Perception of Primary School Teachers towards the Implementation of Project Based Learning

Nyai Cintang[1] ✉ , Dewi Liesnoor Setyowati[2] & Sri Sularti Dewanti Handayani[3]

[1] Study Program of Primary Education, Departement of Education, Universitas PGRI Semarang
[2] Department of Geography Faculty of Social Sciences, Unnes, Semarang Indonesia
[3] Department of Early Childhood Education Faculty of Education, Unnes, Semarang Indonesia

Article Info

Abstract

The research focuses to study the perception of primary school teacher on project based learning. The teacher's perception of project based learning is related to the way the teacher designs and implements project based learning. This research aims to: (1) assess the teacher's perception on the implementation of project based learning in primary school, and (2) to study how the teacher interprets project based learning in the implementation. The result of this research shows that: (1) every teacher has a different perception on the implementation of project based learning. Teacher's perception is seen from the understanding of meaning, role of the teacher, role of the student, the required components to be prepared, the urgency and the advantages, as well as the assessment used by the teacher. (2) The teacher's perception on the implementation of project based learning is closely related to the way the teacher interprets project based learning. The interpretation of project based learning in terms of its implementation, use of guidance, defining problem, defining project, and the context of implementation. Based on the results, it can be concluded that teacher's perception on the implementation of project based learning in primary school has special characteristics which derive different interpretations of project based learning conducted in the pilot project primary school.

✉ Correspondence Address:
Jl. Sidodadi Timur No.24, Karang Tempel, Semarang Timur
Kota Semarang, Jawa Tengah (50232)
E-mail: nyaicintang@gmail.com

INTRODUCTION

Entering the era of ASEAN Economic Community (MEA) triggers an important issue for every country since the emergence of international competitiveness caused by the free flow of labor. ASEAN and world free market require all countries to prepare the quality of human resources in order to compete in regional and global competition (Central Java Provincial Education Office, 2016). Human resource with international standard quality is needed to improve the nation's competitiveness. A nation that has superior competitiveness at the global level will determine the welfare of the state. In 2010 to 2035, Indonesia has a demographic bonus in the form of potential human resources in their productive age. If the potential of human resources is well managed, the nation's competitiveness can be improved to 2045 gold generation. Indonesia is expected to be able to manage its natural resources and increase its potential through the development of human resources (Cintang, 2016).

Education is an important instrument to prepare the qualified human resources in facing AEC, through improving the quality and competitiveness (Central Java Provincial Education Office, 2016). Education is required to always improve the concept of learning in order to be relevant to the needs of people of the era of AEC and the 21st century. Therefore, education should teach career-enhancing skills in the 21st century, which can be done through the concept of learning in school. Education prepares human resources potential through the refinement of curriculum that is able to equip people in the global era. The 2013 curriculum seeks to prepare competent human beings to achieve the 2045 gold generation (Cintang, 2016). The learning process in the 2013 curriculum uses scientific approach. One of the relevant learning models for scientific approach is project-based learning (Taher, 2014). Project Based Learning is an approach which encompasses contextual and meaningful learning. The learning takes both teachers and pupils into real life situation, real problems, and real solution in such a way that the pupils cannot see barriers between what they learn inside and outside the class (Nasrullah, 2013).

Therefore, project based learning seeks to bring the learning into contextual with the real world. The effort is outlined by Markham (2012) who states that students gain knowledge, but they also apply what they learn to solve authentic problems and produce products. Project-based learning is a proper way to realize the main goal of learning, that is how to become students who empower themselves according to the needs of the environment. The implementation of project based learning in the 2013 curriculum aims to equip students with the skills needed in the 21st century. Hallermann *et. al.* (2011) states that "Project Based Learning is a systematic teaching method that engages students in learning important knowledge and 21st-century skills through an extended, student influenced inquiry process structured around complex, authentic Questions and carefully designed products and learning tasks". The process of learning in a class that implements project based learning directs the students' active role in the learning process. In addition to observing the development stage of student thinking, learning activities also need to pay attention to the diversity of learning styles and characteristics of students.

