Contribution of Teaching Factory Learning Strategy Implementation, Mastery of Basic Knowledge, and Self Efficacy to the Vocational Competence and Its Impact to Student Work Readiness in Malang Vocational Education of Motorcycle Engineering

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Abstract— Teaching factory is a learning strategy that classifies a class like the world of work. Implementation of teaching factory is expected to bridge the competencies in school and in the world of work. Teaching factory provides improvements in the mastery of basic knowledge, self efficacy, mastery of vocational competence, as well as on the readiness of students in working the world of work. Self efficacy is a self-confidence in assessing ability, giving effect to the control of vocational competence and readiness work. Basic knowledge is the knowledge that underlie the advanced knowledge memebrikan influence on self efficacy and readiness work

Keywords—iteaching factory, self efficacy, basic knowledge, vocational competence, readness work.

I. INTRODUCTION

Indonesia has entered the period of the ASEAN Economic Community (MEA), meaning anything in ASEAN countries can enter Indonesia including the workforce. This moment must be addressed correctly because. Increased human resources must be done immediately. One way to improve the quality of human resources by improving the quality of vocational education.

Vocational education (SMK) still face several problems: (1) the control of vocational competency of students is still categorized less, as much as 20% of students of automotive majors did not pass in test,(2) in some research submitted that the mastery of vocational competence influenced by many factors: method, learning model ([1]; [2]; [3]), (3)facilities and infrastructure [4]. (4)Self efficacy [5]; [6]. It can be concluded that self efficacy should be considered

to improve achievement and vocational competency; and (5) the mastery of basic knowledge is still categorized as less [4].

In accordance with the identification of the above problems, this research will examine the contribution of teaching factory teaching strategy implementation, basic knowledge mastery, and self efficacy to the mastery of the vocational competencies obtained by the students while attending the teaching factory and the readiness of the students' work

II. DISCUSSION

A. Teaching Factory

Teaching factory is a concept of learning in real atmosphere, so as to be able to define the competence between industry needs with schools ([7]; [8]). Teaching factory is a learning activity that encourages students to directly perform production activities in the form of goods or services within the school environment ([8]; [9]). The implementation of teaching factory is the interface of vocational education to the industrial world, resulting in checks and balances on the process of education in vocational education to maintain and maintain harmony (link and match) with the needs of the labor market [10]. In the teaching industry program students are given more opportunities to perform work like a worker so there is a skill improvement ([11]; [12]; [13]; [14] [15]). Teaching industry or teaching industry not only provides benefits to students, but also provides benefits for educators ([16]; [17]). Parties in the teaching factory that industry and academic incorporate new technology into the curriculum in education ([18]; [19]).

Teaching Factory or teaching industry can improve the quality of student learning and competence [20]. The teaching factory model can improve student competence [21]. Teaching factory with TF 6 M model can improve softskill and hardskill [22]. Teaching factory improves students' abilities [11].

Learning factory can be used in improving the quality of education in the field of engineering [17]. Teaching factory can improve students' ability [12]. Teaching factory of vocational education in Surakarta in terms of learning activities stated very good [23]. Concluded that teaching factory can provide real experience to students [19]. Teaching factory is effective in applied in vocational education, floating students ability [24]. Teaching factory will run well depending on the quality of teachers so it is expected to increase the quality of students.

Teaching factory contributes in preparing graduates in the face of the world of work [24]. The teaching factory program in vocational education has an impact on students' readiness [23]. Learning factory had an impact on their knowledge [25]. Learning factory was developed to provide knowledge of the concept [15]. Learning factory is developed to change the learning paradigm [13]. It can be concluded that teaching factory is a learning approach by conditioning the class as in the industrial world. Teaching factory provides benefits for students in facing the world of work, improving soft skills and hard skills, mastering basic knowledge and vocational competencies

B. Basic Knowledge

Basic knowledge is defined by various experts. Basic knowledge is the knowledge that students have when entering a learning environment that is relevant to acquire new knowledge [26]. False interpretations often occur in learning that may be one of the causes of basic knowledge [27]. The level and organizing of knowledge that arise through a variety of experiences and developments leads to basic knowledge applied extensively to enhance the ability of individuals in a particular field [28]. There is a significant difference in the scores of learning outcomes of Indonesian student history among the high knowledge base group with low initial knowledge [26]. of parents support and basic knowledge acquisition, each directly toward the achievement of vocational competence. basic knowledge is crucial to the success of learning outcomes. The prior knowledge affects learners while receiving new information, organizing new knowledge, and connecting new information with basic knowledge [29]. It can be concluded that basic knowledge is the basis for obtaining subsequent knowledge or advanced knowledge, basic knowledge has an effect on vocational competence

C. Self Efficacy

Self efficacy is the individual's belief in his ability to perform the tasks or actions necessary to achieve certain results [30]. Self efficacy can elicit the ability to communicate mathematically [31]. Self efficacy is the result of a

multiplicity of efforts, an experience that has been done. Self efficacy arises with the selection of appropriate experience, the selection of learning methods affect the level of self efficacy. With the existence of self efficacy students are able to deliver them at a high level of understanding so they can excel. With good coaching the improvement of self efficacy influences work readiness [32].

Self-efficacy is an assessment of the ability to execute decisions made after following the instructions. Self efficacy is useful for determining how they make their chosen employment decisions [33]. Self efficacy has an influence in the learning activities, among others: (1) self efficacy affect the ability to communicate mathematically [31]; (2) self efficacy has an effect on student achievement [5]; (3) self-efficacy provides insight to the participants so as to provide planning skills to their searchers; (4) self efficacy contributes to employment [34]; (5) self efficacy has an effect on work fluctuation; (6) with self efficacy students were able to decide about their cariers [35]; (7) self efficacy gives effect to the interest of work [24], and (8) self efficacy gives influence to personal performance mention that there is a significant influence of self efficacy towards student learning outcomes [6].

D. Mastery of Vocational Engineering Competence

Competencies are graduates are qualified graduate competencies that include attitudes, knowledge and skills in accordance with agreed national standards [36]; [37]; [18]; [38] [39]. Mastery of competency is the result of learning that influenced by many factors: (1) learning methods used by teachers in delivering the material ([40]; [3]; [41]); (2) instructional media used in the learning process; (3) student learning motivation which is an encouragement that arises from within the students to follow the learning as learning takes place; and (4) learning modules.

E. Readiness Work

Readiness is a condition that precedes the activity itself, without this readiness / willingness a mental process does not occur [42]. Readiness is the overall state of a person who makes it ready to respond or respond to a situation [43]. Job readiness is the main capital for students to share their work. Work preparedness is defined as a condition that indicates the existence of harmony between physical maturity, mental, and individual experience to perform certain activities in the form of work or activity relationships.

III. CONCLUSION

The literature review above can be concluded that teaching factory gives influence to the improvement of vocational competence, basic knowledge, self efficacy, and students' work preparedness

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