

**THE IMPLEMENTATION OF PROJECT BASED LEARNING,
DEMONSTRATION AND LEARNING STYLE TO IMPROVE LEARNING
OUTCOMES IN VOCATIONAL HIGH SCHOOL**

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Abstract

This research is aimed at determining the increasing student learning result by using the model of learning project, demonstration and learning styles with English subjects. Project based-learning model is a learning model which student performs final project. Demonstration learning model is a learning model which student does the final demonstration task. The point of demonstration learning is the project demonstration task. Project based-learning and demonstration learning models produce good impact on learning. Both models are related to student learning styles and learning result. This research was held in two schools SMK Negeri 7 Surabaya and SMK Wachid Hasyim 2 Surabaya. This research design used a double paradigm with two independent variables. This research used a full sample technique for 142 respondents. Pre-test and post-test were administered in collecting the data. The results of this research were obtained from the data as follows: the highest score of learning style is kinesthetic learning yielded as 26.62, auditory is 27,76 which affecting the learning result. Minimum score of Project based- learning model is 46,38, maximum score is 83,61, then minimum score of demonstration learning model is 46,38, and the maximum score is 74,08. The result shows that significant increase shown by project based-learning model compared to demonstration one.

Key word: project-based learning, demonstration, learning style, vocational high school

1. INTRODUCTION

The rapid development of technology nowadays in Indonesia has reached in educational field because of science and technology. As has been acknowledged that advances in all fields have been stretched such as the progress of educational tools in schools. The advancement of educational tools can be an indicator of the improvement in education. Science and technology can be regarded as tools to facilitate teachers and learners to learning process in the classroom.

The real form of science and technology that is used for advancement in the field of technology as support tool in the learning process at school are mobile phone, computers or laptop and internet. The tool is used as a means to support in final assignment for learners. For this assignment the teacher assigns the learner to create a video project about the travel stories of learners during school holidays and school trip. Learners present their journey in front of the classroom by forming a group about the trip material and create a slide in power point to make holiday trips to fulfill English assignment.

The assignment of the above projects can be included in the learning model of Project -based Learning and Demonstration. The first task for the project based learning model is video creation, the second task for the Demonstration model is slide making in the power point about trip travel. Both models are assigned for final assesment by using project tasks. The learners will do the assignment of the project easily and happily because they will not find it difficult with the above topic; because English lesson is a difficult lesson most of learners do not understand the learning process in the classroom easily especially learners in vocational high school. Students in vocational high school are expected to work on projects and submit it on time because most of students are less passionate to do the task given by the teacher.

Students must master four skills English lessons in the vocational school. They are : 1. speaking, 2. writing, 3. reading, 4. listening. From those four skills, learners should master at least two skills that is needed so that learners are able to hold interactions, even in situations of inactivity.

Vocational High School (*Sekolah Menengah Kejuruan/SMK*) is a school based on competency skills. This corresponds to Law of National Educacional Ministry No. 20 of 2003 Article 15 that vocational education is a level of secondary education that prepares students primarily to work in a particular field. Vocational education consists of Vocational High School (abbreviated into SMK), and *Madrasah Aliyah* (Islamic high school/MA). The different between the two is that in SMK curriculum there are more skills components than those in MA curriculum. Therefore, subjects such as English are prepared with more study hours. By adding lessons for skills subjects such as English, it is expected that after graduation, vocational graduates can immediately get a job in accordance with the skills they have. However, this is the purpose of teaching in SMK.

