

Factors Affecting the Quality of Education: A Comparison Study in Vocational High School in East Java

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***Abstract**---The purpose of this study is two-fold, the first objective is to understand how to use the learning model in office administration vocational schools. In addition, this study is intended to improve the quality of education in vocational schools in Indonesia. The research was carried out at the state vocational school in the office administration department in Surabaya and Sidoarjo of East Java in Indonesia. The data were gathered through questionnaires to the respondents, while the data were analyzed using t-test. The findings showed that there were significant differences in the performance criteria and the learning model mechanism. Furthermore, there are several differences in two vocational schools including teacher education backgrounds, characteristics of students, and learning environments. The existing differences can be used to improve the quality of education, especially teacher competencies in implementing effective learning process that become a benchmark for the succeed of education.*

***Keywords**--- Learning model, vocational school, quality of education*

I. INTRODUCTION

Education is a conscious and planned effort to create a learning atmosphere and learning process. It allowing students to actively develop their potential to have religious-spiritual power, self-control, personality, moral intelligence, and skills needed by themselves, society and state. The implementation of education in schools is formally organized based on hierarchical and tiered structures. The ongoing process of education in schools is depending on the existence of other subsystems consisting of students, management of school administration, structure and teaching-learning activities, teaching materials or materials arranged in a set of systems called the curriculum.

In Indonesia, the curriculum has been improved several times. First, it was the 1994 curriculum which was later replaced with a competency-based curriculum in 2004. The application of the competency-based curriculum in schools did not last long because two years later, in 2006, the Indonesian government launched a new curriculum namely the 2013 Curriculum. In its development, the 2013 Curriculum faces several challenges, particularly on the teachers' perspectives. Ruja and Sukanto in 2015 noted that teachers are still having difficulty in developing the lesson plan and facing difficulty on evaluation [15].

Teacher plays a crucial role in character building as an attempt at a moral revolution. For this reason, teachers are required to be creative and innovate in the learning process [23]. Meanwhile, Susanto in 2015 mentioned that effective learning measures of the success of teachers in managing classes. In addition, the community has high expectations for the teacher to become skilled in implementing curriculum and learning instruction in helping students learn and succeed in East Asian countries [26].

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However, the existing condition indicates that there are still many teachers who have not fully understand the 2013 Curriculum. Teachers as the spearheads of educational activities need to understand in depth about the basic concepts of Curriculum 2013. Goldhaber and Anthony in 2007 and Suratman et al. in 2020 stated that improving teacher quality can be done with a teacher certification system [10],[25]. In more detail, developing a school should be based on real needs, in line with the national development program, and also see local wisdom in each region [24]. The results competency test of teachers shows that pedagogic abilities have not been optimal yet. This is an indicator that the creativity and innovation of the learning model of teachers in the teaching and learning process is insufficient. The data of the Ministry of education and culture the year 2015 shows that values test competency teachers are insufficient.

Surabaya and Sidoarjo are both provincial capitals but based on the results of the teacher competency test, there are still differences in the pedagogical and professional values of the teacher. Pedagogic competence is one type of competence that is absolutely necessary to be mastered by the teacher [7]. It is basically the ability of the teacher to manage the learning of students. Pedagogic competence is a distinctive competency, which will distinguish teachers from other professions and will determine the level of success of the learning process and results of their students. This competency is not obtained suddenly but through continuous and systematic learning efforts, both in the pre-service period (education of prospective teachers) and during positions, which are supported by talents, interests and other teacher potentials of each individual concerned.

Several previous studies on how to improve the quality of education have been examined by scholars [25], [28], [3], [11], [10]. Some studies focus on the internal factors which affecting the quality of education in the vocational school [28], [3], while others pointed on the learning method used in the classroom [14]. In fact, minor attention to the researchers in examining factors affecting the quality of education in associated with curriculum in Indonesia and the comparing the existing vocational schools particularly in East java province [10].

Therefore, this study, for the first time aimed to compare the learning models in Surabaya and Sidoarjo with the intention of knowing the extent to which the ability of office administration expertise in applying scientific learning and sharing models in applying spectrum-appropriate learning models 2013 curriculum. In addition, the purpose of the study aimed to understand the patterns of learning models appropriate to the 2013 curriculum in the vocational school.

II. METHOD

This study followed a descriptive comparative method with a quantitative approach. The research compares the existing phenomena in two vocational schools in East Java to find out what factors affecting quality education. The population in this study was office administration vocational teachers in Surabaya and Sidoarjo, while, the sampling technique of this study uses saturated samples by taking all members of the population as respondents. The sample is approximately 65 teachers in the vocational school in Surabaya and 35 respondents in the vocational school in Sidoarjo.

