The Use of Project to Enhance Learning Domains Stated by National Qualifications Framework: TQF

Duangkamol Thitivesa

Abstract—This paper explores the use of project work in a content-based instruction in a Rajabhat University, Thailand. The use of project is to promote kinds of learning expected of student teachers as stated by Thailand Quality Framework: TQF. The kinds of learning are grouped into five domains: Ethical and moral development, knowledge, cognitive skill, interpersonal skills and responsibility, and analytical and communication skills. The content taught in class is used to lead the student teachers to relate their previously-acquired linguistic knowledge to meaningful realizations of the language system in passages of immediate relevance to their professional interests, teaching methods in particular. Two research questions are formulate to guide this study: 1) To what degree are the five domains of learning expected of student teachers after the use of project in a content class?, and 2) What is the academic achievement of the students’ writing skills, as part of the learning domains stated by TQF, against the 70% attainment target after the use of project to enhance the skill? The sample of the study comprised of 38 fourth-year English major students. The data was collected by means of a summative achievement test, student writing works, an observation checklist, and project diary. The scores in the summative achievement test were analyzed by mean score, standard deviation, and t-test. Project diary serves as students’ record of the language acquired during the project. List of structures and vocabulary noted in the diary has shown students’ ability to attend to, recognize, and focus on meaningful patterns of language forms.

Keywords—Thailand Quality Framework, Project Work, Writing skill.

I. INTRODUCTION

In the globalized world, where knowledge and innovations widely spread and develop unlimitedly, people communicate among the others more and more. English is a prime language in a variety of fields – science, technology, and commerce – as well as an international language which plays an important role in education [1], [2]. The language has earned an interest from language teachers and educators at all educational levels and been taught as a compulsory subject of learning for countless schoolchildren. Considered one of the core subjects (e.g., arts, mathematics, economics, science, geography, history, and government and civics) essential for student teachers are instructed to perform teaching and economic prosperity [3], [4]. College students whose English falls short of the required standard do not receive their diploma. White-collar workers expend energy on English learning as it is pre-requisite for their promotion. The mastery of the language is equally important to the qualities and skills called from a future workforce in the 21st century, such as, responsibility, initiation, and capacity to work in group [5]. It is important to master at least one foreign language, and ideally many languages [6]. The establishment of ASEAN community in the year 2015 puts Thais in the situations where English is strongly recommended (by the action plan of ASEAN Socio-cultural Community blueprint: ASCC) to be an official language in communication among all people of ASEAN members for exploring understanding and cooperation among the others, opening the opportunities of career advancement, and increasing the competitiveness among the regional trades. However, it was reported that English is the needed skill for effective communication proficiency for Thai senior managers, managers and staff engineers in small and medium enterprises (SMEs) [7].

Thailand as part of the global community realized the country needs to set up the direction towards the country development in 21st century so as to develop Thais to meet the international standards and maintain her significant roles in the regional and international. These themes brought the country the need to launch National Qualifications Framework for Higher Education in Thailand. The national framework serves as guidelines for the educational system to ensure consistency in both standards and award titles granted by institutions all over the country. Programs developed within this framework are recommended not only to lead to knowledge, generic skills and professional expertise associated with studies, but also reflect the mentioned demands – graduates should have the ability and commitment to engage in lifelong learning, ability to use information technology and take initiative in individual and group activities, as well as capacity for effective communication [8]. The qualifications framework begins at an entry level which is the completion of basic education, and culminates with the degree of doctor.

Complying with the national framework, Suan Sunandha Rajabhat Universities (SSRU), previously teacher colleges where teacher candidates are instructed to perform teaching roles mainly in basic education level, develop programs to equip them with generic skills professional expertise associated with the teaching careers. English Department of the Faculty of Education makes a great effort to produce effective English teachers who are professional and skillful in teaching. 5-Year Education Curriculum is designed to equip English teacher candidates with knowledge and skill in learning content, educational psychology, communication, language teaching methods, and technology and innovation in
teaching [9]. In regards of communication, English in particular, what students should know and be able to do with the language are closely intertwined and emphasize the complex interaction among language skills. English-major teacher candidates are expected to apply knowledge of language structure, language conventions (e.g., spelling and punctuation), figurative language to create print texts, to employ a wide range of strategies as they write to communicate with different audiences for purposes, and to adjust their use of language (e.g., conventions, style, vocabulary) to communicate effectively.

