Using Project –Based Approach to Enhance English Speaking Ability of Thai-Nichi Institute of Technology Students

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ABSTRACT

The purposes of this research were 1) to study the use of project-based approach to enhance English speaking ability of undergraduate students at Thai-Nichi Institute of Technology, and 2) to study undergraduate students’ satisfaction with this type of project-based approach. The subject consisted of 60 first year undergraduate students at Thai-Nichi Institute of Technology during first semester of 2014 academic year. The instruments used in this experiment included lesson plans, a project evaluation form, an English speaking test, a student’s self-assessment form and a satisfaction questionnaire. The experimental process and data collection were conducted as follows: The subjects were given an English speaking ability pretest. Then, the 3 English speaking projects were used 45 hours in 12 weeks. After the completion of each project, a project evaluation form and a student’s self-assessment form were administered to measure the subjects’ English speaking achievement, and a questionnaire was used for surveying the subjects’ satisfaction on project-based approach. The t-test was employed to compare the subjects’ English speaking achievement before and after using project-base approach. The mean and standard deviation of scores from the project evaluation form, the student’s self-assessment form, and satisfaction questionnaire were used to measure at the end of the first project, second project and the third project. The experiment lasted for forty – five hours. The results were as follows; The students’ speaking achievement after the project-based approach was significantly higher than before, with projects constructed at 0.01 level. The students’ satisfaction towards studying project-based approach to enhance English speaking ability of TNI students after the first project, second project and third project was at high and the highest level respectively.

Keywords: English Project-Base Approach, English Speaking Ability through Project-Based Approach

Introduction

Speaking skill is an essential process for learning English. Performances through speaking are an indicator of success in careers and family in life (Nunan, 2002). However, many studies reveal that Thai students study English for many years but they cannot apply speaking skill in real life communicative situations effectively (The Ministry of Education, 2002).

Project-based learning appears to match this English teaching and learning need. PBL is basically identified as an instructional approach that contextualizes
learning by presenting learners with problems to solve or products to develop (Moss & Van Duzer, 1998,). PBL is different from traditional instruction because it emphasizes learning through learner-centered, interdisciplinary, and integrated activities in real world situations (Solomon, 2003; Willie, 2001).

College of General Education and Languages focuses on the students’ language skills, so that students will be able to communicate in English and Japanese. In order to achieve the its objective, it has provided English for communication course which is divided into 3 core courses for students from all faculties, as well as elective courses for students from each faculty (TNI Student Handbook, 2014, 20)

In the results, researcher employed project based approach to enhance English speaking ability of undergraduate students at Thai-Nichi Institute of Technology in order to improve speaking ability of first year TNI students in first semester of 2014 academic year. The results derived from this research will provide guidelines for improvement and development of instruction for future course.

**Research Objectives**

1. To study the use of project-based approach to enhance English speaking ability of undergraduate students at Thai-Nichi Institute of Technology, and
2. To study undergraduate students’ satisfaction with this type of project-based approach

**Research Design**

The data was gathered and analyzed as follows:

1. Population and Samples
   1.1 The population is first year students at Thai-Nichi Institute of Technology in first semester of 2014 academic year. There were 600 students from all faculties.
   1.2 The samples consisted of 60 students, and were derived from a simple random sampling technique.

**Duration in Experiment**

The experiment ran for 12 week (45 hours)

**Variables**

Variables in this study were as follows:

1. The English speaking ability of first year TNI students before and after the class.
2. The satisfaction of first year students towards project based approach

**Research Instruments**

1. Lesson plans
2. A project evaluation form
3. An English speaking test
4. A student’s self-assessment form
5. A satisfaction questionnaire
Data Analysis

The collected data was analyzed using computer program. The t-test was employed to compare the subjects’ English speaking achievement before and after using project-base approach. The mean and standard deviation of scores from the project evaluation form, the student’s self-assessment form, and satisfaction questionnaire were used to measure at the end of the first project, second project and the third project. The experiment lasted forty – five hours.

Data Collection

The experimental process and data collection were conducted as follows: The subjects were given an English speaking ability pretest. Then, the 3 English speaking projects were used 45 hours in 12 weeks. After the completion of each project, a project evaluation form and a student’s self-assessment form were administered to measure the subjects’ English speaking achievement, and a questionnaire was used for surveying the subjects’ satisfaction on project-based approach.

