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Effectiveness of Using Google Classroom-Assisted Articulated Learning Model on Learning Achievement of Class XI Creative Product Development and Entrepreneurship Subjects at SMK Bistek Cibinong

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Abstract

The learning model is an important factor in improving student achievement. The application of the Google Classroom-assisted articulation learning model in learning creative product development and entrepreneurship aims to determine:1) the average learning achievement of creative product development and entrepreneurship in the experimental class (XI TKRO) at SMK Bistek Cibinong is equal to the KKM of 75; 2) classical completeness on learning achievement of creative product development and entrepreneurship of experimental class students (XI TKRO) at SMK Bistek Cibinong is greater than 75%; 3) the difference between learning achievement of creative product development and entrepreneurship in the experimental class (XI TKRO) and control class (XI TBSM) at SMK Bistek Cibinong. This study was conducted using a quantitative research methodology. samples, using purposive sampling. The data-collection method used was a test in the form of questions. The hypothesis test of this research uses a one-sample t-test, one-sample binomial, and an independent-sample t-test. The conclusions of this study are as follows: (1) The independent sample t-test showed that the learning achievement of the subjects of creative product development and entrepreneurship in the control class (XI TBSM) was 64 and the achievement of the experimental class (XI TKRO) was 78.10, which means that learning achievement students who use the Google classroom-based articulation learning model are better than those who use the conventional learning model. (2) One-sample binomial output, where the experimental class has classical completeness above 75%, namely 81%, which means that the experimental class's classical completeness exceeds 75%. (3) The output of the independent sample t-test is known to be sig 0.000 < sig 0.05 (5%), which means that there is a significant difference between the control and experimental classes. The key to this research is that the Google Classroom-assisted articulation learning model for creative and effective product development subjects is carried out through both face-to-face and face-to-face learning processes as usual on learning achievement in the subjects of creative product development and entrepreneurship class XI at SMK Bistek Cibinong.

Keywords: Google Classroom-assisted Articulation Learning Model, learning achievement

INTRODUCTION

Education is an excellent tool for the development of human resources (HR). Therefore, education needs to receive proper attention, handling, and priority from the government, families, and education managers. Education is also a system with complex activities, including various related components. Based on (Prof et al.. Mahmud Yunus and Martinus Jan Langeveld) said that education is an effort that is deliberately chosen to influence and help children, aiming to improve science, physique, and morals so that it can slowly lead children to their highest goals and ideals. For the child to have a happy life, what is done can benefit himself, society, nation, country, and religion. In addition, education is an effort to help children perform their life tasks independently and responsibly, and education is an effort by adult humans to guide immature humans to maturity.

Education is an important component of social life. In Indonesia, we can gain a lot of knowledge about morals, religion, discipline, and many others. In Indonesian Education, ways of thinking are mostly developed in schools or universities through the field of study studied by solving problems, solving various problems, analyzing things, and inferring them.

Schools, as formal educational institutions, must be able to develop the potential of students to become the next generation of the Indonesian nation who are competent and have cognitive, psychomotor, and affective abilities that are balanced and able to answer the world of work. Teachers, as educators, play a very large role in supporting the improvement of the quality of the world of education and the achievement of student competencies. The success of teachers in developing a comfortable learning atmosphere that is conducive to the teaching and learning process through professional managerial management is the main need for a study group to achieve achievements in order to produce superior human resources that are competitive. The assessment and development of models and the implementation of learning approaches have been widely conducted. It aims to reveal the most dominant indicators influencing the way students learn to be more meaningful and in accordance with their learning objectives.

The subject of Creative Product Development and Entrepreneurship vocational high school (SMK) is the development of entrepreneurship. Based on the results of the observations, it is known that the subject of Creative Product Development and

Entrepreneurship is aimed at developing student creativity towards vocational knowledge that students have received. Learning activities and student engagement in Creative Product Development and Entrepreneurship subjects tend to be lacking, such as listening, viewing, writing or taking notes as well as Exercises or practices, as well as low student involvement to be active and critical in the learning process.

Table 1
Learning Achievement of Class XI Students at SMK Bistek Cibinong who have not reached the average KKM

No	Class	≥ 75		< 75		Average Value
		Sum	Percentage	Sum	Percentage	
1	XI Online Business and Marketing	19	61,29%	12	38,71%	67,10
2	XI Multimedia	10	50%	10	50%	66,11
3	XI Business Engineering and Motorcycles	12	60%	8	40%	54,10
4	XI Light Vehicle and Automotive Engineering	6	20,68%	15	79,32%	46,44

Based on the table, it is known that there are 53 students who have not completed the questionnaire and 94 students out of 147 students. Thus, unfinished student learning achievement reached 36.05%. This happens because of the ineffectiveness of learning, where learning is constrained by the status of PPKM or the Covid-19 pandemic and the learning model applied by the teacher does not attract the attention of students, so students are less active in the learning process.