Therefore, project-based learning is recommended to be applied to the learning process in 2013 curriculum. In the teacher book, the activity of class projects is on the sub theme four that is directed to sharpen the power of reasoning and high-level thinking. Activities are designed to open the opportunity to ask and explore information related to students' daily and environment (Kemendikbud, 2014). In Banyumas District, there are 11 primary schools of the 2013 curriculum pilot project that have been using the 2013 curriculum for three years.

The facts show that there are some problems of various teacher's perception on project based learning. The curriculum is considered not supporting the implementation of project-based learning because teachers are required to complete a theme in four weeks, while they also need to carry out the class project

that takes much time. The diversity of teachers' perceptions will influence the implementation of project based learning in each pilot project school.

This research provides a comprehensive overview in integrating project based learning on thematic learning in the curriculum of 2013. This research provides a comprehensive overview in integrating project based learning on thematic learning in the curriculum of 2013. It is based on the experience of the teachers of pilot project primary school to contribute in the development of science that can help and facilitate other schools in implementing project-based learning in order to achieve the curriculum target that is preparing human resource potential in the 2045 gold generation.

METHODS

Case study approach was used in this qualitative research. The research focuses on studying the perception of primary school teacher on project based learning. The teacher's perception on project based learning provides a key effect in designing and implementing project based learning. Teacher's misperceptions on project based learning can be an obstacle to achieving the initial foundation of curriculum change. The objectives of this research are: (1) to assess the teacher's perception on the implementation of project based learning in primary school, (2) to study how the teacher interprets project based learning in the implementation of learning.

The purposive sampling technique was used to select the research sample. The sample selection criteria are (1) the teacher's ability in implementing project based learning; (2) the length of teaching time at the grade level to be studied; (3) the teachers' experience in implementing project based learning; and (4) good communication skills. The initial stage of sample selection was done by interview to obtain a general sense of every prospective informant. The selected research sample consisted of four (4) fourth-grade teachers and three (3) fifth-grade teachers, therefore the total

informants were 7 teachers. Teachers who became informants were competent and highly experienced in implementing project based learning.

The instrument of data collection used were (a) interview guides, (b) observation sheets, (c) documentation study sheets, and (d) questionnaires. The results of data collection were then tested for the data validity to check the level of data confidence. The validity test was done through source triangulation technique and method. Miles and Huberman's interactive analysis was employed in this research as the analysis method.

RESULTS AND DISCUSSION

Teacher's Perspective on The Implementation of PjBL
Understanding the Meaning of PjBL

There are four reasons for teachers to implement project based learning on thematic learning in the classroom. All of the informant teachers agreed that project-based learning activities were listed in the teacher book at the end of the theme, with a sub subject of classroom project activities. Similar activities carried out during the learning were tasks, not projects. The difference was found in the intensity of teacher guidance. Seven (7) informant teachers had their respective understanding in interpreting the implementation of project based learning.

First, teachers believed that project based learning can polish the material being studied. This reason is based on the concept of learning while doing. When students learn while doing, what is learned will stay in the long-term memory. The perception is in line with the statement of Iriawan (2015) that the students' work through a project-based learning model is a result of learning by doing or direct experience. The concept of learning by doing is a concept of constructivism approach by John Dewey. The application of John Dewey and Kilpatrick's theory concept into project based learning is supported by Maryatun & Hayati (2010) who states that the application of learning by doing

with a lot of activity, can be done by completing projects and solving problems.

Second, project based learning develops children's skills through the provision of real experience. The teacher believes that students can develop their skills through project based learning, because each student has their own capabilities that differ from each other. Therefore, project-based learning activities carried out were not only one or two types of project, in order to accommodate all students' skills. In harmony with the statement of Educational Technology Division (2006), motivating and engaging students in the learning process is challenging even for experienced teachers because different student learning styles are unlikely to be accommodated only in one approach suiting all students. The development of students' skills through project based learning will provide a real experience for students. Suarni (2014) supports the statement that Project Based Learning is a method of learning that uses problems as the first step in collecting and integrating new knowledge based on actual experience of activity. Real experience is provided by linking or relating the project with student's contextual environment.

