

## Project Based- Learning in Teachers' Perspectives

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### Abstract

This study was conducted to determine the teacher's perspective of project-based learning in Special Region of Yogyakarta. This study is a qualitative research. It describes the teachers' perceptions on project based learning. The data was taken from the sample of 34 teachers through observation, interviews and questionnaires. The perspective of teachers of the learning experience planning constraints on the determination of teaching material according to curriculum implemented using project based learning. In the implementation of the teachers had difficulty in terms of time as project based learning takes a long time, and others feared to disturb the learning process. In terms of assessment, teachers have difficulty doing authentic assessment in the learning process and learning outcomes, especially in the realm of attitudes and skills. The project based learning can improve students' skills in integrating the achievement of competence in the areas of attitude, knowledge, and skills, but requires the readiness of teachers in the planning and control of the time so that the learning can be done well, and students can attain competency knowledge.

*Keyword: project based learning, teacher's perspective, attitude, knowledge, and skills.*

### INTRODUCTION

Education in the context of the Undang-undang No. 20 Year 2003 on National Education System is in order to create an atmosphere of learning and the learning process so that learners are actively developing the potential for him to have the spiritual strength of religious, self-control, personality, intelligence, noble character, and skills needed him, society, nation and state. Then the learning process should be developed to facilitate active student learning process, not passive teacher-centered. Active Learning is a process wherein students are actively engaged in building understanding of facts, ideas, and skills through the completion of instructor-directed tasks and activities (Bell and Kahrhoff, 2006) .

According to Knight & Wood (2005) active learning can be concluded that (a) the in- class activities in place of some lecture time, (b) student work in collaborative groups, (c) Increased in- class formative assessment, and (d) focus group were observed to makeup Significantly higher learning gains and better conceptual understanding. Characteristics of active learning (Bonwell (2014 ) are indicated by the facts as follows: (1) Students are involved in more than passive listening, (2) Students are engaged in activities such as in reading, discussing, and writing, (3) There is less emphasis placed on information transmission and greater emphasis placed on developing student skills, (4) There is greater emphasis on the exploration of attitudes and values, (5) There is an increased motivation of students especially for adult learners, (6) Students can receive immediate feedback from their instructor,

(7) Students are involved in higher order thinking in terms of analysis, synthesis, and evaluation.

In addition, active learning process is learning that engages students so that students direct the learning process with a variety of activities, not just passive listening. Students perform a variety of activities such as reading, discussing, searching for information, notes, and observe. Through various activities students are able to develop the necessary skills, develop attitudes and behavior. Through active learning so students are motivated to learn, learning how to learn, and get feedback on how to improve in the future. Results that can be obtained through active learning is students are able to develop skills of analysis, synthesis, and evaluation.

One model that can activate students' learning is project -based learning (PjBL). The PjBL is a learning method that puts students at the center of learning processes (Boondoe, Kidrakarn, & Sa - Ngiamvibool, 2011), provides a learning environment that focuses on learning through experience (Solomon, 2003), to build students are able to think, create original problem solving / original, developing cooperative work, find learning resources available, finding information, and evaluate the findings ( Kubiak & Vaculová, 2011). The PjBL also showed the students about the real world, multidisciplinary problem that requires critical thinking, engagement, and collaboration (Schwalm & Tylek, 2012). The PjBL is able to motivate, improve collaboration, and communication (Sawamura, 2010), active, reflective, and share learning experiences (Jonassen, et al., 2003).

The PjBL is a systematic teaching method that engages students in learning knowledge and skills through the inquiry process designed from complex product and employment, and authentic questions (Bell, 2010). PjBL refers to the activities of students in designing, planning, and

implementing projects to produce products, publications, or presentations to the general public (Patton, 2012; Barron & Darling - Hammond, 2008) in accordance with the interests of students (Grant, 2009)

The PjBL is a learning strategy that strengthens the student to master new knowledge and publish their knowledge through various forms of publications (Klein et al ( 2009:8 ). Process of project -based learning puts students as subjects of learning. Teachers act as facilitators who prepares everything required in the learning process. understanding students with teacher guidance any problems in learning, competencies that must be mastered, and how to achieve competence. process design and planning is done to meet the students' needs and desires, and implement these projects. projects end with a series of activities to convey to public, publication, and / or generated presentations.

PjBL focus on teaching and learning around each (around) project is driven by the question or problem authentic as a central subject or curriculum, including building a community of learners, and culminating in the submission / presentation of students' work to outsiders (McGrath, 2002). PjBL based on the five things: 1) systematic learning and teaching methods; 2) involvement in learning (engaged learning); 3) skill -based; 4) authentic assessment; 5) and work -oriented products (Ministry of Education Malaysia, 2006).

