

## STRATEGY PROJECT BASED LEARNING (PjBL) IMPROVING SKILLS OF STUDENTS IN LEARNING FOR THE 21ST CENTURY LEARNING MEDIA COURSE

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### Abstract

In 21st Century Learning Skills have 3 skills: (1) life and career skills, (2) learning and innovation skills, and (3) Information media and technology skills. One strategy to achieve the learning skills in the 21st century is with the strategy of Project Based Learning (PjBL). Project Based Learning abbreviated as PjBL is one of learning based on problems using the project / activity as the media, to undertake exploration, appraisal, interpretation, synthesis, and information to produce various forms of learning outcomes. This strategy is very suitable when applied to course learning media, because in this strategy have guidelines step consists of planning (planning), creating (creating or implementation), and processing (processing), which can lead students to produce a project / product. On the subject Media Education, students are required to deliver the products to take advantage of the surrounding environment (contextual) and ICT, which can be used as a media and applied to the learning process.

**Key Words:** 21st Century Learning, Project Based Learning (PjBL), subject Media Education

### 1. Introduction

Nowadays, education is in the age of knowledge (knowledge age) with the acceleration of incredible knowledge. Acceleration of knowledge is supported by the application of media and digital technology called the information super highway (Gates, 1996). in the 21st century, education is becoming very important to ensure learners have the skills to learn and innovate, skills in using information technology and media, as well as be able to work, and survive by using skills for life (life skills). 21st century skills are (1) life and career skills, (2) learning and innovation skills, and (3) Information media and technology skills. The third skill is summarized in a

scheme called rainbow-knowledge skills 21/21 st century knowledge-century skills rainbow (Trilling and Fadel, 2009).

One of the strategy to achieve the learning skills of the 21st century is with the strategy of Project Based Learning (PjBL). Project Based Learning abbreviated as PjBL is one of learning based on problems using the project / activity as the media, to undertake exploration, appraisal, interpretation, synthesis, and information to produce various forms of learning outcomes. Project-Based Learning uses matter as a first step in collecting and integrating new knowledge based on their experiences in real activity.

Strategy Project Based Learning (PjBL) is very suitable when applied to subjects Learning Media. Learning Media is a course that is required to produce products that can be used as media and applied to the learning process. In this course, students can develop the media, and can choose, design, and produce instructional media by exploiting the environment (contextual) and ICT.

## **2. Result and Discussion**

Three educational concept of the 21st century has presented by Ministry of Education and Culture (2013) Exposure Curriculum Development, 2013 in Jakarta has developed a new curriculum for elementary school (SD), Junior High School (SMP), High School (SMA) and vocational schools (SMK). The third concept is a 21st Century Skills (Trilling and Fadel, 2009), scientific approach (Dyer, et al., 2009) dan authentic assessment (Wiggins and McTighe, 2011); Ormiston, 2011; Aitken and Pungur, 1996; Costa and Kallic, 1992. Furthermore, these three concepts were adapted to develop the education into Indonesian Creative year 2045. This was done to achieve conformity with the concept of their capabilities and competence of teachers and education personnel.

In the 21st century the century skills, translated into life and career skills, (life skills and career) include (a) flexibility and adaptability, (b) Initiative and Self-Direction, (c) social and Cross-cultural interaction, (d) productivity and

Accountability and (e) leadership and responsibility. Learning and innovation skills (skills to learn and innovate) include (a). Critical Thinking and Problem Solving, (b) Communication and Collaboration, (c) Creativity and Innovation. and information media and technology skills (skills of information technology and media) include (a). information literacy, (b) media literacy and (c) Information and Communication Technology literacy. These three concepts will be found in the course of learning by implementing strategies Instructional Media Project Based Learning.

Literally the word media means middle or intermediate media or introduction. Association for Education and Communication Technology (AECT) defines media as all forms that are used to process information distribution, while the National Education Association (NEA) defines media as any objects that can be manipulated, seen, heard, read, or talk along with instruments used to these activities, Arsyad Azhar (2013). So the media is anything that can be used as an intermediary to deliver the message, which can stimulate the thoughts, feelings and desires of students so as to encourage the learning process in itself.

In the lecture Learning Media discussed studies on the definition, types / classification, function, basics of media development, and can choose, design, innovation biology learning common in schools, create and produce innovative media learning biology developed student to use the environment around (contextual) and ICT.

In the study or material on "create and produce innovative media learning biology developed students to take advantage of the surrounding environment (contextual) and ICT", the students demanded to be able to produce media innovation biology learning that can later be applied in microteaching, and therefore could be used in schools where students perform Field Learning Implementation Plan (P3L) and the subsequent teaching. In the study or the material is indispensable strategy capable of guiding students to be able to produce a product / project.

Learning based on project has been associated with the "situated learning" from the perspective of James G. Greeno (2006) and the constructivist theory of Jean

Piaget. A more accurate description of the process provided by the PjBL Blumenfeld et al (1991) says that, "Project-based learning is a comprehensive perspective focuses on teaching to engage students in the inquiry. In this case, students pursuing a solution to the problem is not simple by asking questions and improve them, debate ideas, make predictions, design plans or experiment, collect and analyze data, draw conclusions, communicate their ideas and findings to others, asking questions -This question is new, and create a work in the form of product ".