Third, Project based learning provides an opportunity to apply the knowledge learned before. Project-based learning gives students the opportunity to 'be able to do', not just 'know things'. The findings of this study are in line with Educational Technology Division (2006) that states that replacing the recitation and memory learning techniques, project based learning is based on individual strengths, and it allows individuals to explore themselves to meet the curriculum requirements. Project based learning embodies the transformation of learning by giving students the opportunity to explore self-skill, no longer reciting and memorizing.

Fourth, project based learning can facilitate the teachers in knowing the potential or talent of students. Teachers who have implemented project based learning argue that through project based learning, it is easier for the teachers to choose and assign students who should join a competition. Project based learning

helps teachers in knowing the competence of their students.

Teachers also feel a positive impact after applying project based learning in their class. Three positive impacts were found by the teachers. 1) Project-based learning could improve teachers' creativity and it drives the teachers' will to learn. Project based learning is a fresh method and begins to grow as the curriculum and learning concepts change. 2) Project based learning familiarizes teachers with excellent time management. The main obstacle in the implementation of project based learning is time limitation. Therefore, when the teacher tries to implement project based learning, the teacher will be accustomed to timing. Time management should be employed in order to avoid missing material. 3) Student-centered. In the project based learning activities, the teacher does not have to deliver too much explanation because the students' activity is increased. The teacher does not simply give knowledge to the students, but rather supervise them during the project completion. It can be concluded that project based learning was implemented after the learning process of sub theme 1, 2 and 3. In line with Iriawan's statement (2015), project based learning was implemented after the completion of a theme.

The activities during learning process was not a project rather than a task involving skills, such as in an art class or science experiment. Every teacher has their own reason to apply project based learning on thematic learning in the classroom. In addition, teachers who have already implemented project based learning also personally feel a positive impact. Both tasks and projects require the aspect of KI-4, but task is different from project. The difference between task and project lies in the intensity of teacher guidance and the time allocation for completion.

Role of the Teacher

All of the informant teachers agree that in the implementation of project based learning, teachers tend to be passive in terms of teaching activity. However, the intensity of providing guidance to the students in primary school level

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is still dominant. Primary school students still need teacher monitoring in completing their project. Four roles of teachers were found in the implementation of project based learning.

1. Teacher as a facilitator

Teacher as a facilitator Teachers play a role in facilitating the students in developing their skills by providing guidance. Counseling will be performed when the students have difficulty in completing the project. Teachers act as a facilitator who directs and demonstrates how to complete the project. As a facilitator, the teacher indeed only gives direction instead of teaching. A supervisor should only direct, not teach. Several studies have confirmed that the teachers act as facilitators and mentors (Habók & Nagy, 2016; Holm, 2011; Bell, 2010).

2. Teacher as a supervisor

The teacher plays a role in supervising, monitoring and reminding. The teacher acts in controlling the execution of project to match the time specified. The teacher monitors the students' readiness, and supervise whether anyone is having problems finishing the project. Hallermann, S., Larmer, J., & Mergendoller (2011) agree that teacher plays a vital role in farming the experience through careful planning, facilitating inquiry process, assessing learning, and managing logistics.

3. Teacher as a motivator

In addition to guiding and directing, it is important for the teacher to act as a motivator. It aims to increase the student's spirit in completing the project. These findings support the results of Habók & Nagy (2016) study that states more than half of the teachers consider the importance of motivation in PjBL.

4. Teacher as an evaluator

Aside from being a facilitator, a supervisor, and a motivator, the teacher will also act as an evaluator at the end of project-based learning. As an evaluator, the teacher assesses and evaluates the process of project execution. Being a contrary to the results of Habók & Nagy

(2016) study, teachers do not consider the role of instructor, educator, and evaluator in PjBL. However, Habók & Nagy (2016) suggests that it should be noted that this role is very important, as a teacher needs to be able to assess the effectiveness of their own methods besides the evaluation of students.