The study used questionnaires which consisting of five variables, namely (1) scientific procedure indicators in the form of logical theoretical, learning objectives, syntax; (2) learning outcomes have indicators in the form of assessment of the cognitive, affective and psychomotor domains; (3) indicator learning environment used by the conditions of the learning environment and the response of students; (4) the criteria for the appearance of the indicators are the behavior of students and the appearance of students; (5) the mechanism of the learning model consists of indicators, namely the reaction of students, interaction with the environment. For processing questionnaire data, a comparative study of learning models in Surabaya and Sidoarjo using Paired Samples Test with SPSS. Therefore, this study presents a complete picture of the differences in phenomena or social reality, which in this case is a learning model used in office administration vocational schools in Surabaya and Sidoarjo.

BI. RESULTS

Based on the data analysis, it is known that the average value obtained by using scientific procedures in Surabaya is 49.56. Whereas, for the scientific procedure in the use of the model in Sidoarjo is about 48.60. Furthermore, the results of the Independent sample test indicate that the probability value or Sig. (2-tailed) of 0.294. This shows that if the probability value or Sig. (2-tailed) > 0.05, there is no significant difference between the scientific procedure in the use of learning models in Surabaya and Sidoarjo office administration vocational schools.

Table 1. Paired Sample Statistics

Variable	N	Mean	Std. Deviation	Std. Error Mean	
X ₁	Surabaya	55	49.56	3.962	.534
	Sidoarjo	35	48.60	4.609	.779
X ₂	Surabaya	55	60.62	5.201	.701
	Sidoarjo	35	59.66	4.051	.685
X ₃	Surabaya	55	51.16	3.829	.516
	Sidoarjo	35	49.91	3.641	.615
X ₄	Surabaya	55	26.13	2.457	.331
	Sidoarjo	35	25.06	1.552	.262
X ₅	Surabaya	55	31.18	2.874	.388
	Sidoarjo	35	29.46	2.049	.346

Table 2. Independent Samples Test

		Levene's Test for Equality of Variances		t-test for equality of means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
X ₁	Equal variances assumed	4.761	.032	1.055	88	.294	.964	.913	-.851	2.779
	Equal variances not assumed			1.020	64.504	.312	.964	.945	-.923	2.851
X ₂	Equal variances assumed	3.406	.068	.928	88	.356	.961	1.036	-1.097	3.019
	Equal variances not assumed			.980	84.327	.330	.961	.980	-.988	2.910
X ₃	Equal variances assumed	.165	.686	1.538	88	.128	1.249	.812	-.365	2.864
	Equal variances not assumed			1.555	75.228	.124	1.249	.803	-.351	2.850
X ₄	Equal variances assumed	33.430	.000	2.299	88	.024	1.070	.466	-.145	1.995
	Equal variances not assumed			2.532	88.000	.013	1.070	.423	-.230	1.910
X ₅	Equal variances assumed	13.768	.000	3.083	88	.003	1.725	.559	-.613	2.836
	Equal variances not assumed			3.318	86.789	.001	1.725	.520	-.692	2.758

Based on table 1 and table 2, the data specifications of learning outcomes in Surabaya is 60.62 while in Sidoarjo is obtained an average value of 59.66. Furthermore, the results of the Independent sample test indicate that the probability value or Sig. (2-tailed) of 0.356. It implies that there is a significant difference between the specification of learning outcomes at the Surabaya and Sidoarjo office administration vocational Schools. In addition, related to the learning environment, it can be seen that it is no difference between both cities. It is proven by the data on the learning environment in Surabaya is 51.16. As for the specifications of the learning environment in Sidoarjo, the average value of 49.91 is obtained.

Furthermore, related to performance criteria, the average value in Surabaya is amounted to 26.13 whilst in Sidoarjo, the average value is 25.06. Furthermore, the results of the Independent Sample Test indicate that the probability value or Sig. (2-tailed) of 0.024. there are significant differences between the performance criteria at the Surabaya and Sidoarjo office administration vocational Schools.

IV. DISCUSSION AND CONCLUSION

This study uses empirical data by taking different conditions of the region and characteristics of students and teachers but still in locations that are large cities in the East Java region. The main objective is to compare the learning model used in vocational school Surabaya and Sidoarjo. According to Warsita in 2008 learning is an attempt to make students learn or an activity to teach students [28]. While Paolini in 2015, learning is necessary to use the model in learning so that it can stimulate students in learning where the needs of pedagogic students can be fulfilled [17]. Based on the results of this study in the scientific procedure there were no significant differences between the scientific procedures at vocational school in Surabaya and Sidoarjo. The learning model has a systematic procedure because the learning model is not just a combination of various facts arranged systematically and used to combine student behavior based on certain assumptions [26].

