

Conference Paper

Improvement of Subjects Understanding Development of Teaching Materials Through Project Based Learning

Rizza Megasari, Rizky Dwi Putri, and Dian Rachmawati

Department Economics Development, Economics Faculty, Universitas Negeri Malang - Indonesia

Abstract

The course for developing teaching materials is a subject that must be taken by educational students. Students as prospective teachers must be able to make good quality teaching materials so that learning can run effectively and efficiently. In the course of developing instructional materials, students are required to be able to produce a print teaching material that is appropriate for use by students. Teaching materials can be said to be of good quality and appropriate if it is in accordance with the learning objectives that must be achieved by students. This research is a descriptive study with an analysis of teaching materials that have been developed by students through project based learning. The results of the study can be seen that the quality of teaching materials that have been developed along with the cognitive abilities of students master the material of teaching material development subjects. Good quality teaching materials indicate mastery in cognitive abilities as well.

Keywords: development, teaching material, project based learning

Corresponding Author:

Rizza Megasari

rizza.megasari.fe@um.ac.id

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1. Introduction

Development of teaching materials is one of the subjects that must be taken by economics education students at Malang State University. This course requires students to be able to understand and be skilled in applying approaches, techniques, and procedures for developing teaching materials that refer to the 2013 curriculum and contextual which can encourage optimal involvement of students in learning. The final goal of this course is that students can develop teaching materials that are appropriate for students to learn independently. As a teacher candidate, economics education students must be able to develop teaching materials to fulfill their competencies as professional teachers. By developing teaching materials teachers are required to provide and present various teaching materials in order to achieve the competencies expected by the curriculum. Through teaching materials, the teacher prepares material and information so that it

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can be delivered well to students. Own teaching materials according to Heman D. Surjono (2013) are all forms of material (information, tools, and texts) that are used by teachers in carrying out teaching and learning activities in the classroom. Ministry of Education (2008: 6) also defines teaching materials as all forms of materials used to help teachers and students in carrying out teaching and learning activities. The two definitions state that teaching materials are all forms of materials used by the teacher in teaching and learning activities in the form of information, tools or text. To develop good teaching materials, a teacher must consider many things besides the curriculum, one of which is the characteristics of students. Purwanto and Sadjati (in Dewi Padmo, 2004) explain more specifically about the characteristics of good teaching materials. According to the two experts, good teaching materials meet the following criteria: first, criteria for content, meaning that the contents of good teaching materials must be in accordance with learning objectives, accurate, up-to-date, comprehensive in content, appropriate to addressing race and religion, and gender; contains a list of references, lists and indexes. Second, the presentation criteria, means that good teaching materials must present the material to attract the attention of children, the material is organized systematically, there are learning instructions, able to invite readers to respond, concentrate, language style, color, and so on. Third, the criteria for illustration, means that good teaching materials contain appropriate illustrations, illustrations appropriate / related to the text, proper placement of illustrations; size, focus, and balanced and harmonious appearance. Fourth, the criteria for complementary elements, good teaching materials are equipped with instructions and tests. Fifth, the criteria for physical quality, meaning that teaching materials are well printed and bound properly, the paper used is of high quality, and the type and size of letters used is appropriate to the characteristics of the users. An appropriate approach is needed to help improve students' understanding of the teaching material development course. One treatment used to improve the understanding of this course is through project based learning. It is hoped that through the PjBL students will be able to produce a good quality and appropriate teaching material product to be used as a learning companion for middle school students. According to Waras (2008) argues, project based learning is a project that focuses on product development or performance, where students conduct studies or research, solve problems and synthesize information. Project-based learning model is a form of student-centered learning, aimed at developing more independence in students (Sumarmi, 2012). Project-based learning focuses on the main concepts and principles (central) of a discipline, involving students in problem solving activities and other meaningful tasks, giving students the opportunity to work

