Work based learning in motorcycle classroom part 2

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Abstract. This research was conducted with the aim to analyze schools of vocational education (SMK) which uses Work Based-learning (WBL) Models. This research was conducted by direct observation of students of Merdeka Soreang Vocational School Competencies in Motorcycle Business Engineering by comparing the competencies between students who use the WBL model with students who do not use the WBL model. The basic assumption of this research is practical competence will describe student to understand knowledge, attitude and skills when work in work shop. Whereas, the hypothesis of writer it that “ there are significant differences of competences between students who use the WBL learning model with students who do not use the WBL model. The method used in this research is analytical descriptive method. From the results of the study found that there are no differences in aspects of knowledge, but from the attitude and skill effects there are differences between the two classes.

1. Introduction
The development of technical and vocational education and training (TVET) is becoming increasingly important in the agenda of international and national intelligence. For example, UNESCO recommends TVET claiming that, technical and vocational education driven by market demand is more effective in increasing employment and income among underprivileged people [1]. The characteristics of TVET in the development of national skills vary among other countries. The status and role of TVET are shaped by historical, cultural, economic and social factors which influences how TVET systems evolve [2,3].
Therefore, it is important to understand the problems faced by TVET which impedes its implementation and effectiveness [4]. Changes within the dynamic of job types, the global market, and the progress of technology, has led entrepreneurs in potential labor markets to demand complex skill sets from employees [3]. Consequently, nations must begin to systematically evaluate their education system to keep abreast of market developments and demands by modifying the education system, to meet developmental social and economic needs [5]. This change, further challenges TVET to adjust to new competencies which appear faster than general education. Hence, TVET is directly responsible for equipping individuals to adapt to workplace demands [6]. One of the innovations in the development of learning in vocational education is, Work Based Learning (WBL). This model of learning has long been applied, especially in developed countries such as England, Scotland, Ireland, Australia and America which has implemented WBL in higher education as of the early 20th century. In England, government policy on WBL as a significant element in professional development and lifelong learning [7].

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Some definitions explain that work-based learning as all forms of learning through the workplace, whether tangible work experience (work experience) or work in guidance (work shadowing) at a certain time. Another definition states that WBL is all learning that occurs as a result of activity in the workplace [8]. WBL is experience-based learning [9]. WBL is a planned and supervised relationship of classroom experience with expectations and reality of work. Work-based learning experiences provide opportunities for all students to develop and apply knowledge, skills and work attitudes and behaviors that lead to better career choices and productive work, many references to WBL but definitions and implementations vary greatly from one place to another. WBL is used as terminology in various countries for programs at schools or colleges to gain experience from the world of work, and for adolescents to be ready in the transition from school to the world of work to learn the reality of the world of work/work and be ready to make the right choice in work [10]. Work-based learning is any training that relates directly to the requirements of the job on offer in your organization [11].

Based on the notion of understanding expressed by WBL, learning approaches can be defined that utilize the workplace to structure the experience of experience gained in the workplace, which ultimately contributes to the social, academic, and career development of learners to be a driver of learning activities. With WBL, learners develop attitudes, knowledge, skills, enlightenment, behaviors, habits, and associations from experiences in both places and make it possible learning related to real-life work activities [12].

WBL research and evaluation show a correlation between outputs and impacts (outcomes) of graduates with the structure of learning provided by schools and industry as experienced in the workplace. When program objectives, workplace-based curriculum and experience are designed and applied along with adequate staff support and properly evaluated, the program will have a positive impact [12].

2. Research method
The research aimed to get information about existence of competences difference from both groups of students. The basic assumption of this research is practical competence will describe student to understand knowledge, attitude and skills when work in work shop. Whereas, the hypothesis of writer it that “there are significant differences of competences between students who use the WBL learning model with students who do not use the WBL model. The research method in this research is descriptive method. This method is a method that focuses on solving existing problems in the present and actual problems, descriptive research methods are used when aiming to describe or explain the events and events that exist today [13], descriptive methods are methods in researching the status of human groups, objects, conditions, systems of thought or a class of events in the present [9], data collected was first arranged, explained and then analyzed (therefore this method is often called the analytic method [14].

