Evaluation of Countenance Stake on the Implementation of Project Based Learning in the Automotive Engineering Department

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Abstract
Evaluation as an action to find out or an attempt to see the extent to which the goals set have been achieved. In other words, the goal is a tool to determine the success of the learning process that occurs between educators and students. The purpose of this study was to look at the results of the evaluation of project-based learning in productive subjects for students majoring in automotive at the 1 Pantai Cermin Vocational High School. This type of research is evaluative research using a qualitative approach. The evaluation method used is the STAKE method, which evaluates plans, processes and results. The findings of this study, namely, that project-based learning has been implemented for students in the automotive major at Pantai Cermin Vocational High School 1 found that the implementation of project-based learning still has deficiencies in terms of preparation and results. Viewed from the preparation aspect, it was found that the project delivery from the teacher was unclear and not specific, while from the results aspect, the projects undertaken were still limited to video tutorials that had not been published. The conclusion from this research is that project-based learning still needs careful planning to match the expected results or objectives.

Keywords
Evaluation, Countenance Stake, Project Based Learning
A. Introduction

School is a formal educational institution designed to produce human resource graduates under the supervision of teachers, intended for the industrial business world. One of the organizers to achieve success in the field of education is through Vocational High Schools[1]. Vocational High School functions to improve human resources and aims to prepare a middle-level workforce, having the knowledge and skills and attitudes in accordance with vocational specialization. Referring to Government Regulation no. 29 of 1990, Article 3 paragraph 2, "Preparing students to enter the workforce and develop a professional attitude".

Qualified graduates indicate that the teaching and learning process in schools has been successful. Failure in the teaching and learning process can be seen from several factors. Internal factors are factors that arise from within the student himself. Internal factors include attitudes in learning, intelligence, physical condition, motivation and interest, study habits, and self-confidence[2]. While external factors are factors that come from outside the students themselves, such as cleanliness, air, environment, family, community, friends, teachers, media, learning facilities and infrastructure. One of the Expertise Programs in vocational schools is Automotive Engineering.

It takes various components that can affect the quality of learning. One of them is the teacher component, because the success of implementing the learning process is very dependent on the role of the teacher. Because the teacher is the spearhead of educational success and deals directly with students. As a teacher not only delivers material but is also responsible for changes in student behavior. Therefore a teacher needs to have the ability to design and implement various learning strategies and utilize learning resources and media to achieve effectiveness in learning[3].

In the 2013 curriculum there are obstacles, namely: the curriculum is not competency-based according to the demands of the functions and goals of national education, the assessment standards do not lead to competency control, the learning process standards do not describe detailed learning sequences and the content in the curriculum is still relatively dense. Learning method is a systematic way of working to facilitate the implementation of various learning activities to achieve the learning objectives to be achieved. One of the learning methods used is the project based learning (PjBL) learning method. This is what underlies researchers to conduct research on learning using the Project Based Learning model.[4]

Evaluation or assessment is an action to find out or an attempt to see the extent to which the goals set have been achieved. In other words, the goal is a tool to determine the success of the learning process that occurs between educators and students[5]. Evaluation or assessment is carried out to measure the volume of purchases which include entertainment and news. One example of evaluation is the evaluation of betting content. The Stake Countenance model is an overall program evaluation which is also known as the consideration evaluation model. Stake's main concern in this method is to see the relationship between the purpose of the assessment and subsequent decisions based on the nature of the data collected[6].

Based on the results of initial observations made by researchers, there are several things that have not been implemented coherently by teachers in the automotive engineering department, including: there is no scenario preparation in project-based learning, the lack of maximum involvement of students, learning tends to be passive and a lack of effective communication in learning[7]. Based on an interview conducted with one of the teachers majoring in automotive engineering, it is felt that the application of
the PjBL learning method has not been maximized in automotive engineering subjects due to the lack of direction and instructions given by the teacher. In doing practice students often make mistakes, lack of understanding of students about what kind of project is done during practice, so that the final result of the learning project is not optimal.

The next problem found is the limited practice tools and the lack of time allocation for project-based learning. These cases often occur simultaneously. In this case the students had to take turns in doing the practice due to the limited practical tools and making project-based learning not attainable/maximum[4]. This can affect student activity in learning and student interest in learning which leads to student learning outcomes. The use of teaching materials is still limited and students who only rely on their own notes and look for materials that tend to be difficult for students to obtain often make students confused when repeating lessons at home. The use of indirect worksheets makes students understand which steps must be done first. This causes learning to be less conducive. The learning process which is only filled with the lecture method as well as demonstrating work steps that are carried out at once at the same time, this makes students less creative in terms of student learning outcomes. Several things regarding project-based learning revealed that the competency achievement indicators had not been achieved as expected, namely students were able to explain the objectives of the learning[8]. One of the causes of not achieving competency achievement indicators is the lack of supporting teaching materials/modules to train students' creativity, initiative and skills in project-based learning.