Creative Product Development and Entrepreneurship learning are almost completely dominated by teachers in the learning process carried out, so in this case, a learning model that can be applied is needed so that students become active, namely a learning model that is able to bring out active and critical student involvement, especially during the current pandemic. Therefore, efforts are needed to improve thinking skills through learning that involves students directly understanding the material or solving problems. Thus, the articulation learning model can be applied. The application of learning is carried out through limited face-to-face learning (PTM) and is assisted by using the Learning Management System (LMS) service, Google Classroom. This limited face-to-face learning was carried out because of the effects of PPKM caused by the Covid-19 virus.

Regarding the ability of teaching methods, it is mandatory for teachers to know all the learning models contained in the implementation of learning related to student achievement results. By knowing the learning model, it is possible to reduce problems

related to the course of a teaching, as well as to solve various difficulties in delivering material and attract the attention of students who have a variety of characters.

To address this problem, the researcher decided to use a Google Classroom-assisted articulation learning model. Articulation learning model is a learning model that requires students to act as "message recipients" as well as "messengers" of learning that has been given by the teacher, must be carried out by students and explain to other students in a group pair. The articulation learning model is a learning model that emphasizes the ability of students to speak or communicate the material given by the teacher using sentences or words clearly, so that the learning obtained is not only material but also a way of speaking or communicating things that are topics well and clearly.

After the learning process is carried out, students are given assignments through an application in the form of Google Classroom, in which students will get additional information from the teacher and can give assignments in the form of question items or given a problem to be solved by students through the comment's column.

With the Covid-19 pandemic, the world of formal education and even universities have changed their learning methods from face-to-face learning to distance/online learning. At SMK Bistek Cibinong, face-to-face learning is limited, so students and teachers can meet face-to-face assignments or do face-to-face learning as usual. One class was divided into two session groups, using health protocols, and the teaching staff and students must have been vaccinated as a condition.

RESEARCH METHODS

This research was conducted on all class XI students at SMK Bistek Cibinong. The sample in this study consisted of two classes: class XI TKRO as an experimental class and class XI TBSM. The data collection technique used *a purposive* sampling technique, which uses certain considerations by the researcher.

This research uses a quasi-experimental methodology of a non-equivalent control group design type with data sources on the learning achievement of class xi students at SMK Bistek Cibinong subjects of creative product development and entrepreneurship. The data collection technique used in this study included 10 multiple-choice questions.

The data analysis technique used was an analysis of the question item instrument test in the form of validity and reliability tests. Furthermore, experimental data analysis was carried out through the analysis prerequisite test in the form of normality test and

homogeneity test, and the last analysis technique, namely hypothesis test, where this test was assisted by the SPSS 16 program, namely a one-sample t-test, one binomial sample, and an independent sample t-test.

RESULTS AND DISCUSSION

1. Result

Before this study was conducted, it first underwent normality and homogeneity tests. This was done to determine whether the data were normally distributed, and a homogeneity test was carried out to ensure that the groups that made up the sample were from homogeneous populations. The data used in this study are in the form of learning achievements in creative product development and entrepreneurship subjects from the grades of the PPKWU even semester.

After obtaining the normal and homogeneous distributed sample data, the researchers treated the experimental class in the form of learning articulation models assisted by Google Classroom. The following results were obtained from the question items that were already valid and reliable:

a. *Test One Sample T Test*

From this study, the results of the question items given to the control class (XI TBSM) and experimental class (XI TKRO) were obtained. From the processing of data obtained through the daily test question items, it is known that the final result of learning achievements in the subject of creative product development and entrepreneurship class XI TKRO is 78.10, which means H_{0a} rejected, and accepted.H_{1a}

Table 2
One sample statistics

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
prestasi belajar	21	78.10	6.016	1.313

b. *One Sample Binomial* Test

In addition to looking at the average, the researcher also looked at the final result of the classical completeness of the experimental class (XI TKRO) where the result of the classical completeness of the experimental class exceeded 75%, which means it was rejected and accepted. Based on the 2013 curriculum at SMK Bistek Cibinong states that the completeness of learning

achievement for (a) individuals: if the student scores ≥ 75, (b) classical: if 75% of students score ≥ 75.$H_{0b}H_{1b}$