Project Based Learning (PjBL) is a learning strategy that organizes learning around the project, Thomas (2000). The project is a complex task, based on challenging questions or problems, which involve students in the design, problem solving, decision making, or investigative activities; giving students the opportunity to work relatively autonomously for extended periods of time; and lead to product realistic. Within this project-based learning, students become motivated more involved in learning. Products made of students during the project provide results that are authentic can be measured by the lecturers or instructors in teaching. Therefore, in the Project Based Learning, lecturer or instructor becomes a companion, facilitator, and are required to understand the mind of the student.

When students work in teams, they find the skills to plan, organize, negotiate and build consensus on issues task to be done, who is responsible for each task, and how the information will be collected and presented. Skills that have been identified by the students this is a skill that is essential to the success of his life, and as a candidate for educators is a skill that is important in order to teach. Due to the nature of the project is a collaborative work, the development of these skills takes place among students.

The Examples of project / product development of instructional media innovation biological relative and efficient is media props. These props can be created and produced by utilizing scrap materials (Riastuti, 2015). Learning media in the form of props Biology can be created and developed in accordance with the concepts taught by affordability from simple materials are easily obtained even from the

material used. It only took a whim, skills and innovative ways to develop props Biology, because in essence every individual human being has the potential and the talent in him. Potential and talent can be honed so that it can produce works / products that are useful in the form of props. Props which are generated can be from innovation and creativity used to process a variety of materials such as plastic, bottles, pipettes, cans, glass, and other materials used customized forms and benefits in accordance with the concept and indicators of learning.

Some advantages from Project Basic Learning as follows, (Mahanal, 2009):

1. Set up a student on jobs. Students are prepared through the development of skills and abilities through the broadest possible cooperation / collaboration, project planning, decision-making, and time management.
2. Increasing motivation. With these projects, the students use higher thinking skills and forming relationships in school knowledge and skills used in the real world.
3. Improve collaboration to construct knowledge. Collaborative learning provide opportunities for each student to catapult the idea, expressed opinions of a wider, and negotiate preparing solutions, are all skills needed in employment.
4. Improving social relations and communication skills. The importance of team work in the project is needed for students to developed and practiced the communication skills.
5. Open up the opportunities for students to create and view relationships between disciplines.
6. Provide the opportunities for students to participate in school or in the community.
7. Improve the confident of students to feel proud has created a product that used and helpful in the learning process
8. Provide opportunities for students to develop the ability to learn individually with a variety of learning approaches. Providing a practical experience of the real world and learn how to use technology. Project-based on learning activity provides a framework to students to unlock their creativity using technology to

solve problems such as the use / use computer and internet in the final product research.

9. Improve the skills to manage resources. The PjBL encourages students to become independent learners who are responsible for completing complex tasks. Learning Project implemented berbais well provide the opportunity for students to learn and practice in organizing the project, and management of other resources such as equipment to complete the task.

Projects within a learning model PjBL has five criteria, they are the centrality, driving question, constructive investigation, autonomy and realism, (Thomas,2000). Projects in the Project Based Learning is focused on the questions or problems, which encourages students to undergo the hard work the concepts and principles of the core or the principal of the discipline.

The project involves the students in a constructive investigation, in the form of the design process, decision-making, problem-finding, problem solving, discovery, or the process of model building. However, in order to meet the criteria of a project called Project Based Learning, the main activities of the project should gathered the transformation and construction of knowledge (in the sense: new insights, or new skills). The project encourages students in to a significant level. Projects in the Project Based Learning is not the creation of lecturers, inscribed in the script, or packaging. Projects in the Project Based Learning does not end at a predetermined outcome or take the path (procedure) predetermined. Project Based Learning Project prioritize autonomy, choice, working time is not rigid.

The project is realistic. Characteristics of the project gives the students authentication. These characteristics may include topics, tasks, roles played by students, the context in which the project work is done, the collaborators who work with students in the project, the resulting product, the audience for the products of the project, or the criteria under which the products or performance assessed , Project Based Learning involves real-life challenges, focusing on the question or problem is

authentic (not simulative), and the solution has the potential to be applied in the real field.

Project-based learning can be revolutionary in the issue of renewal of learning. Projects can change the nature of the relationship of faculty and student. Projects may reduce competition in the classroom and direct students work more collaboratively rather than individually. Projects can also shift the focus of learning from considering the facts to the exploration of ideas.

Learning PjBL generally have guidelines steps: planning (planning), creating (creating or implementation), and processing (processing), Mahanal (2009) as follows:

1. Planning

At this stage the activities carried out are: a) designing the entire project, the activities in this step are: preparing the project, in more detail include: the provision of information learning objectives, lecturers deliver real phenomenon as the source of the problem, motivating to raise issues and making proposals, b) organizing the work, activities in this step are: planning the project in more detail include: organizing cooperation, choose a topic, choose a project related information, make predictions, and make the design of the investigation.

2. Creating

In this stage the students develop project ideas, combining the ideas that come in groups, and build the project. The second stage includes the development and documentation activities. At this stage, students also produce a product (artifact), which will be presented in the classroom.

3. Processing

This phase includes the presentation of the project and evaluation. At the presentation of the project will occur in the actual creation of communication or to the findings of the investigation group, while in the phase of the evaluation will be conducted reflection.

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