Role of the Students

Students play an active role in project based learning activities. In the process of project based learning activities, students have more activities than the teacher. All teachers agree that the learning approach used in project based learning is student-centered. The dominance of student activities is manifested by forming learning groups that respectively have a leader. As explained earlier, teachers only play the role of facilitator, supervisor, motivator, and evaluator, therefore they should assist the students to be able to play an optimal role in the learning process. Kemendikbud (2013) argues that the role of students is to maximize their asking and thinking competence, conduct simple research, learn new ideas and concepts, perform social interaction and independent learning. Unlike Kemendikbud's opinion, the research found four roles of students in the implementation of PjBL.

First, students act as executors of project based learning activities. As the executors, the students are very enthusiastic to carry out the project to complete it. The role of the student as executor is not only to prepare and execute the project but also to present the project completed. Students are very enthusiastic in the implementation of this concept. Second, students act as planners of project based learning activities. As a planner, the student will create a project execution plan from the beginning of the project until it is completed. In the planning process, students will learn about time and group management. Students can set the deadline for their project execution. Third, students act as designers of project based learning activities. In the primary school project, the students play as mini designers. It means that primary school students create small designs in the form of

miniature products that conceptually can solve environmental problems.

Students were not allowed to provide any tool and material themselves. The teacher had prepared the material needed to make the product. The reason of this is related to the status of the school which is a private school. The school did not want to burden the students and their parents. Most of the students come from the middle to upper class and have busy parents. This is what made the school decided not to put a burden on the students and their parents. Based on the explanation above, it can be concluded that each teacher has their respective perceptions on the role of students. Perception 1-3 further develops student independence because they play important roles from the beginning of the project.

Components to Prepare

Before implementing project based learning, teachers should prepare the required components. This is done in order to reinforce the project based learning activities. Each teacher has their own perceptions about the components that need to be prepared. Based on the results of the research, it was found that the required components to implement project based learning were assessment guidance, learning implementation plan, project guides, teacher records containing the information on project implementation procedures, and student worksheets. Teachers argue that the most important component is the information on project discussions, required tools, and materials, as well as teacher's understanding of the project. In schools applying parallel classes, the coordination among teachers is required before they implement project based learning. The school needs to prioritize teacher collaboration and student activity coordination, in the purpose of omitting any gap in activities among classes.

The Urgency and The Advantages of Project Based Learning

All of the teachers who have implemented project-based learning agree that this method is important to apply in the classroom. This is in accordance with the opinion of *Educational Technology* Division (2006) *Project based learning is important in the learning process.* Each teacher presented different reasons about the advantages the students get through the implementation of project based learning in the classroom.

First, project based learning is important because it makes the students understand more and remember what has been learned for a longer period. This happens because project based learning can give students the opportunity to optimally practice the knowledge to support their skills. The teachers who uphold the concept of learning by doing, assume that theories and knowledge alone are insufficient for students. Learning should be experience-oriented, and it can be realized through project based learning.

Second, project based learning is important because students can develop their artistic talents. This reason arises because the form of applied projects are art-, cultures, and creation-oriented, such as dance, collage, montage, mosaic, and painting. Therefore, the gained advantages for the students are closely related to the development of artistic talent.

Third, project based learning is important because it can develop students' skills, both hard skills and soft skills. Project-based learning can familiarize students in creating products so as to enhance students' creativity. In addition, project-based learning familiarizes students to present project results both orally and in the written form, so as to enhance students' communication skills.

Four, project based learning is important because it can change the teacher-centered approach to the student-centered approach. In project based learning, students are more active and teachers only act as facilitators. One of the advantages obtained is that the students will be more responsible to complete their project. The tolerance among group members also will be developed in project based learning. This is reflected when the students express their opinions during the completion of their project or getting problems to solve.

Fifth, project-based learning is important because the students can receive the right to be a mini designer. Students acquire the skills needed in the 21st century. Students are accustomed to

solving problems, working together, and independently searching the required information.

Sixth, project based learning is important but not all of the lesson items need to conduct a project. The teacher giving this reason revealed that project based learning could only be applied to natural sciences or art learning subject. There was only one teacher who had such an opinion. This assumption is different from other teachers who also apply project based learning in Civics and Bahasa Indonesia subject. The result of the research shows that the relation between urgency and advantages for the students.

