreed that the feedback and comments from their teacher and peers helped them to improve the quality of their writing. They could share and give their opinions freely to each other. They thought that the feedback and comments from both the teacher and their peers gave them some important suggestions to improve the quality of their writing. Appropriate feedback to students can improve students' writing skills. The results of this study were similar to those in the studies of Liu and Hansen (2005) and Min (2006) which found that peer feedback was effective in students' writing revisions.

Moreover, the participants appreciated that the Weblog-based E-portfolio promoted learner autonomy. They had more responsibility to follow the writing tasks and they could learn, think, and practice their writing skills on their own. They revealed that the Weblog-based E-portfolio's student-centered approach helped them acquire more information on the topic that they were writing about. They were able to search for other useful information for their writing through the Internet while they were writing and were encouraged to learn using technology, as there were plenty of audios, videos and pictures. Therefore, the Weblog-based E-portfolio gave the participants of this study the opportunity to control their learning by enabling them to learn at their own pace and more independently.

**Suggestions for Using the Weblog-based E-portfolio.** The participants commented that they had some technical problems with the Internet and computer devices. 10 percent of the participants stated that the Internet was very slow. These problems affected the learning of the participants. They could not learn through the Weblog-based E-portfolio without a reliable Internet connection. Somdee and Suppasetseree's study (2012) also found that high speed Internet in some areas of the university did not work well. They stated that the Internet connection had an effect on the learning process. Furthermore, the participants' responses from

the reflective journals showed that some of them did not have their own computers. Winaitham (2012) suggested that researchers should explore new technology devices such as mobile devices. Therefore, the teachers of online learning courses should be aware of these problems. If the teachers plan to teach the students with online technology, they should make sure that all the students have a reliable Internet connection and suitable technology for learning.

## Conclusion

The purposes of this study were to develop and evaluate a Weblog-based E-portfolio for improving English writing skills of Thai undergraduate students. The Weblog-based E-portfolio was implemented, examined, and revised for efficiency in three pilot steps to meet the 80/80 standard criterion. Then, it was used with forty-five participants in the study. Following a pre-test, participants completed lessons and exercises and writing assignments designed by the researchers. Participants also wrote a reflective journal through the Weblog-based E-portfolio. Then, they took a writing post-test. Finally, they rated their opinions on a questionnaire. The findings of the study showed that a Weblog-based E-portfolio was effective based on the 80/80 standard criterion. The participants showed statistically significant gains on the post-test. Moreover, the participants had positive opinions towards learning through the Weblog-based E-portfolio. Both the quantitative and qualitative results of this study suggest that a Weblog-based E-portfolio is a suitable tool for Thai undergraduate students to improve their writing skills.

## References

- Barbera, E. (2009). Mutual feedback in e-portfolio assessment: an approach to the netfolio system. *British Journal of Educational Technology*, 40(2), 342–357.
- Barrett, H. (2000). Create Your Own Electronic Portfolio. *Learning and Leading with Technology*, 27(7), 14-21.
- Brahmawong, C. (2013). Developmental Testing of Media and Instructional Package. *Silpakorn Educational Research Journal*, 5(1), 7-20.
- Erice, D. (2008). *The impact of e-portfolio on the writing skills of foreign language learners studying at Abant Izzet Baysal University Basic English Program* (Unpublished doctoral dissertation). Gazi University, Turkey.
- Ferris, D.R., & Hedgcock. (2005). *Teaching ESL Composition; Purpose, Process and Practice* (2nd edition). Lawrence Erlbaum Associates, London.
- Geoffrion, L. D., & Geoffrion, O.P. (1983). *Computers and Reading Instruction*. Massachusetts: Addison-Wesley Publishing Company.
- Hamp-Lyons, L. (1991). Scoring procedures for ESL contexts. In Hamp-Lyons, L. (ed.), *Assessing Second Language Writing in Academic Contexts* (pp. 241-276). Norwood, NJ: Ablex.
- Han, W. (2008). Benefits and barriers of computer assisted language learning and teaching. *US-China Foreign Language*, 6(9), 40-43.
- Hedge, T. (2002). *Teaching and learning in the language classroom*. Oxford:

- Oxford University Press.
- Hughes, S. (2004). Computer-Based Training (CBT). In A. DiStefano, K. E. Rudestam, and R. J. Silverman (Eds.). *Encyclopedia of Distributed Learning* (pp.73-78). Thousand Oaks, CA.
- Jonassen, D. H. (1996). *Computer in the Classroom*. Englewood cliffs, NJ: Merrill.
- Jones, S.J. (2006). *Blogging and ESL Writing: A Case Study of How Students Responded to The Use of Weblogs as a Pedagogical Tool for the Writing Process Approach in a Community College ESL Writing Class* (Doctoral Dissertation). University of Texas at Austin, United States
- Joshi, A. (2012). Multimedia: A Technique in Teaching Process in the Classrooms. *Current World Environment*, 7(1), 33-36.
- Kelley, M. J. (2008). *The Impact of Weblogs on the Affective States and Academic Writing of L2 Undergraduates* (Unpublished doctoral dissertation), University of Virginia, United States.
- Linh, N. D., & Suppasetsee, S. (2016). The Development of an Instructional Design Model on Facebook Based Collaborative Learning to Enhance EFL Students' Writing Skills. *The IAFOR Journal of Language Learning*, 2, 48-66.
- Liu, J. & Hansen, G. J. (2005). *Peer Response in Second Language Writing Classroom*. MI: The University of Michigan Press.
- Matsuda, P. K. (2003). Process and post-process: A discursive history. *Journal of Second Language Writing*, 12(1), 65-83.
- Meyer, E., Abrami, P.C., Wade, C.A., Aslan, O., & Deault, L. (2010). Improving Literacy and Metacognition with Electronic Portfolios: Teaching and Learning with ePEARL. *Computers and Education*, 55(1), 84-91.
- Milman, N. B., & Kilbane, C. R. (2005). Digital teaching portfolios: Catalysts for fostering authentic professional development. *Canadian Journal of Learning and Technology*, 31(3).
- Min, H. T. (2006). The effects of trained peer review on EFL students' revision types and writing quality. *Journal of Second Language Writing*, 15(2), 118-141.
- O'Sullivan, K., & Tajaroensuk, S. (1997). *A Handbook in Intercultural Communication*. Sydney: NCELTR
- Prapphal, K. (2004). A Reflection of English Teaching. *MANUSAYA: Journal of Humanities*, 7, 1-8.
- Sokolik, M. (2003). Writing. In D. Nunan (Ed.), *Practical English Language Teaching* (pp.87-108). New York: McGraw-Hill.
- Somdee, M., & Suppasetsee, S. (2012). *Developing English Speaking Skills of Thai Undergraduate Students by digital storytelling through Websites*. Retrieved from [http://litu.tu.ac.th/FLLT2013/www.flit2013.org/private\\_folder/Proceeding/166.pdf](http://litu.tu.ac.th/FLLT2013/www.flit2013.org/private_folder/Proceeding/166.pdf)
- Suppasetsee, S. (2005). *The Development of an Internet-Based Instructional System for Teaching Remedial English to First-Year University Students* (Doctoral Dissertation). Suranaree University of Technology, Thailand.
- Tangpermpoon, T. (2008). Integrated approaches to improve students' writing skills for English major students. *ABAC Journal*, 28(2).
- Tu, C., Chen, P., & Lee, M. (2007). Fostering EFL Learners' Writing Competence through Web-Based Guided Writing. *WHAMPOA. An Interdisciplinary Journal*, 53, 225-244.
- Tumsaduak, B. (2014). *An English Oral Presentation Skills Enhancement E-learning Model for Thai Registered Psychiatric Nurses* (Master's Thesis). Suranaree University of Technology, Thailand.



- Udomyamokkul, W. (2004). *A genre-based approach to teaching argumentative writing: Effects on EFL students' writing performance* (Master's Thesis). Suranaree University of Technology, Thailand.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wannaruk, A. (2008). Pragmatic transfer in Thai EFL refusals. *RELC Journal*, 39(3), 318-337.
- Ward, J. (2000). *SUT Students' Proficiency in Reading Subject-Specific Textbooks in English*. Institute of Social Technology, Suranaree University of Technology.
- Watcharapunyawong, S., & Usaha, S. (2013). Thai EFL students' writing errors in different text types: The interference of the first language. *English Language Teaching*, 6(1), 67-78.
- Wimolmas, R. (2013). A survey study of motivation in English language learning of first year undergraduate students at Sirindhorn International Institute of Technology (SIIT), Thammasat University. *Proceedings of the 3rd International Conference on Foreign Language Learning and Teaching 2013 (FLLT 2013)*, "Research, Renovation and Reinforcement: Enhancing Quality in Language Education", Bangkok, Thailand.
- Winaitham, W. (2012). *The Development of a Multimedia Courseware Production Model for Enhancing English Stress Pronunciation Ability of Thai Undergraduate Students* (Doctoral Dissertation). Suranaree University of Technology, Thailand.
- Winter, R. (2002). Flexible learning. *Australian Education Computing*, 17(2), 20-30
- Wennerstrom, A. (2006). *Discourse Analysis in the Language Classroom – Volume 2. Genres of Writing*. Ann Arbor: The University of Michigan Press.
- Yang, S. C., & Chen, Y.J. (2007). Technology-enhanced language learning: A case study. *Computers in Human Behavior*, 23, 860-879.