II. PROJECT-BASED LEARNING

A. Definition and Characteristics

Within the Communicative Language Teaching framework, in which the interactive nature of communication is essential to meaning-making as interlocutors attempt to get across and understand each other’s message during the negotiation of the message, Project-Based Learning (PBL) approach lends itself to the integration of language- and content-learning objectives because language use and explicit attention to language-related features (e.g., forms, vocabulary, skills) are needed at various points in the exploration of themes. In project work, a sequence of activities is introduced in multiple stages of development for the success of project [10]. These activities are combined in working towards an agreed goal and centered on a theme, or topics, relevant to the specific content being studied. This sequence of activities is viewed as creative tasks, involving combinations of task types: reading, ordering and sorting information, comparing and problem solving [11], [12]. Students are involved in seeking answers to questions they have formulated by themselves, or in cooperation with their teachers, and proceed with investigation of an in-depth study on a selected topic. Participation in conversations, discussions, observation and investigation strengthens students’ understandings on the areas from which the topics are drawn [13], [14]. They learn to learn from each other and view their peers as links in a chain via exchange of information and negotiation of meanings to achieve the agreed goals.

B. Project-Based Learning and Language Instruction

Language is used at various points in a project as students negotiate plans, analyze and collect information as well as discuss ideas [12]. Use of language evolves from works and rise naturally from within in response to needs [15]. Language is used as a tool for communication and functions as a vehicle for acquiring knowledge [16]. These prominent characteristics (e.g., processing and making sense of knowledge, use of language as communication, learning a language via content, collaboration with peers and teachers) make PBL the natural language as communication, learning a language via content, in which students have opportunities to recycle known language while focusing on topics or themes, rather than on specific language features. Language is contextualized and presented in the way that “the task of language learning becomes incidental to the task of communicating with someone...about some topic” [17]. Placing an emphasis on communicating information, students use complex communication skills ranging from receptive skills (e.g., reading) and productive skills (e.g., writing) to processing skills (critical and creative thinking). Linguistic features found in texts students read are likely to appear at some point in their written project report. It is also possible that one would have heard students use ‘real’ and ‘mix’, for instance, talking about their topic and recast these words in their written report as ‘authentic’ and ‘integration’, respectively. The use of linguistics over the course of the project to construct and participate in types of academic discourse shows evidence of students’ language acquisition.

C. Outcomes of Using Project-Based Learning

Despite its benefits reported in relevant literature and a synopsis of the beneficial outcomes of using project work in language teaching and learning, many English teachers do not fully exploit its benefits [18], [19]. A project work requires effort to plan, search for interesting topics, conduct research, write and present a report. Under the pressure of the mandatory schooling timeframe, English teachers are more concerned on a detailed analysis of texts, explanation of keywords and the meaning of the text. Time spent on prerequisite skills (e.g., planning projects, conducting library search, synthesizing collected data, and presenting findings) for project work could be better used for teaching specific reading and writing strategies to handle unfamiliar test questions and accurate structured composition. Also, it is reported that the short of expertise in non-linguistic disciplinary raises language teachers’ concern about their incapability of providing content guidance to students. They feel more comfortable with traditional delivery of language content – lecture on knowledge about English and emphasize reading and writing strategies to handle unfamiliar test questions and accurate structured composition. Also, it is reported that the short of expertise in non-linguistic disciplinary raises language teachers’ concern about their incapability of providing content guidance to students. They feel more comfortable with traditional delivery of language content – lecture on knowledge about English and emphasize writing strategies to handle unfamiliar test questions and accurate structured composition. Also, it is reported that the short of expertise in non-linguistic disciplinary raises language teachers’ concern about their incapability of providing content guidance to students. They feel more comfortable with traditional delivery of language content – lecture on knowledge about English and emphasize reading and writing strategies to handle unfamiliar test questions and accurate structured composition.
serve as model examples of various types of academic language that may be specific to content areas or genres [24] critical to the academic success of learners. The final outcome of project (e.g., board display brochure, theatrical performance, article writing) serves as a focal point for students, who create product, have a real reason for creation and communication.

