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ผลของการสอนที่เน้นเนื้อหาวิชาโดยใช้วิธีสอนแบบซิกซ์ทีที่มีต่อทักษะการนำเสนองานด้วยวาจาของนักเรียนระดับชั้นมัธยมศึกษาตอนต้น

EFFECTS OF CONTENT-BASED INSTRUCTION USING SIX-T'S APPROACH ON ENGLISH ORAL PRESENTATION SKILLS OF LOWER SECONDARY SCHOOL STUDENTS

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บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อ 1) ศึกษาผลการสอนที่เน้นเนื้อหาวิชาโดยใช้วิธีสอนแบบซิกซ์ทีที่มีต่อทักษะการนำเสนองานด้วยวาจาของนักเรียนระดับชั้นมัธยมศึกษาตอนต้น และ 2) เพื่อสำรวจความคิดเห็นของนักเรียนที่มีต่อการสอนที่เน้นเนื้อหาวิชาโดยใช้วิธีสอนแบบซิกซ์ที กลุ่มตัวอย่างได้แก่ นักเรียนหลักสูตรห้องเรียนพิเศษวิทยาศาสตร์ตามแนวทาง สสวท. และ สอวน. ระดับชั้นมัธยมศึกษาปีที่ 3 โรงเรียนสตรีสมุทรปราการ จำนวน 15 กลุ่ม 45 คน ที่เรียนรายวิชาภาษาอังกฤษเพื่อการนำเสนองานทางวิทยาศาสตร์ด้วยวาจา ภาคเรียนที่ 2 ปีการศึกษา 2559 ได้มาโดยวิธีการสุ่มอย่างง่ายโดยใช้ห้องเรียนเป็นหน่วยสุ่ม การทดลองใช้เวลาทั้งสิ้น 8 สัปดาห์ เครื่องมือที่ใช้ในการทดลองได้แก่ แบบทดสอบการนำเสนองานด้วยวาจาภาษาอังกฤษก่อนและหลังการสอนเนื้อหาวิชาโดยใช้วิธีสอนแบบซิกซ์ที และการสัมภาษณ์แบบกึ่งมีโครงสร้าง วิเคราะห์ข้อมูลโดยใช้สถิติบรรยายวิลคอกซัน และการวิเคราะห์เนื้อหา

ผลการวิจัยพบว่า 1) คะแนนเฉลี่ยแบบทดสอบการนำเสนองานด้วยวาจาหลังการสอนโดยใช้การสอนที่เน้นเนื้อหาวิชาโดยใช้วิธีสอนแบบซิกซ์ทีสูงกว่าคะแนนเฉลี่ยก่อนการสอนอย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05 2) ความคิดเห็นของนักเรียนที่มีต่อการสอนที่เน้นเนื้อหาวิชาโดยใช้วิธีสอนแบบซิกซ์ทีแสดงให้เห็นว่านักเรียนทีทัศนคติเชิงบวกต่อการสอนการพูดนำเสนองานด้วยวาจา

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Abstract

The objectives of this research were 1) to investigate the effects of content-based instruction using Six-T's approach on students' English oral presentation skills and 2) to explore students' opinions towards content-based instruction using Six-T's approach.

The sample of the classroom unit-based simple sampling consisted of a class of 45 ninth grade students divided into 15 groups in Streesmutprakan School who enrolled the English for Scientific Presentation Course in semester 2, Academic year 2016. The duration of the experiment was 8 weeks. The instruments were an English oral presentation evaluation scale which was used before and after conducting content-based instruction using Six-T's approach and semi-structured interview. The data were analysed using descriptive statistics, the Wilcoxon Signed Rank test and content analysis.

The finding shows that 1) the English speaking post-test mean scores were higher that pre-test at the significant level of 0.05 2) students had positive opinions towards the content-based instruction using Six-T's approach on English oral presentation skills.

คำสำคัญ: การสอนที่เน้นเนื้อหาวิชา/ วิธีสอนแบบซิกซ์ที/ ทักษะการนำเสนองานด้วยวาจา

KEYWORDS: CONTENT BASED INSTRUCTION/ SIX-T'S APPROACH/ ENGLISH ORAL PRESENTATION SKILLS

Introduction

In Thai classroom context, one of the most useful oral communication activities that most teachers use to provide students the opportunities they need to communicate with other students in their class is an oral presentation. Oral presentation has increasingly become the integral part of course requirements at high school level.

