

IMPLEMENTING PROJECT-BASED INSTRUCTION FOR STUDENTS WITH LOW ENGLISH PROFICIENCY: A CLASSROOM SCENARIO

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Abstract:

This quasi-experiment investigation was aimed at implementing project-based instruction into an English for Science course at Chiang Mai Rajabhat University, Thailand. The endeavor was conducted in the first semester, 2012, with 112 students in two classes. The students were of very low English proficiency levels and were lowly motivated to study the language. The textbook used in this investigation was a compilation from various sources and the topics included topic selection, main idea, note-taking and paraphrasing, summarizing, synthesizing data, writing an outline, and oral presentation. It was found that the students were able to carry out the instructional steps and the final project of each group. What was surprising was that they were happy to have studied the course and their attitude toward learning English was changed in a positive way. Their ability to deliver their projects at the end of the semester greatly enhanced their confidence, proficiencies and self-esteem.

Keywords: *project-based instruction, English for Science, motivation, proficiency, confidence.*

Introduction

An effective use of English for communication in the age of globalization is a pivotal element for future success in one's career, where English is used as a lingua franca among peoples of different linguistic backgrounds. It is undeniable that English has inevitably been intertwined in our modern life. For instance, international trade and business transactions are mostly conducted by using English as a means of execution. Closer to home and at the individual level, internet use for a wider global range is mostly carried out in the English language. With geopolitical boundaries having become blurry or even non-existent in certain cases and with more economic blocs being formed around the globe, there is a need to find a language with mutual intelligibility among member countries, and more often than not, English is used in these circumstances.

As Thailand will become a member country of the ASEAN Economic Community in the year 2015, there is an urgent need to equip its citizens with English proficiency skills, as the language will be used as a lingua franca to communicate among the bloc members. English will become increasingly vital not only for transnational communication in the region but also for business transactions, as a means of classroom instruction, and the language for the tourism industry or for business negotiations when the nations in this economic bloc have become borderless commercially and educationally. As a consequence, English instruction in Thailand has become mandatory. The 2001 National Basic Education Curriculum, the educational blueprint for the country, designates that a foreign language, particularly English, be one of the eight subject strands for primary and secondary school education. The eight subject strands include Thai, mathematics, sciences, social sciences, religion and culture, sanitation and physical education, arts, vocation and technology, and a foreign language. As for the foreign language strand, it is obligatory that English be taught in compulsory education from grade 1 to grade 12 nationwide. Other foreign languages, such as Japanese, Chinese, Korean, French, or languages of neighboring countries can be offered, depending on the readiness of each school (Wiwathananon, 2007: 7-8).

Regarding English instruction at Chiang Mai Rajabhat University, undergraduate students in all major fields of study are required to take three English courses: English for Everyday Communication, English for Academic Skills, and English for Arts or English for Science. As a university dedicated to serve local communities, the number of student enrollment is relatively high. The majority of the students is those who are unable to get places in leading and prestigious universities and are mostly from outlying rural high schools where academic activities are less of a focus. Their general academic skills are basically low and their English proficiencies are poor. Additionally, the number of students in each class is large, between 50 and 60 even for English classes. It is thus quite a challenge to organize classroom activities as proficiencies, motivation, and the interests of the students are considerably diverse.

The project-based instruction

Project-based instruction was promoted by the Buck Institute for Education (BIE) in the late 1990s (www.bie.org). The instruction emphasizes long-term, interdisciplinary, student-centered, and collaborative learning activities. The teacher plays the role of facilitator, working with students to come up with relevant questions, designing meaningful tasks, coaching knowledge development and social skills, and assessing students' work. The students are provided with an opportunity to cultivate the 21st century skills, which include communication and presentation, organization and time management, research

and enquiry, self-assessment and reflection, collaboration and leadership, and critical thinking and problem solving.

According to the BIE, project-based instruction is defined as “a systematic method that engages students in learning essential knowledge and life-enhancing skills through an extended, student-influenced inquiry process structured around complex, authentic questions and carefully designed products and tasks.”

Some benefits of project-based instruction can be listed as follows (Railsback, 2002: 8-11).

- 1) Preparing students for the workplace by exposing them to a wide range of skills and competencies;
- 2) Increasing learning motivation with noted improvement in attendance, class participation, and willingness to do homework;
- 3) Providing students with collaborative opportunities to construct new knowledge by sharing their ideas, voicing their opinions, and negotiating solutions;
- 4) Increasing social, problem-solving and communication skills; and
- 5) Enhancing students’ self-esteem and confidence by enabling them to take pride in their accomplishments (Phanjira, 2010; Chanpirom, 2004).

