The Effect of Using Production Based Training Learning Model and Students' Learning Motivation on Learning Outcomes at Vocational High School

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Abstract

Vocational high school is one of the levels of secondary education with the specialty of preparing graduates to be ready for work. Productive Accounting is one of the subjects taught in the school in which the subject was considered to be difficult for students due to the lack of the school facilities. The aims of the study were to find out 1) was there any effect of production based training learning model on students' learning motivation 2) was there any difference of Productive Accounting learning outcomes between students who had high and low motivation, and 3) was there an interaction among the use of production based training learning model, conventional learning model, and learning motivation toward the Productive Accounting learning outcomes. The research was done in Class X of State Vocational High School (SMKN) 1 Kamal and State Vocational High School (SMKN) 1 Labang Bangkalan, Madura, Indonesia Academic Year 2017-2018. This research model used a type of experimental research (true experimental) with experimental group and control group. The experimental group was taught with the production based training learning model, while the control group was taught with conventional learning model. The selection of groups in this study was carried out using random and manipulating conditions. Based on the results of data analysis, the study showed that there were differences in Productive Accounting learning outcomes of students who got production based training learning model and students who did not get production based training learning model, there were differences of Productive Accounting learning outcomes between students who had high and low motivation, and there was an interaction among the use of production based training learning model, conventional learning model, and learning motivation toward the Productive Accounting learning outcomes

Keywords

Production Based Training Learning Model, Motivation, Vocational High School, Accounting

I. Introduction

Vocational high school is a secondary education to prepare graduates in a work place. Vocational education has varied meanings. Kuntowicaksono (2012) defines vocational education as part of an education system that trains and prepares students to be ready for working in a field of work. According to Ganefri (2013), Vocational High Schools (SMK) is a sub-system of national education that should prioritize and prepare students to choose careers, enter employment, compete and develop themselves to succeed on the job which is rapidly changing and developing. Vocational High School (SMK) is an educational institution whose output is expected to have competencies in accordance with their expertise. To achieve these objectives, the main components should include the teaching readiness, facilities, and infrastructure to support the learning process.

Accounting Productive is one of the competency subjects in the Accounting Expertise of Vocational High School (SMK) in which the subject was difficult for students to understand because the facilities and infrastructure in schools were inadequate. In this case, SMKN 1 Kamal did not have an accounting laboratory so that students learnt only oriented conventional material (lecturing and assignments) without any facilities that supported the students' competence. In the implementation of the Expertise Competency Test in collaboration with Professional Certification Institutions that had been appointed by the East Java Education Official, students of class XII academic year 2016-2017 learning outcomes were not as expected. 33% of students did not meet the standard of the Professional Certification Institute.

To overcome the existing problems, it is needed a learning method that can meet the lack of facilities and infrastructure at SMKN 1 Kamal namely Production Based Training Learning model. It was expected that students can improve their learning outcomes

More importantly, the importance of providing human resources that are skilfully is realized by the government through a vocational education quality policy that pays attention to vocational high schools (SMK). Vocational development is now starting to move from the orientation of the local labour market to the ASEAN workforce called the ASEAN Economic Community (AEC) and preparing graduates with entrepreneurial character (Achadiyah, 2013; Apriliaty, 2012; Bety, 2015). The use of the production based training learning model in vocational schools is a manifestation of one of the efforts to establish cooperation or synergy between vocational school and industry.

The production based training learning model applied in vocational high schools was a process of education and training that integrated in the production process in which students were given learning experiences in conceptual situations following industrial workflows ranging from order-based planning, product evaluation and product quality control to steps post-production service.

The implementation of the production based training learning model is focused on the potential of students and the needs of the region to produce graduates who are professional and have high elevation by paying attention to the principles of effectiveness and efficiency. The main objective of using the production based training learning model is for vocational high schools to play a role in enhancing the empowerment of the region's potential to spur economic growth. The purpose of the production based training learning model is to prepare students to have work competencies related to technical competencies and the ability to cooperate according to the demands of the work organization.

Handayani, et al. (2016) argues that the use of production based training learning model could help teachers to transfer abstract

knowledge to concrete so that it was easily understood by students. The use of the model enabled learning that was teacher-centered to be students-centered because students could be actively involved. The research findings showed that there was an interaction between productions based training learning model and students learning motivation in determining students learning outcomes.