III. PARTICIPANTS

The research was carried out for 14-weeks in a content-based undergrad course called Evaluating and Developing Teaching Innovation. The research was carried out during regular class hours in The Faculty of Education at Rajabhat University, a teacher college, preparing student teachers to perform instructional role mainly in primary and secondary schools in all subjects. The class equipped students with the foundational knowledge of language teaching approaches and methods, English in particular. There were 38 fourth-year English major students as participants whose English proficiency was lower intermediate. As these researchers were their English instructors in previous semesters, it was possible to observe and closely monitor student teachers’ progress. The students are equivalent in nature both in socio-economic and academic background. Project work was not a compulsory requirement in the class: various form of final product could be done in any form as of their interest. Article review was requirement in the class: various form of final product could be done as of their interest. Article review was a consensus as to which information should be used/discarded.

IV. METHODOLOGY

This paper reports a preliminary study of the use of project to enhance the learning domains, as stated in the National Qualifications Framework, in the context of content learning in the areas of language teaching and learning approaches/methods. Thirty-eight fourth-year English major students in The Faculty of Education at Rajabhat University in Bangkok participated in the study. Based on the review of the literature, project-based learning is an appealing tool in the design of language learning activities to involve students in a variety of individual and cooperative tasks [10], [19], [25]. A sequence of activities in project-based learning is structured in the rungs of a pedagogical ladder so as to enable students to reach a higher level of writing performance [26]. This should result in increased writing performance and accuracy on forms (structure and vocabulary). Two research questions are formulated to guide the study.

a) To what degree are the five domains of learning expected of student teachers after the use of project in a content class?

b) What is the academic achievement of the students’ writing skills, as part of the learning domains stated by TQF, against the 70% attainment target after the use of project to enhance the skill?

Researcher hoped this study would lead to a better understanding on creating vibrant language learning environments that require active student involvement for their own writing development. Findings are expected to give language teachers ways to allow for genuine communication, and give real meaning to classroom activities.

The project work in this study is characterized by the primary features of the project development structures commonly found in other projects [18], [20], [27], and [28]: agreeing on a theme for the project, determining the final outcome, planning the contents and the way of carrying out the tasks, preparing for the demands of tasks, gathering needed information, analyzing/organizing collected information, presenting the final outcome, and reflecting on the work done. In addition, this model integrates the stage of attention arousal to strengthen students’ interest in the project via the use of perceptual arousal (e.g., opposite point of view, use of humor to lighten up the topic) and inquiry arousal (e.g., role-play, questions that challenges critical thinking) [29]. The project was a two-month long semi-structured project, designed and organized by both teachers and the students. A detailed description of how the project was implemented in this study was as follows:

Step 1 includes choosing a suitable topic for the project, generating interest and a sense of commitment via the use of perceptual arousal and inquiry arousal. To facilitate topic initiation, an umbrella topic, connected to studied content, was given. A list of related topics was not only provided but also served as guiding examples for ideas. The list is optional.

Step 2 requires negotiation between class and the teacher for the choices of the final outcome of the project, namely review article, as well as the audience for the project work. Choice reasons were shared among class.

Step 3 asks for determining the content and structuring the project. Students and the teacher agree on the scope of information needed to gather, sources of data collection, tentative timeframe, and roles of each group members. Students’ interaction with peers (e.g., exchanging information/opinions, clarifying to ensure comprehension, decision-making for how long things to take and things to be done) are observed/recorded of a group.

Step 4 prepares students for the demands required by a project work in both content and language via variety of teaching (e.g., lectures on relevant approaches and methods, workshop for summary writing, reflection writing and lesson plan design).

Step 5 lets students leave the classroom for gathering information from sources agreed in Step 3. They are instructed to share information among the others and discuss in teams for a consensus as to which information should be used/discarded. The sources are saved for a reference list.