Implementation of project-based instruction for an English for science course

This modified project-based instruction is an adaptation of the project-based learning developed and promoted by the Buck Institute for Education (Larmer and Mergendoller, 2010; Katz and Chard, 2000; Polman, 2000). The adaptation is designed for classroom use, while maintaining all the steps and requirements of the project-based approach for a classroom situation. The students were required to follow the steps at their own pace and according to their English proficiencies. Their projects were related to science and technology and were based on reading passages on scientific topics. The projects must be relevant and applicable to real-life situations in a practical way, so that group members were able to apply their critical thinking to their respective issues. At the end of the course, each group had to deliver an oral presentation to the class about their project.

This investigation was conducted with two classes for the English for Science course at Chiang Mai Rajabhat University from June to September 2012. The purposive sampling method was employed to select the sample group. There were 56 students in each class, so the total number of the sample group was 112. The project-based instruction was implemented in the two classes and the course was in the general education category. Therefore, students from various science-related fields were enrolling in the two classes. The students

thus had different learning styles, came from various cultural and ethnic backgrounds, and possessed diverse English proficiency levels (Railsback, 2002: 4).

As a community educational institution, students of various ethnic and cultural background and academic proficiencies have been accepted. Hill-tribe ethnic minority students study English as their third language besides their respective mother tongues and Thai, the official language and medium of instruction. Many of them have yet to be proficient in the official language, making English instruction even more challenging. Categorized on the lower academic rung, these students are usually poorly motivated to study and their attitude towards the English language is fundamentally negative as they generally perceive that they are able to do well in their lives without English. English is thus viewed as irrelevant and is a bitter medicine for them.

The data for this investigation were collected from students' ongoing work progress for the entire semester, personal observations, and interviews with the students at the end of the semester.

The research instrument was a course book and its supplementary materials. The course book used in this investigation was a compilation from various sources and the topics included topic selection, main ideas, note taking and paraphrasing, summarizing, synthesizing data, writing up an outline, and oral presentation. Material supplements for each topic were produced for the students to practice in order to deepen their understanding and to familiarize them with what they were required to do in each topic as the course was progressing.

Classroom implementation of the project-based instruction

In implementing the adaptation of the project-based instruction at this classroom level, the students chose a topic of interest to their group, searched for related articles, summarized and synthesized them, drew up an outline based on their selected articles, and presented their work orally in class at the end of the semester. The implementation details are divided into four topics, namely the students, the teacher, the feedback and revision, and the oral presentation.

1. The students

The students were provided with some degree of choice to form into a group of five members. Grouping was based on close relationship, major fields of study, interests in the same topics, or even ethnic backgrounds, because they had to meet in their free time for further discussions and planning. As project-based instruction is student-centered and collaborative, members of the group had to work together to carry out the activities and to share their opinions, knowledge, and experience with other group members. To enhance their

collaboration skills, each member was assigned a role to contribute to the project and to strengthen individual accountability, collaborative learning, teamwork, and leadership (Helm and Katz, 2001; Katz and Chard, 2000).

Each student was assigned responsibilities for the success of the project. One member was the coordinator of the group, being the group leader, assigning each member relevant responsibilities, arranging appointments for group discussions as well as progress in their work, and contacting the teacher for consultations and feedback. Another member was appointed as the project secretary in charge of taking notes during group discussions and making appointments with the teacher. The other group members were responsible for proposing topics of interest for their group project, searching for and selecting relevant articles, and carrying out their assignments. Nevertheless, everyone was collaboratively and collectively involved in the processes of summarizing, synthesizing the data, and writing up an outline for their final report before the oral presentation.

An example of the students' projects was "Renewable Energy". After the topic was determined and agreed upon by all group members, they searched for related articles and came up with five articles: renewable energy, geothermal energy, solar energy, wind energy, and hydro-electric energy. After analyzing the articles, it was agreed that the best alternative for Thailand was solar energy, because the country is located in the tropical zone with sunshine all year round. Hydro-electric energy was perceived as the second alternative, but environmentally this form of energy was not practical. Dams had to be built and large areas of forest, agricultural and residential land would be submerged, destroying local ecological systems as well as livelihoods and traditions of affected residents. The group concluded that solar energy was practical, efficient, low-cost, and environmentally friendly for the country.

Each article was assigned to a member to analyze for its main ideas and to summarize the entire article. After that, the five articles were synthesized into a concept map in order to write up the outline for the report and oral presentation. Before the whole process was complete, consultations with the teacher for feedback and revision had to be carried out on a regular basis.