## METHOD

A qualitative design was employed to investigate the application of project-based learning approach to a subject in primary schools. In this research, to explore and understand the implementation of project-based learning is conducted in elementary schools from the perspective of a teacher. The study was conducted on 34 primary school teacher training graduates who implement the project-based learning. Research subjects are scattered in four districts in Yogyakarta Sleman Regency,

Gunungkidul, Bantul and Kulon Progo. The study was conducted to determine the perceived problems of teachers in the implementation plan, implement, and evaluate project-based learning.

The data were taken using the methods of observation, interviews and questionnaires. Questionnaires given to teachers with open-ended questions, and the teacher was asked to describe her condition. Observations made of the documents produced from the teacher lesson plan to the research instrument. Observations also to students who publish the results of their learning. Interviews were conducted with several teachers and principals peers to know some of the issues related to the implementation of project-based learning

## RESULT AND DISCUSSION

Implementation of Project -Based Learning.

To implement this Project Based-learning, teachers found it difficult to prepare the lesson plan. The problems that were found in the preparation of lesson plan included:

1. Determination of KD
2. Selecting the materials (SK and KD)
3. Implementing the KD into the lesson plan using Project Based-Learning
4. Adjusting the existing problems with SK and KD
5. Making inquiries within the framework of the curriculum (essential, unit, contents)
6. Preparing the complex lesson takes a long time
7. Adjusting the lesson plan to the circumstances and the situation on the ground and theory
8. Formulating the problem in accordance with the student and the material
9. Requiring more ideas to enter the 21st century skills in learning design to be attractive
10. Designing learning more fun
11. Exposing description of the problem

12. Determining the steps of learning that enables students to be creative and innovative
13. Synchronizing between the parts contained in the lesson plan from the title until the end

The first problem encountered in implementing project -based learning is on the side of election material. Project-based learning begins with formulating the problem (Intel Education, 2008). Problems in project -based learning is a problem which is formulated as a first step to motivate learning. The problems are formulated is a problem directly related to the real world, experienced students, and or there around student. This is important because the students were taken into contextual learning. Not every teaching materials can be found in the public issues that are directly related to the material. Understanding is what makes teachers experience problems in formulating problems, connecting with the material contained in the basic competencies in accordance with the curriculum. Implementation plan based learning requires the integrity of the project began formulating the problem, the formulation of the questions within the framework of the curriculum, learning activities, and evaluation. One respondent said :

*" The difficulty I faced in planning is to synchronize between the parts contained in the lesson plan from the title up to the end . "*

Project-based learning guided by the questions in the framework of the curriculum consists of basic questions, questions of learning (projects), and the content of the question (matter). A fundamental question is provocative, insightful, and cross knowledge and skills. Through fundamental questions students are invited to connect any learning materials, skills and competence to deal with problems in the real world. Fifty percent of teachers implementer had

difficulty in preparing questions within the framework of the curriculum, especially on fundamental questions. Some causes difficulty preparing fundamental questions are: 1) the question should be broad, spanning across subjects and / or subject matter ; 2) the question must be able to relate the subject matter to the real-life conditions ; 3) broad question , provocative , but not making it up; 4) teachers are not accustomed to using a broad question in the start of the lesson; 5) the belief that the teacher prepared questions related competencies (attitudes, knowledge, and skills) to be controlled by the student.

Project-based learning should be able to provide learning steps which make students to be creative and innovative. Teachers' understanding of the creative and innovative learning very less, eighty percent of teachers are still predominantly use conventional learning to rely on the lecture method, giving tasks , and tend to be one -way. This condition causes the teachers (70 %) are not able to design learning that facilitate creative and innovative learning. One respondent said :

*"Problems in the implementation of the plan is to create a project based learning unit plan (RPP) is a really good fit with the material, determine the learning steps which make students to be creative and innovative"*

From interviews to get a more in-depth information about the difficulty factors greatly affect is the difficulty teachers determine appropriate forms of student activity with teaching materials, can be implemented, does not interfere with another school hours so as not to disturb the learning process to resolve the matter learning. This condition is slightly at odds with the observations at the time of publishing students' learning outcomes with the presentation. Observations indicate : 1) the student is able to present the results to learn well; 2) the content of the presentation was complete in terms of the content of the material; 3) most students are not affected

by the existing carrying capacity, meaning that students are very innovative use of facilities / infrastructures are available to become a media presentation, one of the examples use the calendar as a former media make presentation materials.

Given these problems, the most fundamental thing that teachers face the problem actually is fear of self that does not have the courage to try new things. After confirmation with the teacher behind the implementer, it turns out that this problem lies in the support of other stakeholders.