In addition, Agni, et al (2017) states that learning through production based training aims to develop character and work ethic (discipline, responsibility, honesty, cooperation, leadership and others) that are needed by the business world/industry and to increase the quality of learning outcomes from merely equipping production based training competencies leading to learning that provides the ability to produce goods and services (production based training).

The Production Based Training learning model is production-based learning where direct learning and production are followed. Sumartana (as cited in Fitrillah, 2015) said that with production-based learning which emphasizes more on practical learning, it can make it easier for students to understand and absorb the learning material provided. According to Suryanto (2009), the production based training learning model provides real experience needed in the world of work (industry and society) that experience makes something real needed and will be used by the world of work.

.Ardiansyah (2014) mentions the characteristics of the production based training learning model as follows: (1) practice training materials (job sheets) are designed to accommodate the level of difficulty that is generally found in the industry, (2) this training material is a standard that tends to not change and does not have to specify a product that can be used, (3) training materials are only simulations or a process, form, or difficulty level of workmanship, (4) the results of training are mostly marketable products, and (5) deepening of certain material obtained from continuous training so that students' skills will be honed on the basis of technology that is used both conventional and modern.

Regarding students' motivation, Baron and Scunk (as cited in Slavin, 1994) suggests that motivation is an internal process that activates, guides, and maintains behaviour within a certain period of time. Lack of motivation, both internal and external, will cause students to have less enthusiasm in the learning process. The existence of good motivation in learning will show good results. Through the contextual practicum is one way of generating motivation because students are given the freedom to contract thoughts and findings during learning activities so that students do it themselves with no burden, fun and high motivation. Motivation is closely related to how a person does an activity or work. Thus, the more and more the learning motivation that students get, then the learning activities undertaken by students will be higher so that student learning becomes more successful.

Sukmadinata (2003) states that motivation has two functions, namely: (1) as a directional function and (2) activating and increasing activities. While the characteristics of people who have high learning motivation include ambition to work hard, be competent, diligently improve social status, highly appreciate creativity and productivity. Thus, it can be said that students who have a high learning motivation in terms of productive accounting learning will direct their attention to high productive accounting learning achievement. Additionally, according to Chauchan (1978), motivation is a process of generating motion within the organism that has 3 functions covering 1) energizing and sustaining behaviour, 2) giving direction and setting behaviour, and 3) forming behaviour. Motivation serves to encourage people to do something meaningful, and motivation is seen as a motor that creates energy in a person and with that energy someone will do something.

II. Research Methods

This research model used a type of experimental research (true experimental). This true experimental involved control group and experimental group. The experimental group was taught with the production based training learning model, while the control group was taught with conventional learning model. The selection of groups in this study was carried out through random and manipulating conditions. The design of true experimental research was divided into three. They were: 1) post-test design with random group selection, 2) design of pretest and post-test with random group selection, and 3) solomon design.

The subject of the study was the students of class X AK-1 and X AK-2 in State Vocational High Schoool (SMKN) 1 Kamal as well as students of class X AK-1 and X AK-2 in State Vocational High School (SMKN) 1 Labang Bangkalan Academic Year 2017-2018. Class X in SMKN 1 Kamal consisted of 2 classes with a total of 60 students, while class X of SMK 1 Labang Bangkalan consisted of 2 classes with a total of 32 students. The data are presented in the following table 1.

Table. 1 : The Subjects of the Research

No	SMKN 1 Kamal		SMKN 1 Labang	
	Class	Total of students	Class	Total of Students
1.	X AK-1	30	X AK-1	16
2.	X AK-2	30	X AK-2	16
	Total of Students	60	Total of Students	32

III. Result and Discussion

1. Results

The research sample consisted of 4 classes, 2 experimental classes and 2 control classes with the total number was 92 students. First, the description of Productive Accounting of students learning outcomes data of experimental class 1 that were taught using the production based training learning model. Data on Productive Accounting learning outcomes for experimental class-1 consisting of 30 students were obtained in the following table 2.