Step 6 brings the students back into the classroom and let them sort out the gathered information – analyzing, and organizing for writing up a review article. Students’ interaction with peers (e.g., acting responsibly in group work, recalling and presenting information, analyzing principles/theories in critical thinking manners, communicating effectively in oral/written form) are
observed/recorded.

Step 7 lets students submit to the teacher the final outcome based on agreement in Step 2. Students are allowed to rework their writing until their intended message was clearly communicated. Teacher feedbacks on content (teaching approaches and methods), and language (structures and vocabulary) serve as guidance for correction. Common grammatical errors are listed and correct use of the structures is provided.

Step 8 gathers students’ reflections on the group processing whether or not groups function well in regards of effectiveness in contributing to collaborative efforts to complete the project work [30]. Also, students reflect on the language they acquired during the process of article review writing.

This series of tasks with specific objectives prepared students for the content, skills, and language demanded by the national framework. The objectives were designed to direct students toward the shared goal – project completion. This allows students to become fully engaged with learning through activities that immerse students in meaningful ways for language use for real communication.

V. DATA ANALYSIS

This research on the use of project to enhance learning domains stated by National Qualifications Framework aimed to promote kinds of learning expected of student teachers as stated by Thailand Quality Framework: TQF. The kinds of learning are grouped into five domains: ethical and moral development, knowledge, cognitive skill, interpersonal skills and responsibility, and analytical and communication skills. The data source for this study included the course syllabus, lesson plans, students’ writing work, an adapted project diary, and observation checklists. The data was collected by means of students’ writing works, an observation checklist, and project diary adapted from one in Beckett and Slater’s The Project Framework [20].

The researcher analyzed the course syllabus for content and lesson plan design. Students’ written works were collected two times in Step 4 (see Section V. Method). The researchers identified the sentences (or sentence parts) they wanted the students to correct during revision. When graded work is returned with error labels, students then revise their work. Printouts were collected for progression of revision, instead of only the latest draft or the final product. The summative achievement test measured correctness of structure/vocabulary at sentence level in writing work collected in Step 7 (see Section V. Method). The scores in the achievement test given were then analyzed by mean score, standard deviation and t-test. Self-reported project diaries were used for students to record samples of newly learned vocabulary and structures they often had trouble with. Classroom observations of the student learning outcomes of the five domains acted as a basis for the examination of knowledge, generic skills and professional expertise associated with teaching careers.

VI. FINDINGS

This section reported the findings resulting from the use of project to enhance learning domains stated by National Qualifications Framework. It aims to answer the two research questions as follows.

A. To What Degree are the Five Domains of Learning Expected of Student Teachers after the Use of Project in a Content Class?

Answering the question requires an investigation to ascertain whether the five learning domains (i.e., ethical and moral development, knowledge, cognitive skill, interpersonal skills and responsibility, and analytical and communication skills) are achieved. The practice of the domains dealing with the manners cognitively, ethically, and emotionally is observed in the circumstances in which students work in groups to complete their choices of project. Table I shows the average mean score of the five learning domains practiced by the teacher candidate and its descriptors.

<table>
<thead>
<tr>
<th>The Five Learning Domains</th>
<th>Average (X) by Groups</th>
<th>Descriptors</th>
</tr>
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<tbody>
<tr>
<td>Ethical and Moral Development (i.e., acting responsibly and ethically in ways that consistent with accepted norms, resolving opinion conflicts so as to comes to conclusion). Knowledge (i.e., the ability to understand, recall and present information)</td>
<td>2.23 moderate</td>
<td></td>
</tr>
<tr>
<td>Cognitive skills (i.e., understanding concepts/theories and applying them when asked to do so, analyzing conceptual understanding in critical thinking manners)</td>
<td>2.10 moderate</td>
<td></td>
</tr>
<tr>
<td>Interpersonal skills and responsibility (i.e., working cooperatively in groups, planning/taking responsibility for self-directed work teams towards a common goal)</td>
<td>2.62 high</td>
<td></td>
</tr>
<tr>
<td>Analytical and communication skills (i.e., using basic mathematical techniques, communicating in oral/written form, using information technology)</td>
<td>2.30 moderate</td>
<td></td>
</tr>
<tr>
<td>Average (X) of the total domains</td>
<td>2.41 moderate</td>
<td></td>
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</table>

Table I shows that the teacher candidates’ practice of the five learning domains was at the moderate level (2.41). Ethical and moral development, Knowledge, and Analytical and communication skills were practiced at moderate level: 2.23, 2.10, 2.30, respectively. Cognitive skills and Interpersonal skills and responsibility were practiced at high level: 2.82 and 2.62 respectively.