Table 1. The Urgency and The Advantages of Project Based Learning

Urgency	Advantage(s)
project based learning makes the students understand more and remember what has been learned for a longer period.	students will remember well the lessons they have learned, and the knowledge will be stored in their long term memory.
project based learning can develop students' artistic talents.	developing students' artistic talents.
project based learning can develop students' skills, both hard skills and soft skills.	developing students' language skills developing cooperative behavior and cohesive problem-solving. developing student's creativity embedding tolerance in expressing opinions
project based learning replaces the teacher-centered approach to the student-centered one.	students are accustomed to being responsible to complete their project. students are accustomed to expressing opinions
project based learning gives students the opportunity to be mini designers.	students will be able to practice knowledge maximally.
project based learning is important for the lesson items that need to conduct a project.	to increase students' insight and knowledge.

Assessment

The implementation of project based learning is finished with assessment and evaluation. The teacher's assessment is related to the teacher's perception of viewing a project. On one hand, teachers who believe in product-oriented view will assess the outcome of the project than the process the students going through. On the other hand, teachers who hold process-oriented perception tend to assess the process rather than the final result. However, some teachers choose to assess the process and the outcome of the project in balance. The findings of this perception is in harmony with Kamdi (2010) who states that assessment is classified into process, product, or process and product. The difference is that Kamdi's research (2010) used a combination of process and product assessment.

Teachers who tend to have process-oriented perception put forward the process for all students to understand project completion through group collaboration. This can be handled by applying individual assessment in the learning process. Although the project activities are conducted in groups, the reports are arranged individually. There are three assessment components, i.e group assessment, individual assessment, and outcome assessment. Process-oriented teachers will tend to use project assessment. According to Kemendikbud (2013), project assessment is an activity to assess a task that must be completed from planning, data collecting, organizing, processing, and data presenting.

Teachers believing in product-oriented perception assess the project only on the final outcome as a product. The assessment used is group performance assessment including group project results. While the individual assessment is seen from the aspect of student activeness. The form of assessment instrument used is rubric. Kemendikbud (2013) believes that product assessment is the assessment of manufacturing

process and the quality of a product. Product assessment includes the preparation stage, product manufacturing, and product review according to predefined criteria.

The assessment used is adapted to the type of the project. If the project is product-oriented, results-oriented assessment should be employed to assess it. Whereas, if the on going project is closely related to the process, the assessor should apply process and product assessment.

The Interpretation of Project Based Learning Implementation

In the implementation of project-based learning, the teacher associates the project with contextual environment. Project implementation should be more on giving experience to the students. Therefore, students will be advantaged in a broader way of thinking. All teachers agree that project implementation should be linked to the surrounding environment, in order for the project to be contextual.

The results of this study is in accordance with the opinion of Nasrullah (2013) that project based learning is an approach which encompasses contextual and meaningful learning. If the project is contextual, the students will be more receptive to the project to be carried out. Various forms of project based learning in the primary school level have been described in the teacher book. The project activities that are listed in the teacher book tend to be product manufacturing based on the knowledge gained.

Products generated from the project have not been used to solve problems. All teachers agree that in primary school level, they are still not be able to create products that aim to solve environmental problems. Project based learning is implemented more on the application of the gained knowledge. Therefore, project based learning activities are put at the end of the theme, after sub-theme 1, 2, and 3.

In the teacher book, there are some projects that invite students to solve problems, however, the project is created in certain ways to produce products in the form of mini concepts or miniatures, such as waterwheels and water purifier, thus it can not be a real solution for our

environmental problems. Prior to executing the project, the teacher invites students to examine the problem and think about a problem-solving product that will be created in project based learning activities.

The are only two informant teachers who initiated the project by linking it to real problems. Meanwhile, other informant teachers did not link the project to real environmental problems, rather they linked the project to a contextual environment for the students. Teachers with this perception argue that it is important to invite students to think before executing the project.

The findings of this study relate to the concept of global learning proposed by Yeoh (2016) that students should have confidence in dealing with complexity, persistence in working with difficult problems, the ability to deal with open-ended problems, and ability to communicate and work with others to achieve a common goal or solution.