autonomously in constructing their own learning, and culminating in producing work products. students are valuable, and realistic (Okudan. Gul E. and Sarah E. Rzasa, 2004). In contrast to traditional learning models which are generally characterized by short, isolated / freelance classroom practices, and learning activities centered on lecturers, the project based learning model emphasizes relatively long, holistic-interdisciplinary learning activities, student-centered learning, and integrated with real world practices and issues. In project-based learning students learn in real problem situations, which can give birth to permanent knowledge and organize projects in learning (Thomas, 2000). Based on the description of the above opinions, basically project-based learning has a student centered approach, students are required to construct their knowledge and skills in their own way. Students are demanded so that they can answer basic questions about the problems they face and then they explore, evaluate, interpret, synthesize, and inform to produce various forms of learning outcomes.

2. Methods

This type of research is descriptive research. Descriptive research is research that seeks to describe a phenomenon, event, event that occurs now. Descriptive research focuses on actual problems as they were at the time the research took place. Through descriptive research, researchers try to describe events and events that are the center of attention without giving special treatment to the event. The efforts of teachers to solve learning problems can be in the form of the use of new learning methods, assessment methods or other efforts in order to solve problems faced by teachers or in order to improve the quality of learning. Judging from the descriptive research requirements that are in accordance with professional development activities describing the efforts that have been made, in fact such research can be categorized as a Pre experimental design one Shot case study, however, because the implementation of the research is carried out after the event can still be said as research descriptive. More precisely, research designs like that can be called analytical descriptive research oriented to problem solving, because it is in accordance with the application of the task of a prospective teacher in solving learning problems or in an effort to improve the quality of learning. Descriptive research according to its characteristics has certain steps in its implementation. The steps are as follows:

1. Formulation of the problem. Any research method must begin with the existence of a problem, the problem in this study is the low mastery of students towards the subject matter of teaching material development.

2. Determine the type of information needed. Information obtained is in the form of qualitative, namely complaints of difficulties faced by students when compiling teaching materials
3. Determine the procedure for collecting data. There are two elements of research that are needed, namely the instrument or tool for collecting data and data sources or samples that is where the information should be obtained. The data source of this study is the economic education students offering 2017 NN, O and MM who are pursuing teaching material development courses. By using the Project Based Learning learning model they document their work in the form of printed teaching materials.
4. Determine the procedure for processing information or data. Data and information in the form of interviews and documentation are used as material to compile the discussion.
5. Draw research conclusions. Based on the results of processing the data above, the researcher concludes the results of the descriptive research by answering the research questions and synthesizing all of the answers in one conclusion which summarizes the overall research problems.

3. Results and Discussion

For one semester students offering 2017 NN, O and MM who are taking courses in teaching materials are given treatment regarding the theory and material of the subject. Then students are given the final project in the form of composing printed teaching materials that will be used as the final assignment of the subject. During the process of delivering the theory to the preparation of teaching materials, researchers observed and conducted interviews with students to find out what difficulties faced by students. The difficulties faced by students are the difficulty of compiling material that must be adapted to the curriculum, determining methods and learning models that are appropriate for certain material, difficulty determining the right evaluation to the difficulty in determining what print teaching materials are suitable for use by students to study independently. After analyse these difficulties, guidance is carried out starting from curriculum analysis, determining learning objectives, indicators, material and evaluation of learning. Students are free to determine what teaching materials they will arrange. Students are given time to complete their projects in a few weeks. 3 weeks before the end of the project period students are given the opportunity to get a validity test to then revise the printed

teaching materials they have compiled. Until the lecture is finished, the printed teaching materials are collected and then given an assessment in accordance with the printed teaching materials that the students arrange.