Oral presentations are one activity that teachers can use to give their students the opportunities they need to communicate with other students in their class using English. They are also a process-based, communicative activity that can provide students with an enjoyable way to use English to communicate with their classmates. This, in turn, can result in an overall improvement in the students' motivation to learn English. Oral presentations have also been shown to help improve students' English language abilities (Thornbury, 2005). However, despite the obvious benefits of using presentations in the classroom, very few university students are given the opportunity to do oral presentations in their L2 classes (Tsou & Huang, 2012).

Based on Streesmutprakan School context, oral presentation is concerned as 1) an essential classroom activity aiming to evaluate the understanding of the content the

students have learned in any subjects and value the individual responsibility towards the collaborative work and 2) as a final product of the research projects. Throughout 3 – 6 years of studying in secondary level at Streesmutprakan School, the students, particularly gifted science education program students, are expected to be competently well-equipped with knowledge and communication skills being student representatives to attend both national and international competition such as World Creativity Festival (WCF) organized in Korea, Sri Aman Environmental Youth Summit organized in Malaysia, International Young Physicists' Tournament (IYPT) and so on. However, no matter how smart the students are in doing the project, the abilities to search for the information to support the project or even to deliver oral presentations in English are lower than the level of satisfaction. This happened as a result of the use of first language in doing the project which later causes several problems when they are presenting the project to the international audience. To deliver an effective scientific presentation, students need not only to understand the language structure, but also to be trained to comprehend the content related to the field that students are going to present. The Content-Based Instruction (CBI) combines integrated teaching of all language skills and subject matter or language can be perfected through subject contents.

Therefore, the main objectives of this study are to investigate the effects of content-based instruction using Six-T's approach on English oral presentation skills of lower secondary school students and to explore students' opinion towards content-based instruction using Six-T's approach.

Objectives of the study

1. To what extent does content-based instruction using Six-T's Approach enhance lower secondary school students' English oral presentation skills?

2. What are the opinions of lower secondary school level students towards content-based instruction using Six-T's approach?

Research Methodology

A single group pre-test/ post-test experimental design was employed in this study to investigate the effects of content-based instruction using Six-T's approach on lower secondary students' English oral presentation skills. The quantitative data were collected using the pretest and posttest which were administered before and after the treatment implication phase to examine the effects of content-based instruction using Six-T's approach. Moreover, after the 6-week instruction, the qualitative data were collected to

explore students' opinions towards the instruction through the semi-structured interview process by the researcher, as a course developer and teacher.

Participants

The participants of this experimental study were the 45 ninth grade gifted education program students at Streesmutprakan School enrolling English for Scientific Presentation Course during the second term, academic year 2016. The samples completed the prerequisite English courses (e.g. English Reading and Writing, English Listening and Speaking, English for Science and Mathematics, and English for Communication) and science project course in accordance with the gifted program requirement launched by the Institute for the Promotion of Teaching Science and Technology (IPST) before taking the course in this study. As this research aimed to productively enhance students' English oral presentation skills in groups, the participants of the quantitative study were divided into a group of three students (N = 15) at the beginning of the lesson. For the qualitative research, every group of participants was conducted the semi-structured interview.

Research Procedures

Regarding research procedures, there were three phases to correspond the implementation of a Six-T's approach to content-based instruction. The first phase involved the preparation of the content-based instruction using Six-T's approach in English for Scientific Presentation Course for 9^{th} grade students. The second phase involved the implementation and investigation of the effectiveness of the instruction and the final phase involved the evaluation.

In the preparation phase, there were 8 stages to achieve. For the first three stages, the researchers put emphasis on the exploration and study of content-based instruction using Six-T's approach (Stoller & Grabe, 1997) in the aspect of EFL context implementation and building the coherent curricular in theme-based approach. Also, the researcher studied the Basic Education Core Curriculum (B.E. 2551) in the science subject section, the school curriculum revised in 2015 and the course and curriculum of the gifted education program in order to design the theme units of the English oral presentation in science course to support the needs of the institution. To plan the content-based instruction using Six-T's approach, the implementation steps (Stoller & Grabe, 1997) were introduced. The following figure 1 illustrated how the theme units of the English Oral Presentation in Science Course were planned in sequence.