Research Results

The Results of English Speaking Ability Assessment

The pretest scores were compared with posttest scores of TNI students’ English speaking as following table:

Table 1
The Result of Comparison English Speaking Ability of First Year TNI Students Before and after Project Based Learning

<table>
<thead>
<tr>
<th>English Speaking Ability</th>
<th>N</th>
<th></th>
<th>S.D</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>60</td>
<td>11.45</td>
<td>6.42</td>
<td>10.28*</td>
<td>0.00*</td>
</tr>
<tr>
<td>Posttest</td>
<td>60</td>
<td>17.38</td>
<td>7.48</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Statistically Significant differences at .05 level

The table showed that English speaking ability of first year TNI students after project based learning was higher than before at .05 level. It illustrated that teaching by using project based learning was able to enhance the samples’ s English speaking ability.

Furthermore, after project based learning, project quality assessment was assessed by the researcher, English teachers, and project participated students. There were two components of project assessment

First component: the 3 rating scales were employed to compare mean scores (\( \bar{x} \)) of project based learning to enhance speaking ability of TNI students as following table:

Table 2:
The Result of Project Quality in English Speaking Ability of the First Year TNI Students by English Teacher and Students

<table>
<thead>
<tr>
<th>Evaluator</th>
<th>Project 1</th>
<th></th>
<th>Project 2</th>
<th></th>
<th>Project 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \bar{x} )</td>
<td>Level</td>
<td>( \bar{x} )</td>
<td>Level</td>
<td>( \bar{x} )</td>
<td>Level</td>
</tr>
<tr>
<td>Teacher</td>
<td>1.72</td>
<td>moderate</td>
<td>2.25</td>
<td>Good</td>
<td>2.59</td>
<td>Very</td>
</tr>
</tbody>
</table>
Data analysis from project based assessment presented a form of rating scale. These rating scales were calculated to find out mean and standard deviation and then translated based on criteria developed by (The Ministry of Education, 2002).

2.51-3.00 refers to students had English speaking skill at very good level
2.01-2.50 refers to students had English speaking skill at good level
1.51-200 refers to students had English speaking skill at moderate level

The table showed that English speaking ability of TNI students after learning through project1, project 2, and project3 was at high level respectively which was at moderate level in project1, at good level in project2 and at very good level in project3. It illustrated that project based approach was able to enhance English speaking ability of the first year TNI students.

**Second Component:** Opinions of teachers and students were analyzed in order to 4 aspects: frequency and reality in language using; accuracy in language using; project presentation; and contents as following table

<table>
<thead>
<tr>
<th>English speaking skill</th>
<th>Project 1</th>
<th>Project 2</th>
<th>Project 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency and reality in language using</td>
<td>Students speak very slowly and their speech is very weak. They cannot speak frequently</td>
<td>Students speak frequently and clear more than project1</td>
<td>Students speak quite good, frequent and clear.</td>
</tr>
<tr>
<td>Accuracy in language using</td>
<td>Students pronounce wrong in some words and use error grammars</td>
<td>Students pronounce wrong in some words but they can use English grammar better than project 1</td>
<td>Students pronounce the correct words and they have some errors.</td>
</tr>
<tr>
<td>Project presentation</td>
<td>Project presentation was presented quite serious because students were worried about contents so they recalled without expression of</td>
<td>Project presentation was presented in various style such as; news reporters in entertainment to interview superstar and gossip news which was a story of</td>
<td>Project presentation was presented quite good and students were able to be a guide tour in attractive place of teenagers such as train market in</td>
</tr>
</tbody>
</table>
On the other hand, the data from a student’s self-assessment form of each group in 3 projects which concluded into 3 aspects such as; English speaking, knowledge skill, and desired characteristics as following table.