Project-based learning as a learning model that is cooperative and accommodating to children's abilities toward a free and creative thinking process. Implementation of project-based learning is on the participation of students in understanding the reality of life from the concrete to the abstract. The reality of this life will be a source of inspiration and creativity in carrying out analysis and building a vision of life. Thomas (2000) argues that PBL consists of the following activities:

1. Preparation Phase This is the standard stage of introductory learning where information and schedules are made. students try to understand each other by introducing themselves and gathering expectations in the overall project activities.
2. PBL Processes These are the main stages of learning and consist of a number of activities relating to preparation and the important steps in carrying out a project. This stage includes: (a) group formation and project selection, (b) information gathering, and (c) project work steps.
3. Evaluation Phase This pattern shows the form of activity in evaluating students. Feedback helps lecturers in interpreting students' mastery of the projects they have done. More clearly the description of PBL's work process can be seen in the picture below

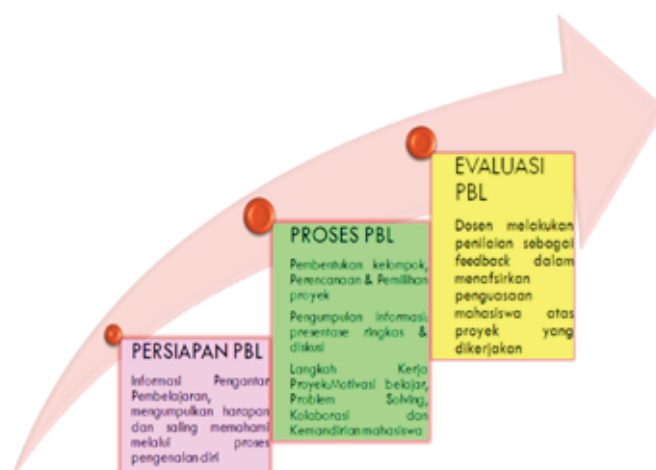


Figure 1: Working Model of PJBL.

Good print teaching materials must be arranged systematically; that is, in addition to the material arranged in a concordant manner according to a certain structure, logical, and the description flowing and easy to follow and understand the reader, the teaching

material must also contain the teaching components (komponen learning system), in the description of the material equipped with examples, illustrations and exercises or assignments that are in accordance with the objectives and material. In appearance and format, teaching materials must be interesting to learn, consistent and orderly. Purwanto and Sadjati (in Dewi Padmo, 2004) explain more specifically about the characteristics of good teaching materials. According to the two experts, good teaching materials meet the following criteria: first, criteria for content, meaning that the contents of good teaching materials must be in accordance with learning objectives, accurate, up-to-date, comprehensive in content, appropriate to addressing race and religion, and gender; contains a list of references, lists and indexes. Second, the presentation criteria, means that good teaching materials must present the material to attract the attention of children, the material is organized systematically, there are learning instructions, able to invite readers to respond, concentrate, language style, color, and so on. Third, the criteria for illustration, means that good teaching materials contain appropriate illustrations, illustrations appropriate / related to the text, proper placement of illustrations; size, focus, and balanced and harmonious appearance. Fourth, the criteria for complementary elements, good teaching materials are equipped with instructions and tests. Fifth, the criteria for physical quality, meaning that teaching materials are well printed and bound properly, the paper used is of high quality, and the type and size of letters used is appropriate to the characteristics of the users. Students are said to master the teaching material development subject if they are able to produce printed teaching materials that have good quality through project based learning. The results of the study can be seen that the quality of teaching materials that have been developed along with the cognitive abilities of students master the material of teaching material development subjects.

4. Closing and Conclusions

Based on the results and discussion above, it can be seen that through the project based learning learning model students are able to understand the teaching material development course well. It is proven by students being able to produce printed teaching materials that have good quality and are feasible to be used as teaching materials. As a prospective teacher, economics education students must be able to arrange a teaching material so that students can learn independently. The instructional materials produced must fulfill the aspects of material adequacy, fulfill the feasibility in terms of the content of the presentation, format / method of presenting learning

materials and the language used. Good teaching materials are learning materials in accordance with learning objectives..

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