The findings could result from the fact that a project is an organization of people dedicated a specific purpose or objective. A project requires social engagement of situated human interaction during the tasks of the project work, for instance, processing and making sense of information found,
using language as mean to learn content, collaboration with peers and teachers, selection and grading of tasks. This process of exchange, evaluation and integration of information/knowledge is a social process, one that is extraintidividual — the interaction of individuals, not their isolated behavior. Students learn to develop conflict resolution skills, role-taking ability, respect for individual differences in abilities and values of project members. They benefit from the interactive experiences within groups, which lead to the outcomes expected of the teacher candidates.

B. What is the Academic Achievement of the Students’ Writing Skill, as Parts of the Learning Domain Stated by TQF, against the 70% Attainment Target after the Use of Project?

Answering the question requires analysis of the summative test scores on the usage of grammatical structures in students’ writing works relevant to the choices of project works. The analysis rests on an analysis in comparison with the review of the literature on the English grammar and usage, reference guides for conventional practices and appropriate formats. Table I shows the students’ summative test scores and the percentage of the scores of the students writing number of the students and those whose scores meet the target attainment.

TABLE I

<table>
<thead>
<tr>
<th>Test Scores (50points)</th>
<th>Percentage</th>
<th>Number of Students</th>
<th>Number of Students Whose Scores Meet the 70% Target Attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 – 47</td>
<td>80 – 94</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>30 – 39</td>
<td>60 – 78</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>26 – 28</td>
<td>36 – 52</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

Table II shows 15 out of 35 students whose academic achievement test scores fall in the range of 40 points to 47 points (80% to 94%) meet the 70% target attainment. 11 out of 16 students whose scores fall in the range of 30 points to 39 points (60% to 78%) attain the target. 4 of the 16 did not meet the attainment. None of the 5 students whose scores falls in the range of 26 points to 28 points (36% to 32%) attain the target. In other words, 26 out of 35 students, or 70% of them, meet the 70% target attainment after the use of project in class while 9 students, or 26% of them, could not make it.

It could be illustrated that, in project work, a sequence of activities is introduced in multiple states of development to the success of project work. The skill would facilitate the participation of the team members and minimize conflicts of the intellects possibly occurring during the project work.

1) Students need to be well equipped with group processing skills (e.g., giving constructive comments) for the success of carrying out group work. The skill would facilitate the participation of the team members and minimize conflicts of the intellects possibly occurring during the project work.

2) A sequence of activities introducing in multiple states of the development to the success of project, the work difficulties are minimized to the level that one could manage. Some of the activities need to be taught/trained for instance reading comprehension.

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REFERENCES

Duangkamol Thitivesa, born in Bangkok, Thailand, obtained her first degree of Bachelor of Arts (English) from Thammasat University, Thailand. She furthered her studied in Master of Education at Southern Illinois University at Carbondale, Illinois, USA, and in Doctor of Education (TESOL) at University of Melbourne, Victoria, Australia.

Ms. Duangkamol is currently an instructor in the English department of the Faculty of Education at SuanSuandhaRaajabhat University. She has recently published “The Effects of Cooperative Groups as Communicative Language Teaching Techniques for Teaching Grammar to English Teacher Candidates in a Rajabhat University” (Jeju: ICEMT, 2012). She worked as a co-researcher in “The Model of the Social Responsibility: the Collaboration between the Public and the Small and Medium Thai Entrepreneur (SMEs)” project to be launched in fiscal year 2014. The two projects were funded by The National Research Committee of Thailand, Bangkok.