THE IMPLEMENTATION OF PROJECT-BASED LEARNING TO DIRECT STUDENTS IN WRITING A RESEARCH PROPOSAL

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ABSTRACT

This paper aims to describe the implementation of Project-Based Learning (PBL) Method in Linguistic and Educational Research classroom. PBL is defined as "a systematic teaching method that engages students in learning knowledge and skills through an extended inquiry process structured around complex, authentic questions and carefully designed products and tasks", Markham, Larmer, and Ravitz (2003:4). The problem investigated is how the implementation of Project-Based Learning directs students in writing research proposal. The subjects were 30 students of the sixth semester of the English Department, Semarang State University, 2012-2013 academic year. The subject course provides students with knowledge of the aims, principles, and kinds of linguistic and educational research methods and designs and the skill and practice in constructing research proposals. Besides, the research class enriches students' understanding about research as a scientific inquiry to solve problems through some stages such as identifying and formulating problem, gathering and analyzing data, and ways to publish the research results (Saleh, 2012). Therefore, equiping students with skills and experiences in writing research proposal is significantly important.

Key words: Project-based Learning, writing, research proposal

INTRODUCTION

English Department students of Semarang State University, like other university students in general by the end of their study are required to write a final project. Final Project is students' scientific work written based on research on any fields such as English teaching and learning, linguistics, discourse, or translation in which it is expected to yield contributing results to the development of science and technology. Moreover, the research itself can be carried out on the basis of field study or library study.

Therefore, before they come across this period, they are equipped with subject courses such as Academic Writing and Linguistic and Educational Research in which each comprises 2 credits. Academic writing is designed to equip students with skills in reading and writing high quality academic English, and Linguistic and Educational Research provides students with the knowledge of the aims, principles, and kinds of linguistic and educational research and gain the practice of constructing a research proposal.

Practically, the purpose of writing final project for students is to fulfil one of the requirements to be under graduates and enrich academic references. Besides, it is aimed at developing students' knowledge and insightful ideas as a basis for them to write more scientific work. Intellectually, the writing of final project is a reflection of all knowledge and language skills gained during the course. The activity of completing a final project involves abilities to understand various research methods, apply cognitive knowledge, explore and read supporting references, and write academically.

As a matter of fact, when come to the end of the semester and students are required to propose a final project topic in semester VII, they have difficulties in generating ideas of what they are going to research. Students have difficulties in determining topics for their final project proposals. Besides, they get confused in starting to write a research proposal and they lack knowledge of how to start doing research. However, there are some factors affecting this condition. During the teaching learning process in Linguistic and Educational Research class, students are not fully aware of the goals and benefits of the subject course. They focus their attention only cognitive knowledge to fulfill the requirements of the exams. The final assignment given in the form writing a research proposal is mostly regarded and done for the sake of completing the final assignment itself. The students do not actually take it as a starting point for them to begin their final project writing. Thus, what mostly happens is that students simply copy and paste it from the internet or other available sources.

Based on the aforementioned description, therefore, an alternative teaching method is required to provide students with knowledge and give practical skills and experiences in indentifying problems and developing topics into research proposals as well. One of the recommended methods which suits this context is Project-Based Learning (PBL). PBL is an instructional method focusing on collaborative teaching learning processes and product-oriented.

PROJECT-BASED LEARNING

There have been a number of research, as reviewed and reported by Thomas (2000), carried out in relation to the implementation of PBL. First, the study was conducted by New American Schools Development Corp (1997). It found out that 9 of 10 schools implementing PBL demonstrated significant improvement in students' test scores on standardized tests. Next, Gallagher at al (1992) studied that students who took problem-solving courses outperformed control students in the breadth of their ethical appeals and in the extent to which they tended to support their appeals with reasoned arguments. In addition, Ljung and Blackwell (1996) mentioned that positive transfer following enrolment in Project OMEGA; graduates of

the program all passed their English, US history, and mathematics.

Based on the aforementioned studies, it can inferred that PBL proved to be effective instructional method in which it encourages students' higher-order thinking and active collaboration.