The implementation of project based learning by teachers only meet the two concepts of global learning proposed Yeoh, they are: (1) students are given the opportunity to solve open problems proposed by teachers; (2) students are given the opportunity to communicate and work with other students to achieve a shared goals. However, there are two global learning concepts that have not been met, i.e. familiarizing the students to solving complex problems and working in difficult situations.

The concept of project based learning implementation that has been performed by teachers is slightly different from the concept of project based learning proposed by Abdulah (2014) stating that project-based learning is a learning method which involves students in problem-solving, further, the students are involved in making learning products related to the problem which is about to be solved.

Meanwhile, the concept of project based learning owned by the teacher is a project-based learning in primary school level involves students with projects related to the contextual environment, the project result can not be used to solve problems, however, the teacher can initiate the project activities by linking environmental

issues. The product resulted from the project activities is in the form of concept or miniature, therefore it can not solve real environmental problems. The teacher's perception on project based learning is more on the application of KI-3 knowledge and the development of students' skills in KI-4.

The teacher's perceptions on the concept of project-based learning affect the way the teacher implement project-based learning. The project does not produce products to directly solve environmental problems. Only two teachers started the project by linking it to environmental problems. Other teachers assume that the project is done solely to create a product as an application of knowledge and skill development.

The differences between the teacher's concept and way in implementing project based learning cause different characteristics of learning-based learning. According to Kemendikbud (2013), there are eight characteristics of project-based learning, two of which were not implemented. They are the problems or challenges proposed to the students, and the process designed by students to determine the solution for the problems or challenges proposed before. The findings of this study require a review by the Ministry of Education and Culture, to differentiate the level of project implementation at different school levels. By all means, the characteristics of projects implemented at the primary school level will be different with projects implemented at higher school level such as junior high school, senior high school, and college. This difference in the level of implementation becomes a key aspect to limit and determine standards of the project.

Use of Guidance

Based on the field findings and document studies, there is no guidance to implement project based learning for students. Students do not have specific guidance to facilitate them in completing the project. There is a gap that project implementation guide is only available for teachers, whereas the student book does not include project implementation guide.

The teacher responds in several ways: (1) orally giving the project implementation guidance the students, (2) writing the project implementation guides on the chalkboard, (3) distributing copies of the guidance contained in the teacher book to the students or using other guidebooks. Guides are required by students to complete their projects. If students have detailed and clear project implementation guides, it will be helpful for them in completing the projects independently.

The teacher book consists of sub theme 1 to 4, whereas the student book only contains sub theme 1 to 3. The project activity is written on sub theme 4, that is not included in the student books. The teacher book and student book are still being improved. The results of this study can be a positive input for the student book improvement. In the revised teacher book and student book in 2016, the project guidance remained unavailable in the student book. The findings of this study indicate that further research is required for the development of project guides for students. Project-based learning absolutely requires guidance for students. The guide should contain every step of the project execution from the beginning of the final stages of project completion.

Defining Problems

Only 2 (two) informant teachers started the project-based learning activities by linking the project with problems existing in the environment. The outcome is shaped in the form of miniature, therefore it would not be able to solve the environmental problems. The teacher attempts to familiarize the students with thinking before executing the project. This is done with the required syntax of project-based learning called the determination of important questions. Meanwhile, other informant teachers did not ask an important question to be understood by the students before they contribute to the project execution. The problem raised in project learning has been determined previously by the teacher, then the teacher has to direct students into a question and answer session to explore students' ideas.

Defining Project

Project-based learning activity begins with defining the project to be completed by students. Teachers who choose to define the project first, argue that the project option is already written in the teacher book. Teachers only need to select projects that can be implemented based on time consideration, materials availability and project difficulty level.

There are some teachers who think that the project should be determined by the students. Considering the role of the teacher as a facilitator, the teacher should provide a learning process that can teach direct experience for students. As a facilitator, it is important for the teacher to consider every project to be implemented by the students, ensuring that the students can complete the project well. In addition, the teacher's duty as a facilitator should accommodate the students' will to determine what project they want to undertake.