2. The teacher

Realizing the fact that the students had a very low level of English proficiency and were poorly motivated, the teacher, in this case, could play not only the role of a facilitator, but that of a monitor, an evaluator, and an instructor. As a monitor, the teacher had to closely monitor students' work progress. Due to their low motivation to study English and their low proficiency level, the students would try every means to avoid doing anything with English. Consequently, the teacher had to regularly urge and encourage them to work step-by-step, in order to instill a sense of achievement in them. When they felt

that English was learnable, their attitude toward the language gradually changed in a positive way and their motivation to work harder was slowly established. Regular monitoring was a must to get the students to work as the course was progressing. As an evaluator, the teacher must check, evaluate and give comments on students' work in each phase. After the work was revised, the teacher had to recheck and reassess it. It was a lot of work, but, for the students' work to progress according to the plan, the teacher had to sacrifice her/his time and energy with exceptional patience. As an instructor, the teacher had to cover the content syllabus in the course book. Certain grammar points necessary for some topics, e.g., passive and active constructions for paraphrasing in order to avoid plagiarism, needed to be presented and practiced. The students also needed some guidelines and coaching on how to paraphrase, summarize to get the gist, synthesize the articles, and write up an outline for their report and oral presentation. These techniques were relatively new to them, so a large portion of time was spent on practicing the techniques.

It can be seen that, in this modified project-based instruction for these poorly motivated students of low proficiency, the teacher still played a significant role in facilitating, coaching, monitoring, and teaching the students to carry out their project activities with a certain level of close supervision and direction in order for the students to achieve their ultimate expectations.

3. The feedback and revision

With regular monitoring, encouragement, and constructive feedback from the teacher, the students tried to do their best, despite their poor English. However, the priority was the group's collaborative feedback and evaluation of the project. Feedback from the teacher was mostly in the form of guiding them to reach a conclusion. In addition, the students were required to write their own reflections in English about what problems they encountered and their solutions. This would be integrated into their final report. Evaluation was also based on individual portfolios which consisted of the assignments and supplementary documents in various units in the course book. The aim of these assignments was to familiarize and teach the students about how to select a topic, find the gist of an article, paraphrase main ideas, summarize a reading passage, synthesize the information from various related articles, and write up an outline for their report.

After having received feedback from the teacher and group members, their work had to be revised several times before the final draft was obtained.

4. The oral presentation

With poor English proficiency, giving an oral presentation in English can be frightening and daunting for the students. However, with constant

encouragement and moral support from the teacher, the difficulties could be overcome after several times of rehearsals and good preparation.

The presentation was divided into three parts: introduction, body and conclusion. The body part was divided into sections according to the main ideas of the report. As a collaborative project, every group member was responsible for delivering one section. One member was chosen as the moderator in charge of introducing members and their responsibilities to the class. The moderator was also responsible for delivering one section of the report. Each group was allotted ten minutes for presentation and five minutes for questions and answers from the audience. For the Renewable Energy project, the role each member played during the presentation was as follows:

Group leader: moderator, introduction, renewable energy, and concluding remarks

Member #1 : Geothermal energy

Member #2 : Solar energy

Member #3 : Wind energy

Member #4 : Hydro-electric energy

Discussion and conclusion

This article discusses an application of a modified package of project-based instruction for an English for Science course, where the students had low English proficiencies and were poorly motivated to study English. The modification of the project-based instruction was tailored for a classroom situation, which had to be in line with the course syllabus. However, all the procedures of the project-based package had strictly been maintained, except the authenticity of the instructional materials and relevance of the project work to the real world (Railsback, 2002: 7).

In the classroom circumstances, there was a lot of resistance from the students in the beginning, as they perceived that what was expected from them was beyond their capabilities. Consequently, the teacher had to be very patient and while giving the students a great deal of encouragement. However, the rule of punctuality must be set up and observed, in order for their work to progress according to the timeframe. Additionally, close monitoring from the teacher had to be strictly conducted for the success of the instruction.

As the class progressed and a sense of achievement was instilled in the students, enquiry, consultations, and discussions became rigorous and contagious. There was a sense of purpose and challenge in their work and their projects became meaningful to them. Students' engagement in the learning process was evident and the 21st century skills were clearly cultivated in them to a certain degree. The skills include communication and presentation, organization and time management, research and enquiry, self-assessment and

reflection, collaboration and leadership, and critical thinking (Larmer and Mergendoller, 2010: 36; Polman, 2000; www.bie.org). The students have become more confident in their English learning abilities.

In conclusion, this modified project-based instruction was able to improve the students' English proficiencies, self-confidence in and attitude toward English learning. The implementation can become successful provided that the teacher thoroughly understands the implementation steps, is patient and well prepared, and closely supervises and monitors the students' work and their study progress throughout the entire course of instruction.

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