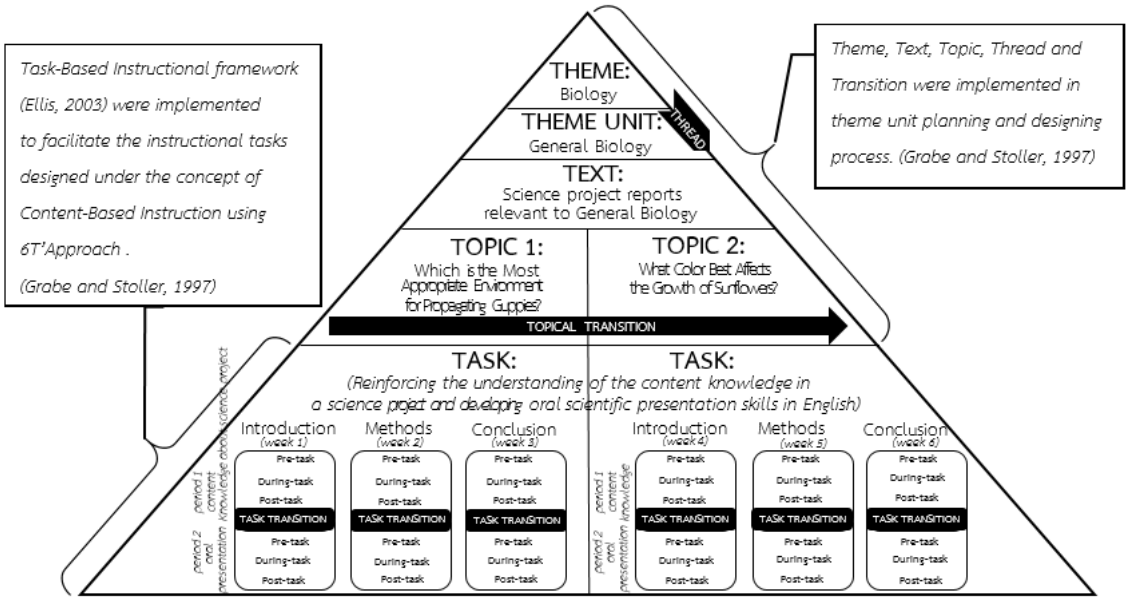

Figure 1: Conceptual Framework illustrating how a Six-T's (Theme, Text, Topic, Thread, Task, and Transition) framework was implemented in the content-based instruction English for Oral Presentation in Science Course

In the first step of theme unit planning, the first requirement in establishing the theme unit content for English for Scientific Presentation Course is 1) to determine the theme, 2) select the text and 3) design the topic sequentially (Stoller & Grabe, 1997). In school settings, a group of curriculum planners, including a head of science department and four science teachers owning grade 9 science classes in both gifted and general programs, was formally invited to the focus group interview responsible for deciding theme, text and topic stretching throughout the course. Based on the interview, the committees finally decided that "biology" is one "*theme"* area of science suitably learned for the 9th graders as indicated in several strands of science curriculum in the Basic Education Core Curriculum B.E.2551 of Thailand. For "*text* selection", a science project report relevant to the selected theme units is considered as the appropriate material complementing the extension of content in an academic discourse of written and oral presentation format. Additionally to achieve the goal of the course, a variety of availably published science projects are appropriately used to develop 9 graders' oral presentation skills. Lastly, a coherent set of *topics* are selected according to the theme units.

The second step is selecting "*thread"*. By studying the published science projects throughout the course, students not only have opportunities to develop the content knowledge and language skills, but also take some natural values into account about lives

and the natural system. This creates the thread which is a linkage developing students' sense of responsibility to help community preserve the natural equilibrium across the theme units.