Table 2 : Data of Productive Accounting Learning Outcomes of Experimental Class 1

N	Valid	30
	Missing	0
Mean		40,97
Std. Error of Mean		2,032
Median		42,50
Mode		45
Std. Deviation		11,131
Variance		123,895
Range		66
Minimum		4
Maximum		70

Based on the table above, there were statistics on central tendency, including the mean was 40.97, lowest value (minimum) was 4, the highest value (maximum) was 70. The frequency distribution is presented in table 3 as follows:

Table 2 : Frequency Distribution of Productive Accounting Learning Outcomes of Experimental Class 1

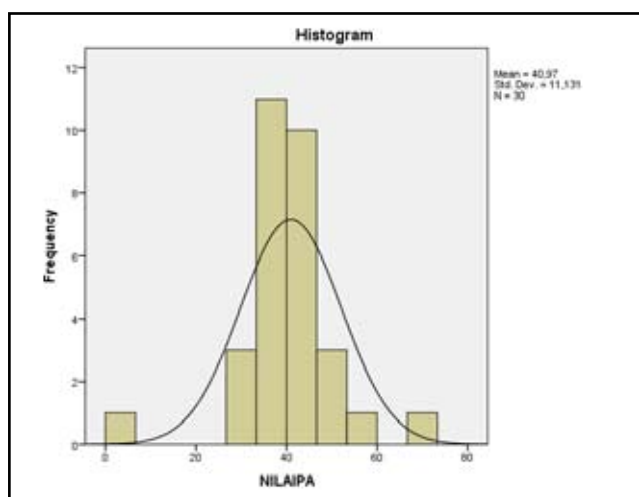|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	1	3,3	3,3	3,3
	30	3	10,0	10,0	13,3
	35	7	23,3	23,3	36,7
	40	4	13,3	13,3	50,0
	45	10	33,3	33,3	83,3
	50	3	10,0	10,0	93,3
	60	1	3,3	3,3	96,7
	70	1	3,3	3,3	100,0
	Total	30	100,0	100,0	

Fig. 1 : Histogram of Productive Accounting Learning Outcomes of Experimental Class 1

Second, description of Productive Accounting learning outcome data for control class 1 who were taught using conventional learning models. Data on Productive Accounting learning outcomes for control class-1 consisting of 30 students were obtained in the following table 3.

Table 3 : Data of Productive Accounting Learning Outcomes of Control Class 1

N	Valid	30
	Missing	0
Mean		56,67
Std. Error of Mean		1,815
Median		55,00
Mode		55
Std. Deviation		9,942
Variance		98,851
Range		45
Minimum		30
Maximum		75

Based on the table above, there were statistics on central tendency, including the mean was 56.67, lowest value (minimum) was 30, the highest value (maximum) was 75. The frequency distribution is presented in table 4 as follows:

Table 4 : Frequency Distribution of Productive Accounting Learning Outcomes of Control Class 1

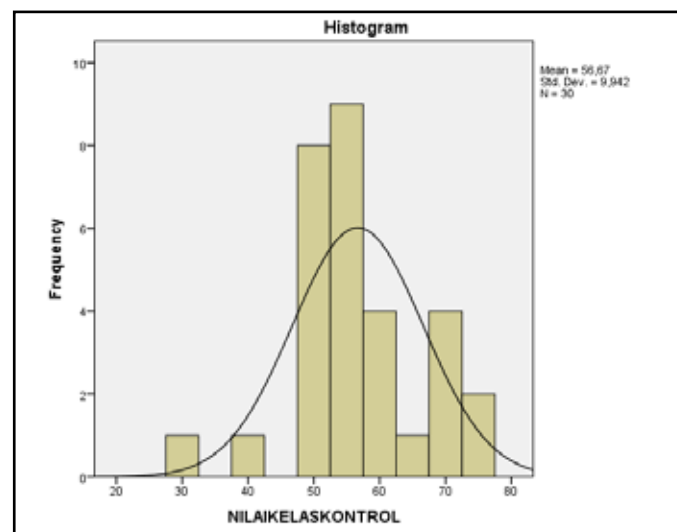|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	30	1	3,3	3,3	3,3
	40	1	3,3	3,3	6,7
	50	8	26,7	26,7	33,3
	55	9	30,0	30,0	63,3
	60	4	13,3	13,3	76,7
	65	1	3,3	3,3	80,0
	70	4	13,3	13,3	93,3
	75	2	6,7	6,7	100,0
	Total	30	100,0	100,0	

Fig 2: Histogram of Productive Accounting Learning Outcomes of Control Class 1

Third, description of Productive Accounting learning outcome data for experimental class 2 who were taught using conventional learning models. Data on Productive Accounting learning outcomes for experimental class 2 consisting of 16 students were obtained in the following table 5.