## APPENDIX A

### The Questionnaire of the Thai EFL Undergraduate Students' Opinions toward Learning through the Weblog-based E-portfolio

**Instruction:** Read the statements and mark  $\surd$  in the box provided according to the degree of agreement.

**1= Strongly Disagree/ 2= Disagree/ 3= Undecided/ 4= Agree/ 5= Strongly Agree**

Statements	Degree of Agreement				
	5	4	3	2	1
1. The Weblog-based E-portfolio was useful for practicing writing inside the classroom.					
2. The Weblog-based E-portfolio was useful for practicing writing outside the classroom.					
3. The Weblog-based E-portfolio helped the participants to understand the stages of process writing better.					
4. Learning process writing through the Weblog-based E-portfolio helped the participants to improve the quality of their writing.					
5. It was not difficult for the participants to create and use the Weblog-based E-portfolio by themselves.					
6. The contents and exercises in the Weblog-based E-portfolio were easy to understand and not confusing.					

7. The Weblog-based E-portfolio helped the participants to acquire more information about the topic they were writing about.					
8. The participants could search for other useful information for their writing through the Internet while they were writing through the Weblog-based E-portfolio, such as information about the topic that they were writing about or any other information.					
9. The Weblog-based E-portfolio could reduce writing anxiety.					
10. The participants were not afraid to ask the teacher if they didn't understand something about writing.					
<b>Statements</b>	<b>Degree of Agreement</b>				
	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
11. Suggestions and comments from peers helped the participants to improve the high quality of writing.					
12. The participants had more chance to discuss or consult about writing problems with the teacher.					
13. The participants had more responsibility to follow their tasks assigned by the teacher.					
14. The participants had more time to learn, think, and practice their writing skills on their own.					
15. The participants enjoyed writing when they wrote through the Weblog-based E-portfolio.					
16. The participants were satisfied with their writing on the Weblog-based E-portfolio.					
17. The participants liked English writing more than before, after they had practiced writing through the Weblog-based E-portfolio.					
18. After the participants had practiced writing through the Weblog-based E-portfolio, they felt that writing in English was not as difficult as they had thought previously.					

## APPENDIX B

### The Guided Questions of Reflective Journal

1. Did writing through the Weblog-based E-portfolio help you to produce a higher quality writing product? If yes, how? If not, why not?
2. Describe your feeling towards the practicing process writing through the Weblog-based E-portfolio. How do you like or dislike it?
3. What are your suggestions towards practicing writing through the Weblog-based E-portfolio?

## APPENDIX C

## Rubrics Scoring for Writing Assessment

Categories of Performance	Beginner (1)	Basic (2)	Intermediate (3)	Advanced (4)
<b>Topic sentence/ Main idea</b>	-No evidence of a topic sentence. - The sentence is incomplete and does not state the main idea.	- Topic sentence is present but poorly written. - It is not entirely clear.	-Topic sentence is complete. - It is clearly stated.	- Topic sentence is very strong and clearly states the main idea.
<b>Supporting sentences</b>	-Random ideas are difficult to follow. - Do not support the topic sentence. - Less than 3 sentences.	- Limited details for getting attention in the topic. - Short, choppy sentence that lack flow. - Having at least 3 sentences.	- Mostly related details. - Not all sentences are complete and focused. - Contains 3 or more sentences.	- All sentences are complete and support the topic sentence. - Contains 3 or more sentences.
<b>Concluding sentence</b>	-There is no concluding sentence that connects to a topic sentence.	- The sentence is complete but does not sum up the paragraph.	- The sentence is complete and adequately sums up the paragraph.	- The sentence is complete and restates the topic sentence effectively.
<b>Organization of Ideas</b>	-Paragraph lacks a clear focus. Ideas in the paragraph are disorganized. - Confusing order of ideas	-A few ideas in the paragraph do not support the main idea or are out of place, causing a confusion of meaning.	- Ideas in the paragraph support the main idea, but could be organized more clearly.	- Well-organized with clear Topic, Body Conclusion. -Ideas flow in the paragraph and clearly support the main idea, creating meaning.
<b>Grammar/Mechanics</b> (Grammar, Punctuation, Capitalization, Spelling)	-Paragraph has more than 6 errors.	- Paragraph has 5-6 errors.	- Paragraph has 3-4 errors.	- Paragraph has 0-2 errors.

(Adapted both the Rubric for Elementary Paragraph Writing from RCampus and a Rubric for a Well-Written Paragraph from the Saskatchewan Literacy Network)