Table 1: Thread utilized to provide linkage among the two theme units of the course

Themes	Thread liking the two themes of biology
Biology (General)	Responsibility to help community preserve
Biology (Plant)	the natural equilibrium

The third step was sequencing the content and the length of theme units. The sequential order of English for Scientific Course contents were planned corresponding to the difficulty and complexity of theme units. Therefore, the theme of "general biology" is sequenced before the theme of "plants" in order to help students gradually develop the understanding of the biological basic content, terms and vocabulary related and also linguistic features to be applied into the more complex theme. Also when selecting the science project topics to be learned every week, within one theme, two topics are introduced in sequence according to the level of difficulty and complexity.

The fourth step was to expand the perspectives on the thematic content, the researcher read more additional information from several sources for the task designation in the next step. Additionally, teacher read more books about giving the oral presentation in science and watch the model VDO clips of the middle school winning teams' science project presentation available in Youtube to analyze and shed some lights on the language functions utilized in the winning science project presentations. Both of these knowledge revision will be useful in task designation step.

The fifth step required the specification of core objectives for each theme unit. The objectives in terms of content, language and strategy learning are scoped and sequenced in order to help the researcher organize the course outline and generate the tasks supporting each theme unit in details.

The sixth step emphasized on the task designation of each theme unit. Each topic under the main themes of general biology and plant spends three weeks with two period hours reinforcing students' content knowledge understanding of the science project in particularly three sections, including the introduction, the methods and results, and the conclusion, and developing the language skills in presenting the three sections of the

science project in English. In each lesson, teacher generated the tasks based on the principles of study skill task, vocabulary and structure learning tasks, discourse organization task, information transfer task and communicative interaction task to build up the students' enduring comprehension of the three sections of the published science project in L1 and reinforced the presentation skills in terms of both verbal and non-verbal delivery.

The seventh requirement was to explicitly determine the transitions across topics in a theme unit and across tasks. Within topics, transition was created to accommodate such gradual concept and comprehension of biology from the basic idea of biology in general (topic 1) to more complicated idea about plant (topic 2). In addition to the transition across these two topics, the researcher created the inforgraphic, as task transition, for students to summarize the main points of the science project from the understanding and used it as the outline in drafting the oral presentation script.

The final step required the fine-tuning of the sample theme units. After all instruments were constructed, the instruments were validated by the three experts, an expert in language communication, a foreign teacher from English Program who taught science, and the biology teacher. Then, all instruments were pilot-tested and modified to be used in the next stage.

Instructional Instruments

Lesson plans

The lesson plans were designed based on the content-based instruction using Six-T's approach incorporating Ellis's task-based instructional framework (2003), including the three teaching stages: pre-task, during-task and post-tasks, to facilitate the designed tasks under the Six-T's framework. Within one topic consisting of three sub-lessons, each lesson comprises two periods which the first period aimed at reinforcing students' understanding about the content knowledge of the science project and another aimed at developing the English oral scientific presentation skills in terms of verbal and non-verbal delivery. The objectives of lesson plans considered scientific content and language learning in balance and the parallel format of lesson stretches throughout the six-week course.

The teaching steps for both content knowledge and oral presentation lessons are provided with a brief lesson description as follows:

Content knowledge lesson:

This lesson aimed at building up the students' enduring comprehension of the introduction section of the published science project 1 in L1. 15 groups with 3 students each collaboratively read the introduction and write a summarizing infographic, a type of graphic organizer, about the main topics, issues or problems generalized in the introduction part of the science report. The summarizing infographic was considered as a task reflecting student's understanding after reading the introduction of the science report and as a note used while delivering the oral presentation. Concurrently, students built up the scientific vocabulary skills with definition, synonyms and usage, and the language use in the introduction section through the study skills task, vocabulary and language structure learning tasks and discourse organization tasks. The outcome of this lesson were applied as a linkage to the lesson 2 when students would be assigned to write a presentation script about the science project 1.

Oral presentation lesson

This lesson aimed at developing the students' oral presentation skills of the introduction section of the science project 1. Students analyzed both verbal and non-verbal characteristics of the oral presentation delivery through the effective models generated and compiled by teacher such as the presentation script and the VDO clips and students were able to apply the language features and non-verbal characteristics observed from the VDO clips into their oral interaction practice task. The summarizing task from lesson 1 (content knowledge) was concerned as task transition to help each group of students transfer the summarized ideas of the science project 1 in planning and drafting the oral presentation script in lesson 2. The evaluation of the oral presentation task were completed online by two evaluators, the researcher as course developer and teacher and a foreign teacher who taught science in English Program.