The population in this study were level II students of SMK Merdeka Soreang Motorcycle Business Engineering Skills competence consisting of 34 students who used the WBL learning model and 34 students who did not use the WBL learning model, Data collection techniques used in this study were by conducting tests, distributing questionnaires and conducting direct observation, In this study the authors did not do the sample technique because of the small number of populations so the authors conducted research on all populations. The study was conducted on two different classes, a class not treated as a control class and a class treated in the form of a WBL learning model as an experimental class and then compared aspects of knowledge, attitudes and skills, to measure knowledge using written tests, to measure attitudes with observation and measure capabilities with work assessment place (WPA), all of the instruments used have been verified and validated.

3. Result and discussion
The result of this study indicates that the average test score of students assisted do not use the WBL model is 57.19 while that of use the WBL model is 54.91; the average questionnaire score is 55.57 and 50.2; And the average observation score is 67.07 and 49.40; and the average competences is 179.3 and 152.14. According h test, for the first hypothesis it is obtained $h = 14 > 11$ to this Ho is accepted. It
means that there is no significant difference in knowledge between students assisted by do not use the WBL model a student use the WBL model. According to t test, for second hypothesis is obtained $h = 14 > 11$, so that $H_0$ rejected. It means that there is a significant difference in attitude between students assisted by do not use the WBL model and students use the WBL model. For the third hypothesis it is obtained $h = 11, 4 < 11$, so that $H_0$ rejected. It means that there is a significant difference in skill between students assisted by do not use the WBL model and students use the WBL model. And for the fourth hypothesis it is obtained $h = 16 < 11$, so that $H_0$ rejected. It means that there is a significant difference in competence between students assisted but do not use the WBL model Motor and students use the WBL model. Based on the above observation, it can be concluded that learning outcomes are the level of mastery and ability of students towards learning material from all psychological domains as a result of the learning process and experience. Thus, learning achievement is an implementation of learning activities that have been carried out by someone, both related to cognitive, affective, and psychomotor.

If there are two groups of students who have the same process and experience, of course the learning outcomes achieved by the two groups of students will be the same. In line with the theories put forward, after the authors carry out research to compare knowledge between regular class students with WBL classes. From the results of hypothesis testing it is found that the level of cognitive mastery for learning theory in this case is not much different. The cause of the similarity of students' knowledge on theoretical subject matter is that both the control and experimental classes have no difference in treatment, the difference in treatment is only in learning practice, namely the WBL method with the conventional method. Judging from the attitude effect of the results of hypothesis testing, it is found that there are differences between the two classes, this is because in the WBL class adopts an industrial curriculum where the curriculum contains industrial habit content, besides the supervision process is carried out by two parties namely from the school and industry parties so that the process more intensive supervision in the WBL class than this optimal supervision requires students to be always obedient and obedient to follow all the standard operating procedures that have been set, from habits, obedience and compliance, eventually become a character that is embedded in students. For the skills effect after the hypothesis testing there are skills differences, for the WBL class use a synchronization curriculum between industry and school curriculum by involving the industry in all educational processes so that the treatment of students is more organized compared to regular classes even though in terms of time of delivery there is no difference between these two classes.

4. Conclusion
Referring to the findings and discussions in the previous chapter, there are several conclusions that can be accepted. As an approach that compares average scores and tests on productive subjects in Motorcycle Engineering between students who use the WBL learning model and students who do not use the WBL learning model, meaning that both groups of students have the same knowledge value, the cause is that there is no difference in treatment. Theoretical learning in the form of material being taught, the source of learning is the same method of learning theory with the same teacher. As an approach by comparing the average score of questionnaire data between students who use the WBL learning model and students who do not use the WBL learning model, it means that the two groups of students have different attitudes. The reason is that students who use the WBL learning model have instructors from two institutions, namely teachers as school instructors and instructors from industry so that coaching students who use the WBL learning model is more intensive than students who do not use the WBL learning model, the development of students who use the WBL learning model can be monitored well, because the communication went very well too, so the coaching from teachers and instructors from the industry went consistently. Based on direct observation research and the results of the calculation of test marks on the class of students who use the WBL learning model with students who do not use WBL learning methods. In addition,
the skills of students who use the WBL learning model are supported by knowledge and attitudes that are better when compared to students who do not use the WBL learning model.

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