Table 4
Opinions of Students from Self-Assessment Form in Project 1, Project 2, and Project 3

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Project 1</th>
<th>Project 2</th>
<th>Project 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English speaking</strong></td>
<td>Students spoke English quite good but they have some errors in words because they were excited</td>
<td>Students spoke English frequently and clearer than project 1 and they had confidence in speaking</td>
<td>Students spoke English frequently and they had more confidence.</td>
</tr>
<tr>
<td><strong>Knowledge skills</strong></td>
<td>Students knew about vocabulary from searching for information and some group presented by using video presentation with English subtitles in order to their friends were able to read in terms of they didn’t follow speech’s reporters.</td>
<td>Students got a lot of vocabulary and idioms of English. They practiced English speaking more frequent than project 1</td>
<td>Students learnt English vocabulary more than project 2 and they got useful contents to travel in Bangkok and they could be able to be guide tour in the future</td>
</tr>
<tr>
<td><strong>Desired characteristics</strong></td>
<td>Students had less responsibility to groups because each</td>
<td>Students had more responsibility than project 1. They were professional</td>
<td>Students had more professional</td>
</tr>
</tbody>
</table>

Emotions

superstar in Thailand and it was very interesting news. The audience was very happy. The various contents such as entertainment news about superstar in Bangkok and general news. Moreover, vocabulary about entertainment news was employed in presentation.

Bangkok, Jatujak market, and they interviewed foreigners with being a guide tour. Contents were useful for students about traveling in Bangkok and attractive places that teenagers needed to go. Furthermore, it was useful for travelers who wanted to visit Thailand.
student recalled only own story. Content was not connected and mode of stories was not interesting. Students didn’t have confidence in speaking.

After experiment Project 1-3, self-assessment form was deployed in measurement of English speaking ability of the first year TNI students which was 5 rating scales and compared by using criteria as following:

Table 5
Result of Self-Assessment in English Speaking Skill of the First Year TNI Students in Project 1, Project 2, and Project 3

<table>
<thead>
<tr>
<th>Self-Assessment</th>
<th>Project1</th>
<th>Project2</th>
<th>Project3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency in Speaking</td>
<td>3.48</td>
<td>4.28</td>
<td>4.55</td>
</tr>
<tr>
<td>Accuracy in Language Use</td>
<td>3.95</td>
<td>4.33</td>
<td>4.74</td>
</tr>
<tr>
<td>Communication</td>
<td>3.94</td>
<td>4.64</td>
<td>4.77</td>
</tr>
<tr>
<td>Total</td>
<td>3.79</td>
<td>4.41</td>
<td>4.68</td>
</tr>
</tbody>
</table>

The mean scores were set in 5 levels in order to Likert’s scale (Likert, 1978). The criteria were analyzed by interpreting meaning as follows (Wongsothorn: 1995):

1.00 ≤ x < 1.50 refers to students’ self-assessment about speaking skill at very low level
1.51 ≤ x < 2.50 refers to students’ self-assessment about speaking skill at low level
2.51 ≤ x < 3.50 refers to students’ self-assessment about speaking skill at moderate level
3.51 ≤ x < 4.50 refers to students’ self-assessment about speaking skill at good level
4.51 ≤ x < 5.00 refers to students’ self-assessment about speaking skill at very good level

The table showed that the first year TNI students had self-assessment about English speaking ability at good level for project1 (x̄=3.79), at good level of project2 (x̄=4.41), and at very good level of project3 (x̄=4.68) respectively. When considered in each aspect, it was found that Frequency in Speaking, Accuracy in Language Use, and Communication were at high respectively.
Results of Students’ Satisfaction on Project-Based Approach

Satisfaction questionnaires on teaching-learning process by using Project-Based approach from Project 1, Project 2 and Project 3 were demonstrated in Table 8:

Table 6
Results of Students’ Satisfaction on English Teaching-Learning by Using Project-Based Approach of the 1st Year TNI Students from Project 1, Project 2 And Project 3

<table>
<thead>
<tr>
<th></th>
<th>Project 1</th>
<th>Project 2</th>
<th>Project 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \bar{x} )</td>
<td>3.89</td>
<td>4.48</td>
<td>4.69</td>
</tr>
<tr>
<td>Level</td>
<td>High</td>
<td>High</td>
<td>The highest</td>
</tr>
<tr>
<td>S.D</td>
<td>0.89</td>
<td>0.77</td>
<td>0.69</td>
</tr>
</tbody>
</table>

Criteria were developed by Best (1981) as follows:

\[
1.00 \leq x < 1.50 \quad \text{refers students had the lowest satisfaction}
\]
\[
1.51 \leq x < 2.50 \quad \text{refers students had low satisfaction}
\]
\[
2.51 \leq x < 3.50 \quad \text{refers students had moderate satisfaction}
\]
\[
3.51 \leq x < 4.50 \quad \text{refers students had high satisfaction}
\]
\[
4.51 \leq x < 5.00 \quad \text{refers students had the highest satisfaction}
\]

According to Table 8, it showed that students’ satisfaction on English teaching-learning process by using Project-Based approach of the 1st year TNI students after doing Project1, Project 2 and Project 3 was at high and the highest levels. Therefore, English teaching-learning process by using Project-Based approach can encourage the student’s learning performance.