Research Instruments

The research instruments employed in this study were 1) English oral presentation pretest and post-test 2) English oral presentation evaluation scale and 3) semi-structured interview questions.

English oral presentation pretest and posttest

The English oral presentation pretest and posttest were constructed in parallel following the science fair-oriented format which each group of students was required to deliver a science project presentation on the topic of interest in biological discipline. The time allocation for each test was 5 minutes. The detailed information for the oral

presentation preparation concerned the following aspects: 1) numbers of presenters, 2) time, 3) materials and 4) topics to be evaluated. Content and language delivery were the major aspects to be equally evaluated by the two judges, the researcher as the course developer and teacher and a foreign science teacher from English Program division. The total score for pretest and posttest earned 200 marks which each judge had a hundred mark each. In pretest, a recorded clip of each group's science project presentation was submitted via the science fair coordinator's email, while the posttest required each group to present their project to the audience at the school main auditorium. Both pretest and posttest were examined by the three experts to check the content validity based on the Item of Objective Congruence (IOC). The results of the content validity were greater than .50.

English oral presentation evaluation scale

The researcher adapted the oral presentation evaluation scale proposed by Valencia Community College (2006 - 2007) to measure the lower secondary students' scores before and after implementing the content-based instruction using Six-T's Approach. The criteria applied for evaluating oral presentation were categorized into 2 aspects: 1) content and 2) delivery. To evaluate students' oral presentation proficiency, two experts consisting of language specialist and content and language specialist attended a group of inter-raters.
The experts were asked to watch the sample video of students' presentation and try assessing the presentation using the same scale provided. After watching, the two experts attended in a discussion. This process lasted when the experts shared the same perspectives while giving students' feedback.

Semi-structured interview questions

The semi-structured interview questions were conducted at the final week of the instruction by the researcher, as the course teacher, with all fifteen groups of participants. The interview was done in Thai for the participants to comfortably express their exact opinions to the questions. The conversation between the researcher and each group was audio-recorded and transcribed. The interview questions consisted of six questions which were constructed based on the aspects of positive and negative opinions towards the implementation of content-based instruction using Six-T's approach and other comments for the future course. The interview questions were validated by the three experts and the content validity was examined by the experts based on the Item of Objective Congruence

(IOC). All aspects in the interview questions revealed by the items in the IOC were greater than .50. All questions were appropriate for the study.

Data collection

The data collection for this study were carried out in two phases: before and after instruction. Before participating in the instruction, the participants were briefly introduced the content and tasks activities they would be involved during the instruction. In the first week, the English oral presentation pre-test were administered to each group of students to assess the current level of English oral presentation skills before the treatment. Then the researcher started the six-week lesson with 4 topics relevant to the science project in biology to all students. By the end of the sixth week, students were assigned to presentation their project in preference in the 2016 science fair organized by the school as the post-test.

Finally, semi-structured interview was used with all 15 groups of participants in order to explore their opinions towards the implemented instruction.

Data analysis

The collected data was analysed as follows:

1. The students' English oral presentation skill was assessed using parallel pre- and post-tests. Mean of scores and Standard Deviation (S.D.) of pre-test and post-test were analysed. The Wilcoxon signed rank test was used to compare the English speaking ability differences between pre-test and post-test results.

2. Content analysis was used to analyse the qualitative data on students' opinions towards the content-based instruction using Six-T's approach.

Results of the study

Section 1 English oral presentation skills

Before the scores of pre- and post-test were compared to test the hypothesis and observe the improvement of lower secondary school student's English oral presentation skills through the descriptive statistics, including the minimum and maximum values, mean scores and standard deviation, the raw scores from the two raters were converted into the percentage system using Microsoft Excel which out of a hundred, the foreign teacher's score was ten percent of the marks earned, while the researcher's score was ninety percent. As a result, this confirmed the reliability of the raters' scores that could measure students' oral

presentation test in terms of content knowledge and oral presentation ability. Table 2 below illustrated the descriptive statistics results of the English oral presentation scores.