Project-based Learning (PBL) is "a systematic teaching method that engages students in learning knowledge and skills through an extended inquiry process structured around complex, authentic questions and carefully designed products and tasks" (Markham, 2003: 4). It implies that PBL is developed based on authentic problems occuring in real life and it needs serious preparation of tasks. Meanwhile, Stripling, et.al. (2009:8), defines PBL as "the instructional strategy of empowering learners to pursue content knowledge on their own and demonstrate their new understandings through a variety of presentation modes". It means that PBL requires students to work collaboratively involving discussion and presentation activities, and thus these enhance students communicative skills. Moreover, it is also mentioned that Project-based Learning is "an instructional model that involves students in investigations of compelling problems that culminate in authentic products". Similarly, it can be inferred that the final goal of PBL implementation is product-oriented, and the processes have also become very significant components to take into account, though. Furthermore, based on the previous PBL practices, Markham (2003:6) mentions that "PBL enhances the quality of learning and leads to higher-level cognitive development through students' engagement with complex, novel problems. PBL also teaches students complex processes and procedures such as planning and communicating". More importantly, some teachers having worked on PBL reported that PBL is a rigorious, relevant, and engaging instructional model that supports authentic inquiry and autonomous learning for students. PBL is an intructional method centred on the learner. Instead of using a rigid lesson plan that directs a learner down a specific path of learning outcomes or objectives, PBL allows in-depth investigation of a topic worth learning more about (Erdem, 2002; Harris & Katz, 2001 in Bas & Beyhan, 2010). Moreover, Blummenfeld, et al. 1991; Demirhan, 2002 cited in Bas & Beyhan, 2010, summarize that PBL is a comprehensive approach to teaching and learning that is designed to engage students in investigation of complex, authentic problems and carefully designed products and tasks.

In addition to the previous part about some definitions of PBL, Markham (2003:6) further summarizes benefits of PBL reported by teachers as follows:

(1) PBL overcomes the dichotomy between knowledge and thinking, helping students to both "know" and "do".

(2) PBL supports students in learning and practicing skills in problem solving, communication, and self-management.
(3) PBL encourages the development of habits of mind associated with lifelong learning, civic responsibility, and personal or career success.
(4) PBL integrates curriculum areas, thematic instruction, and community issues.
(5) PBL assesses performance on content and skills using criteria similar to those in the work world, thus encouraging accountability, goal setting, and improved performance.
(6) PBL creates positive communication and collaborative relationships among diverse groups of students
(7) PBL meets the needs of learners with varying skill levels and learning styles
(8) PBL engages and motivates bored or indifferent students

Thus, if PBL is effectively used, it will benefit and help teachers create a high performing classroom in which you and your students form a powerful learning community focused on achievement, self-mastery, and contribution to the community and allows you to focus on central ideas and salient issues in your curriculum, create engaging and challenging activities in the classroom, and support self-directed learning among your students (Markham 2003: 6-7).

PROJECT DEVELOPMENT AND INSTRUCTION

Projects must be carefully planned before being implemented to clarify student learning goals, final products, timeline, and instructional activities (Klein et.al 2009:11). Developing the project in this context that was writing a research proposal followed the stages:

(1) Preparation (Planning)
(2) Practice
(3) Performance (Assessment)

The following part presents how each stage was carried during the implementation of PBL in Linguistic and Educational Research to direct students writing a research proposal.

Preparing/Planning the Project

Klein, et.al 2009:11 in *Project-Based Learning: Inspiring Middle School Students to Engage in Deep and Active Learning* mention that in preparation stage of PBL there are five steps which have to be carefully followed:

Step One: Establish Content and Skill Goals

In this step, both content goal and skill goal were established. In terms of content goal, by the end of the project students were required to produce a research proposal. Meanwhile, the skill goals determined were students engage and develop proficiency in collaborative learning skills, skills with presentation tools, analysis skills, communication skills, problem solving and critical thinking skills, and task and self-management skills. Besides, students

were prepared with academic language skills related to content vocabularies for research.