Referring to some of the problems above, the researcher believes that it is necessary to evaluate PjBL-based learning to reveal the problems that exist in that learning. This evaluation is expected to produce things that need to be addressed in the implementation of PjBL-based learning[9]. Based on these problems, underlies the researchers to conduct research in the form of an evaluation of the implementation of Project Based Learning in the Automotive Engineering major. Besides that, evaluation is also deemed necessary to be carried out continuously, especially evaluation in the field of education which has a very significant impact in order to improve the quality of education which is better and is expected to continue to develop in accordance with the times and the demands of the business and industrial world[10].

Due to the limited ability and time they have, the researcher will limit research on the evaluation of the implementation of this learning, only for teachers of productive subjects, especially in the competence of Automotive Engineering expertise at Vocational High School 1 West Sumatra. By selecting productive teachers in the competence of Automotive Engineering as the object of evaluation, it is hoped that the teachers can provide the maximum possible learning services in order to further improve the mastery of student competencies.

Based on this, in this study, researchers will directly involve students in the automotive engineering expertise competencies to provide their responses to the effectiveness of the implementation of learning carried out by productive teachers of automotive engineering expertise competencies[11]. Besides that, the involvement of students in this study was to obtain an overview of the level of satisfaction of students and receiving learning services provided by productive teachers during the learning process.

Project-based learning is a learning model that uses projects/activities as the medium. Learners research, evaluate, interpret, synthesize and inform to achieve
various forms of learning outcomes[12]. Project-based learning is a learning model that uses problems as a first step in gathering and integrating new knowledge based on experience in real-world activities (Kemdikbud, 2013). Project-based learning is a student-centered learning model for conducting an in-depth study of a topic[13]. It was concluded that project-based learning is learning that focuses on student activities to understand a concept by conducting in-depth studies of a problem and finding solutions by creating concepts for the establishment of a project.

Based on the background description presented, the purpose of this proposal is for the researcher to feel the need to contribute so that the learning process and results of design hair curlers can improve students’ practice results to become more active and creative. The existence of this learning evaluation is also expected to assist in understanding the concepts in learning material so that students are able to produce a practical result that is worth selling. One solution to the problem is to make a "Countenance Stake Evaluation of the Implementation of Project Based Learning in the Automotive Engineering Department".

### B. Research Method

The type of research used in this research is evaluation research with the Stake model. The Stake Model views the program being evaluated as a system, therefore the program is analyzed based on input, process and outcome components[14]. The research method used is a combination method (Concurrent Method Research), with a balanced mixed model (Cocurrent Triangulation), which is a research method that combines qualitative and quantitative methods by adjusting the two methods in a balanced manner. This method is used together, at the same time, but independently to answer similar problem formulations (sugiono 2016:499). This type of research was chosen because it can obtain two kinds of data in a data collection stage, namely qualitative data and quantitative data.[15]

This research is categorized as an evaluative research type, with a quantitative descriptive approach. Quantitative descriptive in program evaluation is used to collect, describe and explain the aspects that have been evaluated. The evaluation model used is the evaluation model developed by Stake. Model Stake Evaluation emphasizes the implementation of two main things, namely making descriptions and judgments. These two main points are obtained through an overview of the evaluation components which include inputs (antecedents), processes (transactions) and products (outcomes)[16].

![Rational Observation Antecedents Transactions Outcomes](image)

**Figure 1. Research Design Evaluation Model Countenance Stake**
C. Result and Discussion

Based on the results of observations and interviews between teachers and students, the findings of this study include three parts, namely the antecedent component, the transaction component, and the outcomes component. The findings are described in the following table:

**Table 1. Countenance Matrix of Antecedent Components**

<table>
<thead>
<tr>
<th>Description Matrix</th>
<th>Observation</th>
<th>Standard</th>
<th>Judgment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Implementation Plan</td>
<td>The lesson plan made by the teacher is in accordance with the standards that apply at Vocational High School 1 Pantai Cermin</td>
<td>Actuality of learning plan achievement made by productive teachers with automotive engineering expertise as much as 48%</td>
<td>Learning plan components based on Learning Process Standards include: 1) School identity; 2) Subject identity; 3) Main material; 4) allocation time; 5) Learning objectives are formulated based on; 6) Basic competence and competency achievement indicators; 7) Learning material, contains facts, concepts, relevant principles and procedures; 8) Learning methods used by educators achieve basic competencies adjusted to character student characteristics; 9) Learning media to assist the process of conveying the material lesson; 10) Learning resources can be in the form of books, print and electronic media, the natural surroundings, or other relevant learning resources; 11) Step learning steps are carried out through stages introduction, core, and closing; 12) Assessment learning outcomes.</td>
</tr>
</tbody>
</table>

**Table 2. Transaction Component Countenance Matrix**

<table>
<thead>
<tr>
<th>Description Matrix</th>
<th>Observation</th>
<th>Standard</th>
<th>Judgment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Implementation Plan</td>
<td>The teacher carries out project-based learning The teacher accompanies students in working on projects that have been distributed. The project to be completed. The project undertaken is in the form of productive practice of automotive</td>
<td>The teacher designed learning in 4 meetings. In the first meeting the teacher gave an explanation regarding the project-based learning.</td>
<td></td>
</tr>
</tbody>
</table>

Process execution project-based learning does not experience significant problems.
engineering competencies in accordance with the existing material in lesson plans.