Table 5 : Data of Productive Accounting Learning Outcomes of Experimental Class 2

N	Valid	15
	Missing	0
Mean		31,00
Std. Error of Mean		2,193
Median		30,00
Mode		30
Std. Deviation		8,494
Variance		72,143
Range		30
Minimum		15
Maximum		45

Based on the table above, there were statistics on central tendency, including the mean was 31.00, lowest value (minimum) was 15, the highest value (maximum) was 45. The frequency distribution is presented in table 6 as follows:

Table 6 : Frequency Distribution of Productive Accounting Learning Outcomes of Experiment Class 2

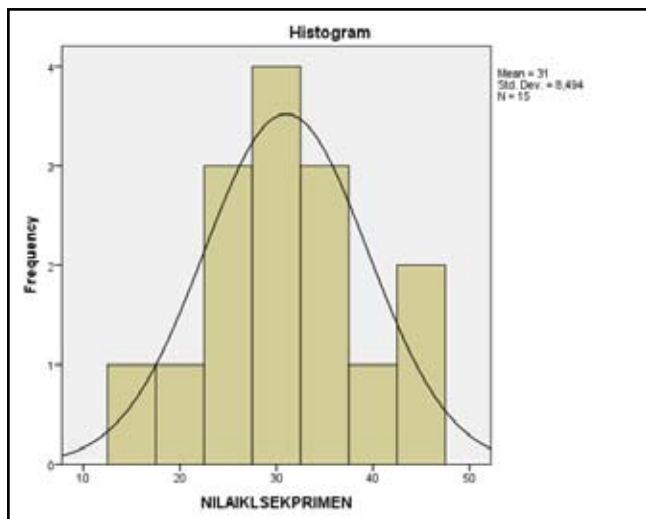|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15	1	6,7	6,7	6,7
	20	1	6,7	6,7	13,3
	25	3	20,0	20,0	33,3
	30	4	26,7	26,7	60,0
	35	3	20,0	20,0	80,0
	40	1	6,7	6,7	86,7
	45	2	13,3	13,3	100,0
	Total	15	100,0	100,0	

Fig. 3 : Histogram of Productive Accounting Learning Outcomes of Experimental Class 2

Fourth, description of Productive Accounting learning outcome data for control class 2 who were taught using conventional learning models. Data on Productive Accounting learning outcomes for control class 2 consisting of 16 students were obtained in the following table 7.

Table 7 : Data of Productive Accounting Learning Outcomes of Control Class 2

N	Valid	16
	Missing	0
Mean		35,00
Std. Error of Mean		1,369
Median		35,00
Mode		30[a]
Std. Deviation		5,477
Variance		30,000
Range		20
Minimum		25
Maximum		45

Based on the table above, there were statistics on central tendency, including the mean was 35.00, lowest value (minimum) was 25, the highest value (maximum) was 45. The frequency distribution

is presented in table 8 as follows:

Table 8 : Frequency Distribution of Productive Accounting Learning Outcomes of Control Class 2

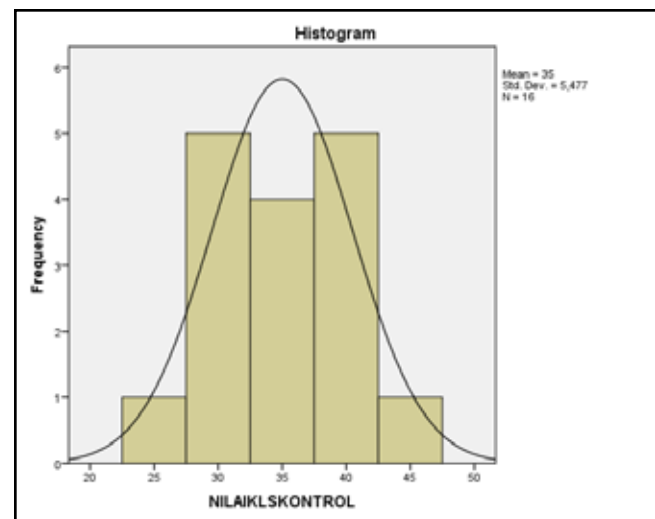|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25	1	6,3	6,3	6,3
	30	5	31,3	31,3	37,5
	35	4	25,0	25,0	62,5
	40	5	31,3	31,3	93,8
	45	1	6,3	6,3	100,0
	Total	16	100,0	100,0	