Step Two: Develop Formats for Final Products

After the goals had been established, students must be introduced with the format of the final product which was authentic products in the forms of (1) presentations, (2) portfolios, and (3) performances/final products. Presentation was done by the students after each task was completed. The presentation paper then was kept in a folder as students' portfolios, and these would be used as materials for the completion of the final product. (Appendix 2: breakdown tasks and activities)

Step Three: Plan the Scope of the Project

Developing a timeline and scope of the project included such activities as (1) organize the tasks and activities, (2) decide on assessments, (3) analyze the final product required, and (4) create a timeline for the entire project. (Appendix 1: project timeline; Appendix 2: breakdown tasks and activities)

Step Four: Design Instructional Activities

Designing instructional activities consisted of two activities; they were designing instructional strategies in the forms of integrating the tasks and activities into the lesson plan, presentation, and discussion. Besides, this step was used to plan the assessment which were formative and summative assessment. (Appendix 1 & 2)

Step Five: Assess the Project Design

Once all the instructional activities had been designed, the teacher reflected on the design based on the questions focusing on (1) goals, (2) collaboration, (3) instruction, (4) final presentation and celebration. Based on the assessment, the project design have fulfilled all requirements for developing PBL except number 2 which is collaboration. It is expected that in the future practice, the study will involve collaborative work with colleagues (Appendix 3: project design checklist)

Practice

The activities in this stage were (1) review handouts, (2) research websites, and (3) conduct additional activity to develop understanding and completion of project. Handouts covered such materials as introduction to research, language teaching research, research methodology, research preparation, research implementation, and research conclusion (Saleh, 2012:v). Reviewing handouts was carried out through lecturing/presentation, question-answer, and discussion. In addition, students were required to find and read additional references from websites and discuss related and supporting articles with their classmates for completing their final product. Besides,

breaking down tasks and activities was conducted to develop understanding and completion of project. The activitiy was done through presentation, questions-answers and discussion.

Performance/Final Product

There were some activities which must be followed in this final stage; (1) put together the pieces of the projects (interview results, portfolios, draft, references), (2) submit final product for first review, (3) make changes to the product as needed, (4) present the completed project to class, and (5) submit the final product for assessment. The scoring rubric for assessing research proposal consists of such components as format, introduction, literature review, and methods. Complete scoring rubric can be seen in appendix 3.

DISCUSSION AND CONCLUSION

Based on the final product assessment result, it can inferred that the use of PBL to direct students writing research proposal gives some benefits. During processes, breakdown tasks and activities promote students' "learning by doing", and "practice of research". Students gain the practice to prepare research such as identifying problems, conceptualizing and formulating the problems, defining variables, formulating hypothesis, constructing research design, constructing research instruments, and sampling. Besides, students practiced writing academically through step-by-step activity. In addition, students had a very possible chance to finish their study as expected; 10 out of 30 students involved in this project developed their topics and research proposals resulted from this project development into their final projects. It can be summarized that PBL brings students to the awareness of advantages of Linguistic and Educational Research class. PBL is beneficial to teach Linguistic and Educational Research and to give practical experiences to students in writing research proposals.

TEACHER'S AND STUDENTS' CHALLENGES:

Despite its advantages, teacher and students were faced with challenges on such aspects as (1) Time; weekly task and activity sometimes took longer time than it was scheduled, (2) Classroom management; teacher must balance the need to allow students to work on their own with the need to maintain tasks and activities in order, (3) Control; teachers often felt the need to control the flow of tasks and activities, and (4) Support of student learning; teachers sometimes gave students too little feedback.

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Appendix 1

PROJECT TIME LINE

PROJECT: WRITE RESEARCH PROPOSAL

PROJECT OBJECTIVE:

By the end of the semester, students are able to write research proposals.