Table 3. Countance Matrix Component Outcomes

<table>
<thead>
<tr>
<th>Description Matrix</th>
<th>Judgment Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Learning Implementation Plan</td>
</tr>
<tr>
<td></td>
<td>Intens Observation Standard Judgment</td>
</tr>
<tr>
<td>Student learning outcomes</td>
<td>There are still students who do not</td>
</tr>
<tr>
<td>Productive</td>
<td>submit project assignments that</td>
</tr>
<tr>
<td>Automotive</td>
<td>have been given by the teacher</td>
</tr>
<tr>
<td>Engineering</td>
<td>The project assignments given must</td>
</tr>
<tr>
<td>learning outcomes</td>
<td>be completed in accordance with the</td>
</tr>
<tr>
<td>fulfill Completeness</td>
<td>deadline for project submission.</td>
</tr>
<tr>
<td>Criteria Minimum of 75%</td>
<td>Student learning outcomes no memes</td>
</tr>
</tbody>
</table>

Based on the findings of this study, the evaluation of Project-Based learning for students majoring in automotive at Vocational High School 1 Pantai Cermin has similarities with the findings of other studies. In this case the similarities in the model variables used, namely Countenance Stake which refers to antecedents (planning), transactions (processes), and outcomes (learning outcomes), this research was conducted by Amalia Puspayanti with the results of research that learning Substantive Technical Training for Competency Improvement and which was evaluated using the Countenance Stake model showed results in the very good category.

In addition, for project-based learning variables, there are similarities with research conducted by Zainal Abidin with research results namely several things that become obstacles in implementing online learning including limited internet quota and the unfamiliarity of educators and students in applying it. Therefore it is necessary to have a more massive special effort to overcome this problem starting from each individual, family support, educational institutions/institutions. One learning approach that can maximize online learning is project-based learning. This learning provides opportunities for students to study concepts in depth while also improving their learning outcomes.

This is in line with the findings in this study which found that the implementation of project-based learning still has deficiencies in terms of preparation and results. Viewed from the preparation aspect, there were obstacles in the form of project submissions from lecturers that were still unclear and not specific, while from the results aspect, the projects undertaken were still limited to articles or journals that had not been published. The conclusion from this research is that project-based learning still needs careful planning to match the expected results or goals.
Discussion
Based on the findings of previous research, this section will discuss the findings in the evaluation research of project-based learning for students majoring in Automotive Vocational High School 1 Pantai Cermin using the Countenance Stake model including:
a. Antecedent Evaluation
   At the planning stage, the activities carried out by teachers and students are in the form of:
   1) The teacher first explains the Learning Implementation Plan regarding the material to be taught, including the form of the assignment to be given. In this case the task is in the form of a project.
   2) The teacher gives different material for each group.
   3) The teacher gives an explanation regarding the systematics of making a project in the form of a video.
   4) Teachers and students agree on the deadline for submitting projects
   5) The teacher gives an overview of the output of the project assignments being worked on.

b. Transaction Evaluation
   In the learning process activities, no significant obstacles were found from either the teacher or the students. At this stage, the teacher accompanies students in making a video tutorial project which is a project that must be completed within a predetermined time limit.

c. Outcome Evaluation
   Project assignments given by teachers to students are still only in the form of drafts. Student projects are not yet at the publication stage. This is what teachers should consider in order to design project-based learning more maturely.

d. Recommendation
   Based on an analysis of the evaluation of project-based learning for automotive students at Vocational High School 1 Pantai Cermin, the following is recommended:
   1) Project-based learning planning needs to be carefully designed so that the results are as expected.
   2) The implementation of project-based learning needs to be accompanied directly by the teacher concerned. Third, the results of project assignments carried out by students need assistance up to the dissemination/publication stage so that students feel proud because they have produced a written work that can be seen by many people.

D. Conclusion
From the results of the research that has been done it was found that in the process of implementing project-based learning it still has deficiencies in terms of preparation and results. Viewed from the preparation aspect, it was found that the obstacles in the form of project delivery from the teacher were still unclear and not
specific, while from the results aspect, the projects undertaken were still limited to articles or journals that had not been published. The conclusion from this research is that project-based learning still needs careful planning to match the expected results or objectives.

Based on the conclusions that have been presented, the results of this study still have limitations, so it is hoped that researchers who will conduct research with similar variables, namely project-based learning and Countenance Stake evaluation models, will conduct more in-depth research.

E. Acknowledgment

Thanks to the Technology and Vocational Education Study Program, Padang State University and Vocational High School 1 Pantai Cermin which have contributed a lot to this research, especially to the supervisor and discussion lecturers who have provided many suggestions and input in this research. Thank you to the Technology and Vocational Education Study Program, Padang State University and Vocational High School 1 Pantai Cermin which have contributed a lot to this research, especially to the supervisor and discussion lecturers who have provided many suggestions and input in this research.

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