Table 3
Binomial Test

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
ketuntasan	Group 1	KKM	17	.81	.75	.036
	Group 2	Tidak KKM	4	.19		
	Total		21	1.00		

c. *Independent Sample T Test*

Furthermore, the researchers looked at the final results of the difference between the control class (XI TBSM) and the experimental class (XI TKRO). Based on the output of the independent sample test, it is known that the sig value is 0.000 < the sig value is 0.05 (5%) which means it is rejected and accepted. With this, there is a significant difference between the learning achievement of creative product development subjects and control class entrepreneurship and the experimental class.$H_{0c}H_{1c}$

Table 4
Independent sample test

Tabel 3
Binomial Test

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
ketuntasan	Group 1	KKM	17	.81	.75	.036
	Group 2	Tidak KKM	4	.19		
	Total		21	1.00		

2. Discussion

The effectiveness of learning according to Supriyono (2014: 1) refers to being empowered and successful for all components of learning that are organized to achieve learning objectives. In this study, there are 3 (three) problem formulations to assess the success of achieving learning objectives. From the final results of the 3 (three) problem formulations above, the researcher concluded that the use of a google classroom-assisted articulation learning model affects the learning achievement of class xi students at SMK Bistek Cibinong.

The results of this study are supported by an opinion by Huda (2013: 269) where the benefits of applying the articulation model to learning, especially those that have an impact on students are as follows: 1) Students become more independent, 2) Students work in groups to complete learning materials, 3) Awards are more group-oriented than individual, 4) There is interaction between students in small groups, 5) Each student has a speaking or skilled opportunity in front of the class to conveying the results of the discussion. With this statement, the articulation learning model indirectly affects the learning achievement of students.

Noordin Asnawi (2018: 17) mentions the Google Clasroom application a blended learning platform aimed at every scope of Education as a way out of the difficulty in creating, sharing and grouping each paper assignment. This app is one of the best platforms to improve teacher workflows.

CONCLUSION

Based on the results of research conducted by researchers, regarding the effectiveness of *the Google Classroom-assisted* articulation learning model on the learning achievements of class XI creative product development and entrepreneurship subjects at SMK Bistek Cibinong. So the following results were obtained: 1) The average achievement of learning Creative Product Development and Entrepreneurship class XI experiments at SMK Bistek Cibinong is the same as KKM of 75. This can be seen from the results of the *One Sample T Test* test which includes the results of one statistical sample output obtained in the form of learning achievement of class xi TKRO of 78.10 and *one sample test* has a sig value of 0.029 < a sig value of 5% (0.05) which means that the average achievement of learning creative product development and entrepreneurship class XI experiments at SMK Bistek Cibinong is more / equal to KKM of 75. 2) Classical completeness in the learning achievement of Creative Product Development and Entrepreneurship of class XI experimental students at SMK Bistek Cibinong exceeded 75%. This is evidenced by the results of the *excat sig* (1-tailed) value of 0.036 < 0.05 and *the observed prop* value of KKM of 0.81 and not KKM of 0.19 which means that the classical completeness in learning achievement of creative product development and entrepreneurship of class XI experimental students at SMK Bistek Cibinong exceeds 75%. 3) There is a significant difference between the

achievement of learning creative product development and entrepreneurship material entrepreneurial attitudes and behaviors of students of class XI experiments and class XI control at SMK Bistek Cibinong. This statement is evidenced by the results of the *independent sample test output* which is known to have a sig value of 0.000 < a sig value of 0.05 (5%) which means it is rejected and accepted.$H_{0c}H_{1c}$

With these results, the researchers concluded that the *Google Classroom-assisted* articulation learning model in creative product development and entrepreneurship subjects was effectively carried out in the face-to-face learning process limited to the learning achievements of class xi creative product development and entrepreneurship subjects at SMK Bistek Cibinong.

REFERANCES

Arikunto, S. (2013). Prosedur penelitian suatu pendekatan praktik. Jakarta: Rineke Cipta

_____.(2021). Dasar-dasar evaluasi pendidikan edisi 3. Bumi Aksara, Jakarta: PT Rineka Cipta.

_____. (2013). Prosedur penelitian suatu pendekatan praktik. Jakarta: PT Rineka Cipta.

Sugiyono, D. (2013). Metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R&D.. Bandung: Alfabeta.

Sukmadinata, Nana Syaodih. 2010. Metode Penelitian Pendidikan. Bandung: Rosdakarya.

Susanti, L. 2019. Prestasi Belajar Akademik dan Non Akademik. Malang: Literasi Nusantara.