WEEK	TEACHER'S ACTIVITIES	STUDENTS' ACTIVITIES	PROJECT
1	Overviewing course outline, activities, tasks, responsibilities, assessment	Taking notes Questions-answers Discussions	Overviewing the projects; break down tasks and activities, presentations, portfolios, time line, and assessment
2	Discussing the term "research problem", how to formulate research problem, how to formulate research hypothesis	Taking notes Questions-answers Discussions	Overviewing the projects; break down tasks and activities, presentations, portfolios, time line, and assessment. Launching 1st breakdown task and activity (Week 3 task)
3	Discussing the term "variable" different types of variables, operational definition of variables	Taking notes Questions-answers Discussions	Presentation of Week 3 task Submitting portfolio of Week 3 task Launching 2nd breakdown task and activity (Week 4 task)
4	Discussing the term "variable" different types of variables, operational definition of variables	Taking notes Questions-answers Discussions	Presentation of Week 4 task Submitting portfolio of Week 4 task Launching 3rd breakdown task and activity (Week 5 task)
5	Discussing what "research data" is the four scales of easurement, how to classify research data in accordance with the scales of measurement	Taking notes Questions-answers Discussions	Presentation of Week 5 task Submitting portfolio of Week 5 task Launching 4th breakdown task and activity (Week 6 task)
6	Discussing what "research instrument" is, different types of research instruments, how to construct research instrument	Taking notes Questions-answers Discussions	Presentation of Week 6 task Submitting portfolio of week 6 task Launching 5th breakdown task and activity (Week 7 task)
7	Discussing what "research instrument" is, different types of research instruments, how to construct research instrument	Taking notes Questions-answers Discussions	Presentation of Week 7 task Submitting portfolio of week 7 task Launching 6th breakdown task and activity (Week 8 task)
8	Mid-term test	Taking the mid-term test	
9	Discussing the term "sample" the	Taking notes	Presentation of Week 8 task

	four techniques of sampling, how to take samples from the given population	Questions-answers Discussions	Submitting portfolio of week 8 task Launching 7th breakdown task and activity (Week 9 task)
10	Discussing the term 'research design', the difference between experimental and non-experimental designs, how to choose the right design	Taking notes Questions-answers Discussions	Presentation of week 9 task Submitting portfolio of week 9 Launching 8th breakdown task and activity (Week 10 task)
11	Discussing the term 'research design', the difference between experimental and non-experimental designs, how to choose the right design	Taking notes Questions-answers Discussions	Presentation of week 10 task Submitting portfolio of week 10 Launching 9th breakdown task and activity (Week 11)
12	Discussing the terms reliability and validity, types of reliability and validity, how to estimate the reliability and validity of instrument	Taking notes Questions-answers Discussions	Presentation week 11 task Submitting portfolio of week 11 Launching 10th breakdown task and activity (Week 12 task)
13	Discussing the terms reliability and validity, types of reliability and validity, how to estimate the reliability and validity of instrument	Taking notes Questions-answers Discussions	Putting together the pieces of the projects (interview results, portfolios, draft, references) Monitoring Questions-answers Discussions
14	Discussing The difference between descriptive and inferential statistics, three types of descriptive statistics and their use, how to perform a statistical analysis on a given set of data	Taking notes Questions-answers Discussions	Submitting the project for first review Making changes to the project as needed Monitoring Questions-answers Discussions
15	Discussing, The difference between between descriptive and inferential statistics, three types of descriptive statistics and their use, how to perform a statistical analysis on a given set of data	Taking notes Questions-answers Discussions	Presenting the completed project to class Monitoring Questions-answers Discussions
16	Final-term test	Taking the final-term test	Submitting the final product of the project (research proposals) for assessment

Appendix 2

LINGUISTIC AND EDUCATIONAL RESEARCH
BREAK DOWN TASKS AND ACTIVITIES OF THE PROJECT

WEEK	TOPICS	ACTIVITIES
3	IDENTIFYING PROBLEMS	1. Do informal interview to English teachers and/or students or do direct observation in the classrooms to find out: • Learning processes and teaching methods • Facilities and equipment • Instructional materials and devices • Administration and supervision • Assessment and evaluation • Student personnel services, etc. 2. Find and read current issues or observe phenomena dealing with: • Societal needs and opportunities • Curriculum and curriculum development • Educational programs • Learning processes and teaching methods • Student personnel services • Facilities and equipment • Teacher education • Administration and supervision • Assessment and evaluation and take some notes on those issues. **Results:**
4	SELECTING A PROBLEM AND FORMULATING RESEARCH QUESTIONS/PROBLEMS	1. Choose the problem(s) from your list (previous assignment) fulfilling the characteristics of research problems (workability, critical mass, interest, theoretical value, practical value; Tuckman, 1978:24-25) 2. Find and read references dealing with the problems chosen 3. Formulate the research problem fulfilling the characteristics • It should ask about a relationship between two or more variables • It should be stated clearly and unambiguously (usually in question form) • It should be testable by empirical methods (possible to collect data to answer the question(s) **Research problem(s)/question(s):**