## 2. Implementation of Project Based Learning

Teacher learning difficulties in implementing PBL:

- 1) Requires a lot of time
- 2) Should be sufficient funds
- 3) Implementation of learning outside the classroom, which are located not fused (character interview)
- 4) Learning with LCD Preparation takes time and skill
- 5) Adjust the timing of PBL with other subjects
- 6) Preparation tool that many lessons
- 7) Going and bring in speakers
- 8) Replicates and the number of tasks
- 9) Less facilities and supporting infrastructure
- 10) Sometimes does not match the expected
- 11) Took longer preparation
- 12) Require more complex media
- 13) Carrying capacity of school

In terms of the implementation of project-based learning, teachers find it difficult to manage time according to the schedule. Project-based learning is a process of inquiry-discovery learning, ie learning which should enable students to explore knowledge with teacher guidance has been prepared. Eighty percent of the teachers' difficulties in making the learning process a schedule ranging from searching for information related to the topic, process data, analyze, create products, and publish product. So that teachers feel intrusive

project-based learning is another learning activity.

On the side of providing facilities to the students to get information from various sources as a source of learning, teachers find it difficult because of the limited carrying capacity of the school and the surrounding community. Some schools do not have enough internet connection, inadequate library collections, much of the agency/institution or another institution that can be used as a resource. The results of questionnaires and interviews and observations coupled with the location of the school implementation project -based learning, the teacher said that:

*"My difficulty in implementing project-based learning one of which is constrained by time and library infrastructure, the Internet, and computers are adequate."*

The actual carrying capacity limitations can be overcome with the fulfillment of the necessary information to save a learning resource that can be prepared teachers. In project-based learning is one factor that can influence learning success is the availability scaffolding prepared teachers. Teacher as facilitator of one of the things that need to be prepared is to provide a learning resource for students when school carrying capacity and inadequate environment. Included in the information technology needed, then the project-based learning, information technology is not the sole means of success. Some respondents said:

*"Information technology is the initial lesson plan, school is not available, simply use the existing media."*

This confirms that the necessary information technology in the learning process, especially with the advancement of technology today. But the more important thing is the process of learning to use a variety of sources, practice a variety of skills, and provide learning experiences for students to be able to solve the problem with the problems faced. So therefore, the unavailability of information technology

does not mean students can not carry out learning to develop and integrate the realm of attitudes, knowledge, and skills.

Carrying capacity peers, principals, and other stakeholders become essential judgments that may decrease the motivation of teachers to implement project -based learning. Respondents said:

*"Lack of support from all the teachers. Others tend to be apathetic teachers with project-based learning. It is influenced by several factors: 1) the project-based learning model considered too difficult compared with the usual learning models; 2) less inequality in the ability of teachers to use information technology tools."*

Some problems shows that teachers are lacking motivation in applying and developing methods of learning. The tendency of teachers comfortable with what is done during this so less open to new things that anticipate developments to facilitate the students. Another thing is the teachers' mastery of information technology is still lacking. From interviews and observations, the majority of primary school teachers are still very rare use of information technology tools in the planning and learning process. Ownership perangkat computer teacher is still lacking. Teacher competence in information technology is still very low, even some teachers can not operate komputer be good if only for the most basic stuff of the learning process.

3. Evaluation of Project Based Learning  
Difficulties in implementing the teacher evaluation of project -based learning, among others :

- 1) Assessment before, during, and after carrying out the project
- 2) Follow-up assessment
- 3) Determination of the final assessment of the learning process from start to finish

Project-based learning assessment process carried out with authentic assessment, the



assessment process and learning outcomes. The habit of teachers during the assessment are documented assessment of learning outcomes in the cognitive domain. One respondent said :

*"Project -based learning difficulties in one of which is to assess the current activities going on."*

Observation of the lesson plan is made , an assessment instrument when activities take place there. When the observation is made at the time the teacher doing the learning, the teacher turns out to be unfamiliar to assess the learning process. Assessment is focused on the assessment results. During the learning process, the teacher is still very focused and concentrated on assistance to students in the sense not to let the student proceed. Respondents said:

*"Difficulties in implementing project -based learning is at the time of observation and assessment."*

The observation of a document learning assessment, teachers tend to use one type of instrument which refer to the list. Learning assessment one of which can be reached by using a learning journal. Notes to the teacher who made the observation during the learning process. Interviews showed that teachers still consider what the students during the learning "not important" means it is a common thing done. Yet in the learning

process, students need to be given a record observations and conclusions over the learning process is done. Observations used as feedback to students for improvement.

## CONCLUSION

1. Preparation of project-based lesson plan requires the ability to select the competencies that will be developed, teaching materials combine with contextual skills, connecting with the actual problems of learning materials;
2. Process of project-based learning does not have to depend on the availability of a complete infrastructure. Limited facilities and infrastructure is not a barrier in the implementation of project-based learning, because the process is more important that students have a learning experience combining the realm of attitudes, knowledge, and skills;
3. Assessment was conducted in the planning process of the student before implementing the project, conduct implementation projects, and publications project, so it can be monitored every existing development;
4. Should be done change the mindset of teachers that learning should enable students to actively engage students in the learning process.

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