**Conclusion**

1. Students who learned English by using Project-Based Approach had statistically significance differences at 0.01 level.
2. Students had high satisfaction on Project 1 and Project 2 and the highest satisfaction on Project 3.

**Discussion**

According to the study, it was found out that English teaching-learning process by using Project-Based Approach was able to enhance students to use English in a real situation based on their interests. The students had to help each other to do the projects they preferred under the same framework. Thus, after the experiment, the students’ before and after learning by using Project-Based Approach had statistically significance differences at 0.01 level.

Moreover, the students’ satisfaction on Project-Based Approach was at high level in Project 1 and Project 2, and the highest level in Project 3.
The students’ before and after learning by using Project-Based Approach had statistically significance differences at 0.01 level from the following reasons:

1. Projects organized in this study were Storytelling, English news report and Teenager Guides were unified with project steps. Thus, the students had a chance to develop their English speaking skills continuously. The students learned the context based on their interests through process of planning, operating and evaluating by team working. Moreover, the students had an opportunity to practice English speaking before giving an official presentation which created the students’ self-confidence on their project presentation.

Moreover, the students had to assess their project with their team members. They, then, realized of advantages and disadvantages of the Project they had done which could be used to improve their next project. This is related to Haines (2002)’s concept who highlights that the main benefit of Project-Based Learning is to experience a real situation. The learners have to apply their own knowledge with the existing circumstances. In addition, working as a team will motivate the students to share and exchange their ideas and help each other. The learners who are not good at language, however, might support their team members in other areas. The implementation of Project-Based Learning in language can generate the balance between knowledge and language. Consequently, Project-Based Learning is able to support the students to practice language using with freedom of choice in choosing the project they are interested in creative and information learning environment.

2. The students’ before and after learning by using Project-Based Approach had statistically significance differences at 0.01 level. This might be because the students learned how to do the project step by step starting from planning and practicing. The teacher, however, acted as facilitator and evaluator. This is similar to Nunan (2002) who state that three main steps of Project-Based Learning are as follows:

   Step 1: Planning- all team members have to plan for the directions of their projects together followed by the guidance of the teacher.
   Step 2: Learning outside classroom- all team members have to help each other to collect data from various sources. In this step, the teacher has to motivate the students to complete the project on time.
   Step 3: Checking- the teacher is playing an important role in this step as he/she is the one who helps the students from the beginning of the project.

After collecting all data, the team members have to design how to present the data in a form of project presentation. Process of Project-Based Learning is categorized as follows:

1. Defining project title and project limitation. It requires all team members to brainstorm their ideas of title and limitation of the project they are interested in.
2. Defining a clear result of the project.
3. Defining steps of the project, data analyzing, emphasizing on project resources and dividing each team member’s tasks.
4. Analyzing and selecting language skills that are used in the project.
5. Data collecting from inside and outside classroom.
6. Data analysis to create accurate and effective project.
7. Project presenting in a form of report, clips, presentation, etc.
8. Project evaluating by teacher and students together. This step is to assess the project based on objectives of the project, language skills, communicative skills, project discussion as well as benefits from the project.

The students’ satisfaction on Project-Based Approach was at high level in Project 1 and Project 2, and the highest level in Project 3. This might be because the students had high determination to complete their projects. Thus, they had a responsibility on their tasks. Further, to be the best project in the class is important motivation of the students in terms of project competition with other groups and high scores from the teacher. This is related to Herzberg, Mausner, & Synderman (1959: 113-115) who study the motivation hygiene theory. The theory demonstrates two factors which cause satisfaction in working as 1) Motivation factors such as success, promotion and recognition; and 2) Hygiene factor such as salary, job security or, in case of students, high scores from the teacher.

References