5	FORMULATING HYPOTHESES	Based on the research problem(s) you formulated (previous assignment), formulate the hypotheses, either a working hypothesis or null hypothesis or both. **Hypotheses:**
6	IDENTIFYING VARIABLES	Identify the variables of your research problem(s)
7	IDENTIFYNG RESEARCH DATA	Based on the variables you identified, identify your research data either quantitative (in the form of numbers) or qualitative (in the form of description/explanation/qualities/characteristics, etc) **Research Data:**
8	DETERMINING RESEARCH INSTRUMENTS	Remember the previous assignment (identifying research data). Based on the form of the data, think about the kinds of instruments which you are going to use to collect the data. **Research Instruments:**
9	CONSTRUCTING RESEARCH INSTRUMENTS	Construct instruments of your research: **Instruments:**
10	SAMPLING TECHNIQUE	Decide the subjects of your study **Subjects of the study:**
11	RESEARCH DESIGN	Determine the research design of your research **Research Design:**
12-16	WRITING A RESEARCH PROPOSAL	1. Write a research proposal based on the template. 2. The research proposal is due on week 16.

Appendix 3

LINGUISTIC AND EDUCATIONAL RESEARCH PROJECT
RESEARCH PROPOSAL ASSESSMENT RUBRIC

Title of research: …….…….....

Name : ……..…….....

Score : …../40 X 100

ITEM	SCORE (WRITE SCORE VALUE TO BE AWARDED)		
1. FORMAT	**POOR (1)**	**FAIR (2-3)**	**GOOD (4-5)**
• Title page included and title reflects research area • Pages are numbered • Doubled spacing with Times New Roman font of size 12 • Proper use of language (passive voice and present/future tense) • References are cited according to APA format and			

arranged in alphabetical order • At least 3 references (print or non-print) cited from various sources			
2. INTRODUCTION	**POOR (1)**	**FAIR (2-3)**	**GOOD (4-5)**
• Rationale of the study is clearly stated • Objective(s) of research is clearly stated and achievable • Hypothesis(es) is/are listed appropriately			
3. LITERATURE REVIEW	**POOR (1-6)**	**FAIR (7-11)**	**GOOD (12-15)**
• Background information provided relates to the research area with proper in-text citation • Adequate evaluation and elaboration of past research in the area of study • Information presented in an organized manner that reflects depth and good understanding of area of study			
4. METHODS	**POOR (1-6)**	**FAIR (7-11)**	**GOOD (12-15)**
• Variables (independent, dependent and controlled) • Instruments are listed • Research design chosen is appropriate to achieve objectives • Types of data to be collected are clearly stated • Research idea has a good degree of creativity and originality			

Remarks:

Source: http://www.assessment.ua.edu/rubrics

Smallwood, Bob, Jon Acker & Holly Hallman (University of Alabama)

NOTES FOR CONTRIBUTORS

The manuscript: All copy must be typed written, double-spaced, throughout, on one side of the sheet only.

Italic type: Only for cited linguistic forms, titles of books, and journals that occur within the text.

Small capitals: Where essential to emphasize a word, phrase, or sentence in the text or to mark a technical term when it first occurs.

Punctuation: Enclose quoted words, phrases, and sentences in double quotation marks. Enclose quotation within quotations and glosses in single quotation marks.

Notes: Do not use footnotes. Use a raised number (without parentheses) for a note reference number. Type all notes, double-spaced, at the end of the text.

Bibliographical reference: Cite accurately and fully literature referred to in a bibliography at the end of each article.

Within the text, make a brief citation such as (Marmaridou 1998) or (Villata 2004: 31-32). Give the page number only for the passage to which reference is made, not for the whole paper.

Type the full bibliography, single-spaced under the heading REFERENCES. Arrange the entries alphabetically by surnames of authors as in the following examples.

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