Some other teachers choose to establish the project based on the teacher-student agreement. They state that project-based learning activities require students to complete the project to produce a product. Students will fully run the project with teacher's guidance. Therefore, students act as designers who hold the responsibilities and need to creatively accomplish the project by their own ways. The teacher-student agreement is used as a bridge for starting the project. The capability of the student is shown by their readiness in preparing the tools and materials to be used in the project based learning implementation. This strategy will familiarize the students to be responsible and disciplined in performing the collective agreement. Unlike other state primary schools, the informant teachers of private schools, AIP-04 prefers to provide the materials needed for the project development.

The Context of Implementation

The context of project implementation relates to the scope of the project and where the project-based learning activities take place. The context of project implementation may take place at home, school or in the community. Some informant teachers direct the project-based learning activities within the scope of schools, some others implement it in schools and homes, and some others direct the project in schools and communities.

Teachers who choose to carry out project based learning activities within the school scope consider the absence of a supporting teacher if the project is implemented outside the school. Teachers who choose to implement the project at home consider the limited time to complete the project. Some projects are not possible to do in schools. For fifth graders, the project activities cover both the school and community environment. Some projects defined for Grade 5 require the students to engage with the community, therefore the teacher attempts to realize the objective in the real world. Teachers have been able to involve the students into the project outside the school contexts such as small industries, post offices, and markets. Usually, the project involves the community as sources during the data collection.

Some teachers implemented the project in the outside of the school, that is within the community. When the students were asked to be junior journalists, as a project, who required them to interview the village chairperson of the neighborhood.

Each teacher has their own way to implement project based learning. Certainly, teachers with professional and pedagogic competencies have considered various things that were appropriate for the condition of the environment and the capability of the students. Teachers have the authority to organize and design the learning strategies to be undertaken, including project based learning

The data was collected through interview, observations and document studies. Moreover, data retrieval was done with questionnaire to present the teachers tendency related to the learning strategies applied. Table 2 presents the way teachers implement project based learning based on the questionnaire results that have been processed with triangulation and data analysis.

Table 2. The Way Teachers Implement Project Based Learning

Theme	Sub theme	Frequency (f)	Relative frequency (%)
The Implementation of PjBL in the Classroom	Product-based	7	100
	Real problem-based	2	29
Time Allotment	One Meeting	0	0
	Two-Three Meetings	2	29
	One Week (Minimum)	6	86
Guidance for Students	Using teacher guidebook	1	14
	Teacher made the guide independently	1	14
	Teacher's instructions	5	71
	Using other guidebooks	1	14
Defining Problem	Defined by the teacher	2	29
	Defined by the students	0	0
	Defined by the teacher and students	0	0
Defining Project	Defined by the teacher	6	86
	Defined by the students	2	29
	Defined by the teacher and students	1	14
The Context of Implementation	Implementing the project in school	7	100
	Implementing the project in the community	2	29
	Implementing the project at home	1	14

The way the teacher implement project based learning tends to be product-oriented rather than real problem-oriented. Project based learning activity was completed with a duration of 2 days to 1 week. This is adjusted to the maximum time allotment provided in the teacher book that is 1 week. About the project guidance for students, it is urgently needed and requires further development study. The teachers were more dominant in defining projects and problems seeing that the projects for primary school level has been defined in the teacher book. Meanwhile, the context of project implementation is mostly done in schools. The bar chart data is presented in Figure 1.

CONCLUSION

All teachers agree that project-based learning should be implemented in primary schools. In project-based learning, teacher's activities are more passive and the learning process is student-centered. However, the intensity of providing guidance to the students in primary school level is still dominant. Students gain plentiful advantages when they act as product executors, product designers, as well as product makers. However, in case the teachers only place the students as product makers, their independence will be hindered. Two tendencies were found during the teachers' assessing process: product-oriented and process-oriented. On one hand, teachers who believe in product-oriented view will assess the outcome of the project than the process the students going through. On the other hand, teachers who hold process-oriented perception tend to assess the process rather than the final result.