Table 2

The comparison between the descriptive results of the English oral presentation pretest/ posttest (N = 15 groups with 3 students each)

	N	***Minimum***	***Maximum***	***Mean***	***S.D.***
Pre-test	*15*	*27*	*49*	*40.13*	*7.02*
Post-test	*15*	*59*	*82*	*70.93*	*8.24*

From table 2, it showed the English oral presentation skills of the lower secondary students at Streesmutprakan School after receiving the content-based instruction using Six-T's approach were enhanced. The results indicated a significant difference in the participant's mean scores of the posttest (Mean = 70.93) with the standard deviation of 8.24 which was dramatically higher in the pretest (Mean = 40.13) with the standard deviation of 7.02.

As the results of the study obtained from the small-size sample, 15 groups with 3 students each, the Wilcoxon Signed Rank Test was employed in order to analyze and compare the differences between the pretest and posttest scores. Table 4.2 illustrated the pre- and post- measurement of the English oral presentation skills of each group of students taking the oral presentation test with a full mark of 100.

Table 2 below illustrated a before and after measurement of the English oral presentation skills, the results proved that the significant increase in the mean score of the posttest resulted from the implementation of content-based instruction using Six-T's approach with average rank of .00 comparing to average rank of 8.00. From the Wilcoxon Signed Rank test, the observation of the difference between before and after measurement appeared significant. It indicated that the posttest ranks were statistically higher than pretest ranks with $Z = -3.412$ and $p < .001$.

Table 3

Wilcoxon Signed Rank Test's results of English oral presentation skills pretest/ posttest

Ranks

		N	Mean Rank	Sum of Ranks
Posttest-Pretest	Negative Ranks	0[a]	.00	7.02
	Positive Ranks	15[b]	8.00	120
	Ties	0[c]		
	Total	15		

a. Posttest < Pretest

b. Posttest > Pretest

c. Posttest = Pretest

Test Statistics[b]

	Posttest-Pretest
Z	-3.412[a]
Asymp. Sig (2-tailed)	.001

*p<.01

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

Section 2 Students' opinions on content-based instruction using Six-T's approach

The semi-structured interview was conducted at the final week of the instruction by the researcher, as the course teacher, with all fifteen groups of participants. The interview was done in Thai for the participants to comfortably express their exact opinions to the questions. The conversation between the researcher and each group was audio-recorded and transcribed. The interview questions consisted of six questions which were constructed based on the aspects aiming to explore lower secondary school students' opinions towards the implementation of content-based instruction using Six-T's approach. The questions were:

1. What do you think about implementing content-based instruction using Six-T's approach into English for scientific presentation course?

2. How can content-based instruction using Six-T's approach develop your oral

Presentation skills?

3. What do you think about the tasks in the content knowledge lesson?

4. What do you think about the tasks in the oral presentation lesson?

5. Are there any comments to improve the instruction in this course?

From the interview, each group of students reflected that after leaning the scientific oral presentation course through content-based instruction using Six-T's approach, they improved their presentation skills in terms of content comprehension based on the science project they presented and oral presentation skills, including the language fluency, language use in three parts of the presentation (introduction, methods and results, and conclusion) and non-verbal communication. "Presentation improvement" was mentioned the most (f = 82) among the six positive aspects followed by "content knowledge improvement" (f = 60), and "thread" was mentioned the third most (f = 3). On the contrary, there were some students stated that it was worth developing English oral presentation skills through the content-based instruction using Six-T's approach; even though, the learning tasks provided in the class were too difficult (f = 17).

Also, the participants thought that working in group created the active learning environment and collaborative skills. In terms of tasks in the content knowledge lesson, the majority of the participants mentioned that 'task 2 Choosing appropriate vocabulary and language patterns in writing a science project summary' helped them develop the stock of vocabulary and technical terms in biology as well as the linguistic structures in each part of the science project. In the oral presentation lesson, the students felt that the skills in oral presentation

Discussion

The objectives of this study was to 1) investigate the effects of content-based instruction using Six-T's Approach on students' English oral presentation skills and 2) explore students' opinions towards content-based instruction using Six-T's Approach.