Fig. 4: Histogram of Productive Accounting Learning Outcomes of Control Class 2

2. Discussion

The result of the first hypothesis (F count=529, sign=855) indicated that significance value was $\geq 0,05$ (5%) meaning that F count coefficient was significant. It means that Ha was accepted and Ho was rejected. The study showed that there were significant differences in Productive Accounting learning outcomes of students who got production based training learning model and students who did not get production based training learning model. Based on the comparison the individual mean score of the students, it was known that production based training learning model showed the highest mean score compared to conventional learning model. Therefore, it was proven that production based training learning model was better than conventional one in term of time management, students independency, and students' creativity. However, the conventional learning model has positive thing in the sense of material target. The students' learning outcomes cover the ability that the students have after getting the learning experiences from teachers including behaviour, knowledge, and skills to be implemented in their daily life.

Meanwhile, the result of second hypothesis (F count=547, sign=855) showed that significance value was $\geq 0,05$ (5%) meaning that F count coefficient was significant. It means that Ha was accepted and Ho was rejected. It was concluded that there were significant differences of Productive Accounting learning outcomes between students who had high and low motivation. The study proved that the mean score of Productive Accounting in experimental class by using production based training learning

model with motivation showed the highest mean score compared to the conventional learning model. Students' should be given a motion in their learning activities. Motivation determined the level of students' learning success or failure that demanded teachers' imagination and creativities to find out the way to increase the students' motion. Thus, motivation became an integral part in teaching and learning process.

Finally, the third hypothesis result (F count=728, sign=855) showed that significance value was $\geq 0,05$ (5%) meaning that F count coeffisient was significant. It means that Ha was accepted and Ho was rejected. This indicated that there was an interraction among the use of production based training learning model, conventional learning model, and learning motivation toward the Productive Accounting learning outcomes. The result of the study was in line with the study conducted by Handayani, et al. (2016) that the use of production based training learning model enabled learning that was teacher-centered to be students-centered, thus through the students' participation in the process of teaching learning, the students' achievement increased.

IV. Conclusions and Suggestions

A. Conclusion

Based on the results of the analysis, it can be concluded that 1) there were differences in Productive Accounting learning outcomes of students who got production based training learning model and students who did not get production based training learning model, 2) there were differences of Productive Accounting learning outcomes between students who had high and low motivation, and 3) there was an interaction among the use of production based training learning model, conventional learning model, and learning motivation toward the Productive Accounting learning outcomes of Class X of State Vocational High School (SMKN) 1 Kamal and State Vocational High School (SMKN) 1 Labang Bangkalan, Madura, Indonesia Academic Year 2017-2018. Therefore, the model and the students' motivation contributed to the students' learning outcomes in the subject of Productive Accounting in vocational high school level.

B. Suggestion

Based on the conclusions of the results of the study, the researchers provide some suggestions both for teachers and principals. For teachers, (1) it is expected that there should be a change in the attitude of the teachers in improving the learning model in implementing teaching and learning activities at schools. (2) teachers are expected to be able to develop their profession so that they become professional teachers. (3) teachers should improving their performance through improving the quality of Productive Accounting learning, and (4) teachers should encourage and increase knowledge to conduct research that will be useful for improving future learning. For Principals, (1) the principals should facilitate various facilities and infrastructure needed for learning media such as the Accounting Laboratory, procurement of school computers, adding literature to library books in Accounting subjects, and LCD, (2) the principals provide full support for teachers if they have positive thoughts on improving the quality of learning teachers both in the classroom and outside the school e.g. conducting comparative studies, industry visits, training, workshops, seminars and competitions, and (3) the principals should also facilitate teachers in various training so that the teachers have a lot of insight and knowledge that will be applied in classroom teaching.

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