English is taught by incorporating technological knowledge to deliver the material in classroom. Teachers must be responsive and literate in delivering learning to their students. Therefore, science and technology should be incorporated in English classroom teaching in SMK. By collaborating with science and technology, there are several teaching strategies that can be applied by teachers. Some of them are:

1.1. Project-Based Learning Model

Project Based Learning is a method of learning to solve a problem by using a project approach. With this model, SMK learners must think critically, innovatively, they can use creative ideas for video making where the learner must match the ability to acquire manual skills and learn more by doing the original activities. There are projects at the base of project-based learning. On the project a student searches solution of the problems they face in any way and order of their own will. In addition, this approach supports the students in acquiring manual skills and learning more by performing the original activities (Chen, 2004). Because of this characteristic, the thought of using a project-based learning environment provides advantages for students gradually becoming widespread especially in lessons where daily life is more related such as science and technology (Ayvaci and Çoruhlu, 2010). Project Based Learning model with project assignment is expected that learners get maximum results and learn learning styles that can change their way of learning to be better.

Project-Based Learning Model has the following characteristics, 1) There is a theme given by the students, 2) Students create product framework, 3) Students create a picture of the process of making video, 4) Students are responsible for editing a product, 5) Students evaluate gradually on the resulting product duties, 6) Students carry out repetitions gradually in the event of a product creation error, and 7) Students evaluate gradually on the product assignments produced by groups per bench row.

1.2. Demonstration Learning Model

The method of teaching used in this research is demonstration method (Anas, 2014: 27) Demonstration method is a method of teaching by demonstrating the goods or events of the rules and sequence of activities, either directly or through the use of instructional media relevant to the subject or metrics being presented (Majid, 2013: 198). By applying the Learning Demonstration Model with assignments, using the project is expected that the students get maximum results and learners can find out learning styles that can change their learning methods to be better.

The Demonstration Learning Model has Characteristics, 1) There is a theme given by the students, 2) Students make product incident steps, 3) Students write a slide about the product event stages in the power point, 4) Students are responsible for the presentation of a product, 5) Students gradually evaluate on product assignments in groups.

1.3. Learning Styles In The Learning Process

Learning styles is often interpreted by the characteristics and preferences of individual choices on how to gather information. Interpreting learning styles is a key to develop work performance in school and in personal situations. When learners are able to recognize their own learning style to absorb and manage information, gradually they can make learning and communication more easily in accordance with learning style.

According to Oxford (1990), among all other factors, learning styles and strategies have an important role in foreign language acquisition. Regardless of the methods teachers use to instruct foreign language, serious consideration should be taken on the fact that every individual has his/her

way of learning. In other words, people learn in different ways; by seeing, listening, analyzing, visualizing, thinking, memorizing, reasoning etc. Thus, each individual in the learning process has his/her own unique characteristics known as learning styles. In addition, the strategy is a plan or technique that the learners consciously use to achieve a specific goal or solve a problem or task. In other words, there are some of the techniques or devices used by the learner to gain knowledge (Rubin, 1975). The score of the two models used in this study is as follows: the average scores of project-based learning model is 83,61. The average score demonstration learning is 74,08, then both models of learning above can be related to kinesthetic learning style and auditory learning style of learners with score is 27 so that model of project-based learning can improve learners learn result.

2. RESEARCH METHODS

2.1. Types of research

This research is a quantitative research because all data is calculated by using SPSS 22. According to Sugiono (2013: 13), quantitative method is the traditional method because this method has been used for a long time as method for research. This research is an experimental research with Project-based Learning, and Demonstration Learning as independent variable ; Learning Style as dependent variable and ; learning result.as moderator variable.

2.2. Time and Place of Study

The research was conducted in two schools of SMK Negeri 7 Surabaya and SMK Wachid Hasyim 2 Surabaya. This research has been conducted from October to November 2017.

2.3. Population and Sample Research

The population of the study is 142 students, using a complete sample sampling technique for all members inputted into the sample. Sample was taken from two schools. From SMK Negeri 7 Surabaya consists of two classes namely XI TITL 2 and XI TKJ 2, while SMK Wachid Hasyim 2 Surabaya consists of two classes namely XI MM 1 and XI MM3.