The teacher's perception on the implementation of project based learning is closely related to the way the teacher interprets project based learning.
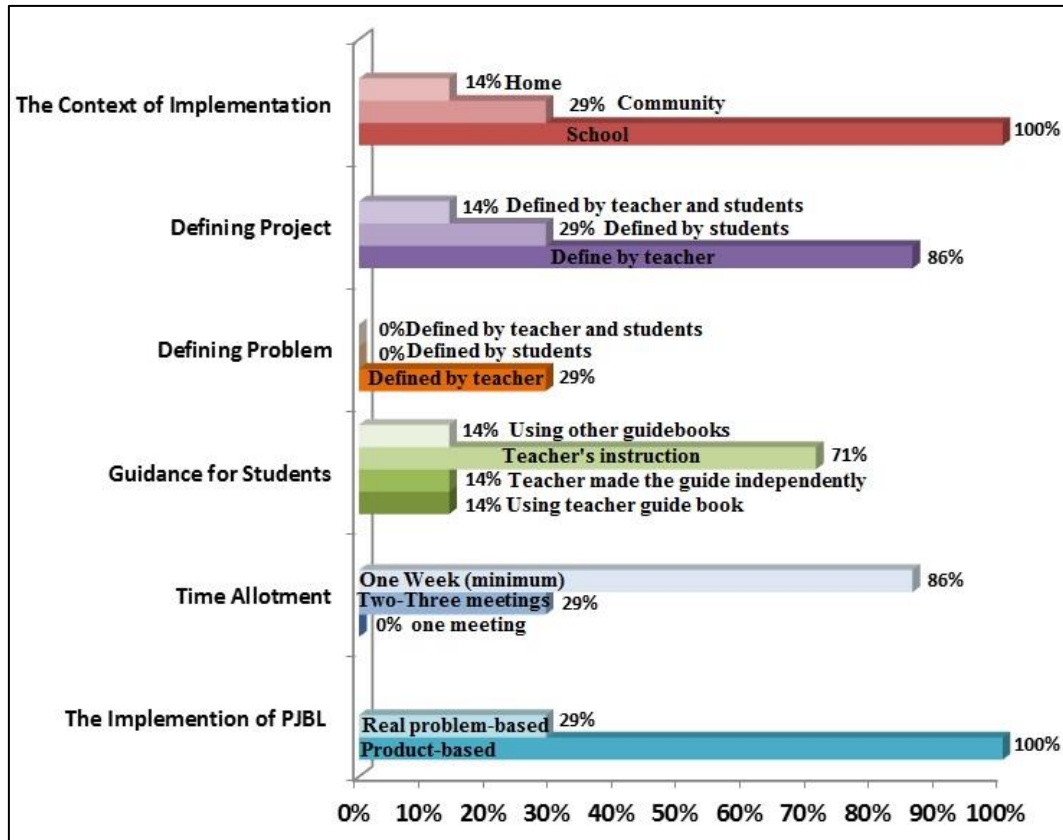
Figure 1. The Way Teachers Implement Project Based Learning

The concept of project based learning owned by the teacher is a project-based learning in primary school level involves students with projects related to the contextual environment, the project result can not be used to solve problems.

However, the teacher can initiate the project activities by linking some environmental issues. The product resulted from the project activities is in the form of concept or miniature, therefore it can not directly solve the environmental problem. The teacher's perception on project based learning is more on the application of KI-3 knowledge and the development of students' skills in KI-4.

The findings of this study denied Educational Technology Division's opinion that projects could be finished after three to eight weeks. The statement can not be applied in Indonesia because each theme contains a project and it is completed in just four weeks.

The findings of this study require a review by the Ministry of Education and Culture, to differentiate the level of project implementation at different school levels. By all means, the characteristics of projects implemented at the primary school level will be different with projects implemented at higher school level such as junior high school, senior high school, and college. Differentiating the level of project-based learning implementation is important to limit and standardize the project implementation at each educational unit.

The researchers in the field of practical learning can follow up the research results. They can conduct the development of project-based learning guidance for students. The research findings show that project guide for students is poorly provided, especially in the student book. As a matter of fact, those guides and books are considerably needed by students.

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