In addition, this scientific procedure consists of logical theoretic which according to Daramadi in 2017, logical theoretical rationales which are compiled by the creators or developers that have been adjusted to the revised curriculum, so that there is no distinction between the conditions in the vocational school in Surabaya and Sidoarjo [4]. Furthermore, related to the learning objectives, the curriculum has been prepared by the government and included in the competencies that exist in each subject, so that each teacher's learning explains in advance the learning objectives so that the goals are clear about what will be achieved, including what and how learners learn well and how to solve learning problems. The syntax in the learning model has an important role because of the component of a learning model one of which is syntax which details the phases of activities in a model and explains the activities that students must take during the learning process [1]. Indeed, according to Ghariblaki and Poorahmadi in 2017, the importance of syntax in the learning process is assumed to be one for corrective feedback so that it can be in accordance with the objectives of learning [9].

The second variable is the specification of learning outcomes where this variable consists of cognitive, affective, and psychomotor domains. The results showed that there is no significant difference between the specification of learning outcomes at vocational Schools in Surabaya and Sidoarjo. This finding is in accordance with Purwanto in 2010 which explained that learning outcomes are changes in students' behavior which is a result of the learning process in the form of changes in cognitive, affective, and psychomotor aspects [18]. In addition, the results of this study are also in line with the results of research from Nurbudiyani in 2013, which mentioned that in the evaluation should be able to describe the abilities of students that lead to the cognitive, affective, and psychomotor domains. This measurement is carried out to determine the extent to which this learning goal has been achieved [16].

The learning environment in this study resulted that there is no difference between vocational school in Surabaya and Sidoarjo. It is because the learning environment in Surabaya and Sidoarjo was caused by the availability of the laboratory so learning was not just sitting and listening to teachers lecturing and the surrounding environment. The response of students also influences the specifications of the learning environment, this is due to the reciprocity of the students providing positive feedback on the learning process. Students in the vocational school in Surabaya are better able to explore themselves to create a conducive learning environment. This is in line with the results of Radovan and Makovec in 2015, which revealed that the learning environment has a large contribution to developing self-motivation and skills [19]. A good learning climate will provide a consistent correlation with learning outcomes [14]. This finding agrees to Saefulbahri in 2015 which stated that learning resources do not originate only from books but the environment also has benefits as a source of learning so that it will increase their knowledge and can increase students' understanding [21].

Furthermore, the performance criteria variable in this study showed that there is a difference between the performance criteria at vocational School in Surabaya and Sidoarjo. This is because the appearance of students and the behavior of students has different characteristics between Surabaya and Sidoarjo, which is also closely related to the environment around their school and also the cultural or academic habits. This is in line with a previous study by Nasution in 2017, which mentioned that the effectiveness of the learning model relates to the characteristics of students who are taught [15]. Indeed, Dunlosky et al. in 2013 also stated that the characteristics of these students influence the effectiveness of the learning model used where aspects of age, ability, and level of prior knowledge also influence the performance criteria of students [5].

The mechanism of the learning model relates to the ecological conditions and the influence of teacher subjectivity that is not fully insurmountable. This is related to the reaction of students when a teacher uses a learning model and gives a positive reaction to ongoing learning. Thus, interaction with the intended environment is the teacher as the facilitator in learning, where the existing learning resources can be used by students with direction from a teacher. This study resulted in a difference between the mechanism of the learning model in the office administration vocational school in Surabaya and Sidoarjo. It is caused by the conditions of the educational background and experience of teachers in Surabaya are better than in Sidoarjo. This is in line with the study by Ma and Ma in 2014, which remarked that American students have a stronger and more cooperative competitive than East Asian students, but are less effective because learning styles in improving mathematical performance are practiced in the classroom [14].

Teacher education can hold the key to improving the practice of different learning style education as a strategy to improve students' mathematical performance in the United States and beyond. Similarly, Inoue and English in 2014, said that teacher experience of 77 percent can implement a new curriculum that has been well prepared [12]. The teacher mentions that classes involving games, songs, and songs usually work. The use of learning models that vary in each subject of Vocational School in Office administration is expected to provide improvements in the learning process. In applying the learning model, one must pay attention to several aspects according to Alma in 2009, which refers to the terms of reference underlying the development of a learning model goal, arranged based on clear stages, describing the relationship between the teacher and students in a system, and supporting systems innovative learning model [2].

Therefore, vocational teachers must understand the needs of the changing workforce in order to prepare graduates as a professional workforce [8]. In addition, Dunn et al. in 2019 stated that the study in 21st century students are expected to be more active in the learning process by further increasing creativity, critical thinking, communication and collaboration that can be implemented in the global community [6].

This study recommends further research to examine teacher professional competencies through innovative learning by making learning devices to minimize the existing deficiencies. In addition, it is suggested for teachers to conduct lesson study and attending an annual teacher conference of East Java to improve pedagogical and professional competence.

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