2.4. Data, Instruments, and Data Collection Techniques

This study uses data from the results of pretest and posttest conducted in the research. In these kinds of test, the learning style questionnaire used. The pretest and posttest problems consist of multiple choice questions and learning styles are multiple choice questions used by researchers. The learning material used by the researchers is syllabus, lesson plans and books that have been adapted to the learning objectives. The pretest and posttest material was designed to adjust the expected outcomes in learning.

2.5. Data analysis Technique

In analyzing the data, researchers used the One-Sample Kolmogorov-Smirnov Test, while for the non-parametric and parametric homogeneity normality test, and the ANOVA test, researchers used SPSS 22.

3. RESULT AND DISCUSSION

3.1. Preliminary Data Description of Pre-test and Post-test Validity

The validity of pretest-posttest project based learning and demonstration learning with multiple choice questions consisting of ten questions, twenty five using SPSS 22 in obtaining the following table results.

Table 1: Pre-test and Post-test Validity test

N about pre-test and post-test valid / not

1,2,3,4,5,6,7,8,9,10,11,12,13,14, valid

15,16,17,18,19,20,21,22,23,24,25

Test of validity is with multiple choice questions consisting of twenty five of pre-test s and post-test questions.

Table 2 Test of Homogeneity of Variances

	Levene Statistic	df 1	df2	Sig.
demonst rasi	1.205	12	129	.286
pjblpret est	1.205	12	129	.286

The score gets df equal to df 12 and significant 0.286 for significant demonstrations which are more (>) than 0.05. For learning model pjbl with df 12 obtained significant 0.286 more (>) than 0.05, then H_0 is accepted and H_a is rejected so that the population variant is homogeneous.

Table 3: One-Sample Kolmogorov-Smirnov Test

		demonspost	pjblposttest
N		142	142
Normal Parameters ^{a,b}	Mean	74.0845	83.6197
	Std. Deviation	4.09201	3.31070
	Most Extreme Differences		
	Absolute	.138	.176
	Positive	.074	.176
	Negative	-.138	-.137
Test Statistic		.138	.176
Asymp. Sig. (2-tailed)		.000 ^c	.000 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

The experimental group learning outcomes (project based learning) 142 students, Mean 83.62, standard deviation 3.31, control group (demonstration) 142 students, Mean 74.08, standard deviation 4.09, if the significant value is $0.000 < 0.05$ then the distribution is not normal. H_0 is rejected and H_a is accepted.

Tests of Between-Subjects Effects

Tabel 4: TEST Anova

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	1184.221 ^a	71	16.679	2.215	.001
Intercept	47541.455	1	47541.455	6312.808	.000
X2	239.850	16	14.991	1.991	.026
X1	185.178	14	13.227	1.756	.064
X2 * X1	554.073	41	13.514	1.794	.016
Error	527.167	70	7.531		
Total	108879.000	142			
Corrected Total	1711.387	141			

a. R Squared = .692 (Adjusted R Squared = .380)

Based on data from 4.10 for 2-way ANOVA test, it was found that the learning model with a sig value of $0.026 < 0.05$, then H_0 was rejected by H_a , which means that the learning model influences learning outcomes. While the value while the Significant Value for learning style is

0.064 < 0.05. So H₀ is accepted H_a is rejected, which means that the learning model does not affect learning outcomes. that means the influence of learning models and learning styles on learning outcomes.

4. CONCLUSION AND SUGGESTION

4.1. Conclusion

The highest score of learning style are kinesthetic learning is 26.62 and auditory is 27,76 affecting the learning result. Minimum score of Project based- learning model is 46,38, maximum score is 83,61, then minimum score of demonstration learning model is 46,38, the maximum score is 74,08. Then r table is 0.396.

4.2. Suggestion

1. Student should be provided direction. Student understands more clearly what type of learning style the student has to improve learning outcome by project based-learning compared to Demonstration learning
2. Student by mastering four competencies is able to improve his / her learning outcome on Project based-learning compared to Demonstration model.

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