The findings of the study revealed that there is a statistically significant difference at the significant level (0.01) between mean scores of the participants on the English oral presentation pre- and post-test. This could confirm the hypothesis that the content-based instruction using Six-T's approach resulted in the positive improvement and enhanced the

lower secondary school students' English oral presentation skills. Therefore, the hypothesis to the first research question was accepted. This finding also conforms with Iamamnuay (2013) who studied about the learning activities in content-based instruction to enhance oral presentation skill of the first year vocational students. From the results of her study, as observed from the pretest and posttest, the participants' performance in terms of English oral presentation enhanced after learning through the seven activities which shared the features in common (e.g. preparation, practice and grammatical knowledge). Also mentioned in Promsang (2010), his research study aimed to implement and examine the effect of the learning activities using content-based instruction for the 9 grade students, the finding confirmed statistically that the activities designed under the content-based instruction helped students to improve their oral communication skills.

In the perspective of other countries, there are several researches supporting the use of content-based instruction to enhance the English skills. For example in Fujioka-Ito, N. (2005*)*, she conducted the study in developing a project in content-based instruction extended from a reading passage which focused on developing all 4 skills in English simultaneously. All the theme units in her study implemented the Six-T's approach to build a coherent content-based curriculum which promoted the content learning involvement. The results showed the improvement of students in all 4 skills after learning through the content-based project.

The findings from semi-structured interview show that students have positive opinions towards content-based instruction using Six-T's approach. From all positive aspects towards the instruction, students stated that they had positive improve in terms of content development which corresponds with the study of Walters, and M. Vilches (2001), Chandsawangbhuwana, C.J. (2011). In addition, while conducting the semi-structure interview, each group of students discussed about the tasks that helped them improve the English oral presentation skills. Some students mentioned "the infographic" which is one of the task transition was a task that helped them transfer the understanding about the science project to the oral presentation lesson. During the presentation, they used the infographic as the outline of their talk instead of using some notes as before. They have more confidences while presenting the data with the gestures (Iamamnuay, 2013).

Recommendation for Further Studies

It is wished that this research study will shed some light on exploring the effects of the content-based instruction using Six-T's approach on lower secondary school students' English oral presentation skills. The following suggestions are presented to help the researchers whose interests correspond to the area of this study.

1. The course teacher should explore more science project type to select as the text for the class. In this study, as interviewed by the science teachers and teachers who are always involved in the science fair international competition, they suggested to focus only one type of project which is the experiment project first. Because most of the science project competitions seem to encourage students to work collaboratively to investigate the variables they would like to study using scientific methods, this type of project appropriately matched the needs of the school. Therefore for the further course, other types of science project such as innovation project, demonstration project, and etc. should be considered to be mastered in the class.

2. The class time should be arranged together in one day. This can create the continuity among the learning activities to achieve the terminal goal of the lesson within one day.

References

Chandsawangbhuwana, C.J. (2011). *Development of CNC Machine Technology Workshop using the Content-based Instruction (CBI) Approach on the Ability to Acquire Content Knowledge and Language Skills: A Case Study of Learners with no Technical Content Background knowledge.* Master's Thesis, Department of Curriculum, Instruction, and Educational Technology, Faculty of Education, Chulalongkorn University.

Stoller, F.L., & Grabe, W. (1997). A Six T's Approach to Content-Based Instruction. *Focus on Post-secondary Instruction.* Retrieved from http://www.carla.umn.edu/cobaltt/modules/curriculum/stoller_grabe1997/6Ts.pdf.

Thornbury, S. (2005). *How to teach speaking*. Harlow: Pearson Education.

Tsou, W., & Huang, Y. (2012). *The Effect of Explicit Instruction in Formulaic Sequences on Academic Speech Fluency. Taiwan International ESP Journal*, *4*(2), 57–80.

Vega, P. (2010). *Effect of Team Teaching of Thai and Foreign Teachers of English in Task-Based Instruction on English Oral Communication Ability and Opinions about Team Teaching of Upper Secondary School Students.* Unpublished master dissertation, Chulalongkorm University, Bangkok, Thailand.

Iemamnuay, S. (2013). *The Effects of Using Learning Activities in Content-Based Instruction on Oral Presentation Skill of The First Year Vocational Students, English Program, Chetupon Commercial College.* Unpublished master dissertation, Chulalongkorn University, Bangkok, Thailand.

Walters, A. & M. Vilches (2001). Implementing ELT Innovations: A needs Analysis framework. *ELT Journal Volume 55/2,* 133-141.