

TEACHING FACTORY IMPLEMENTATION EFFECTIVENESS AT STATE VOCATIONAL SCHOOL 2 BITUNG

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Submission date: 21-Jun-2023 10:49AM (UTC+0700)

Submission ID: 2120094208

File name: TEACHING_FACTORY_IMPLEMENTATION.pdf (563.39K)

Word count: 2597

Character count: 14183

6 TEACHING FACTORY IMPLEMENTATION EFFECTIVENESS AT STATE VOCATIONAL SCHOOL 2 BITUNG

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ABSTRACT

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The current problems of SMK are generally related to limited equipment, low practical costs, and a learning environment that is not yet in accordance with the world of work. This condition can lead to the unpreparedness of vocational school SMK graduates in entering the world of work. The unpreparedness of SMK graduates in carrying out existing jobs in the world of work has a domino effect on the user industry. Therefore, to get SMK graduates who are ready to work, it is necessary to collaborate between SMKs and the business/industrial world with the aim of accelerating the adjustment time for SMK graduates in entering the world of work and in the end it will also improve the quality of SMKs. The purpose of this study was to examine the effectiveness of Teaching Factory implementation at SMK Negeri 2 Bitung and to determine the appropriate Teaching Factory implementation strategy in order to produce SMK graduates who are competitive in the world of work. The research methods to be used are case studies and research and development. The output of this research is a national scientific publication (Journal).

Keywords; *Teaching Factory, strategy, SMK, learning*

INTRODUCTION

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Vocational Education is education that prepares students to work besides being able to continue their education to a higher level. The government's efforts to increase the number of SMKs are in the context of preparing a productive work force so that Indonesia's large population can become Human Resources not just about the number of people but by paying attention to their quality. The massive increase in the number of SMKs must be accompanied by good and standard teaching staff, education and facilities, in addition to other educational standards. The growth of SMKs up to 2013 was 11,708, the target of the Directorate of Vocational Development was according to the 2010-2014 Vocational Education Development Roadmap, in 2014 there were 11,748 SMKs with 4,512,063 students

and 219,000 teachers. (Directorate of Vocational Development). In 2015, there were 12,809 SMKs with details of 3,339 SMKs with State status (26.07%) and 9,470 SMKs with Private status (73.93%). The percentage of applicants to enter SMK increases every year 11%. In 2013 the number of applicants was 1,921,919 candidates, of which 1,527,778 students were accepted.

The growth in the number of SMKs throughout Indonesia is not accompanied by the quality of graduates according to their areas of expertise. The quality of SMK graduates has not been able to fill the needs of the business world and the industrial world, because the skills possessed are not up to the standards required by the world of work. Data from the Central Statistics Agency, in August 2015, as many as 12.65 percent of the unemployed came from SMK, 10.32 percent from SMA, 7.54 percent from diplomas, and 6.40 percent from universities.

In Indonesia, the application of the Teaching Factory concept was introduced in SMKs in 2000 in a very simple form, namely in the form of developing production units that had been carried out in SMKs. Then the concept developed in 2005 to become an industrial-based SMK development model.

North Sulawesi Province has 169 SMKs, both public and private. In Manado City there are 32 Vocational Schools, Bitung City has 114 Vocational Schools and Bitung City has 7 Vocational Schools. The location of this research was carried out in Bitung City. In the preliminary survey in Bitung City, there was only 1 SMK implementing the Teaching Factory, namely SMK Negeri 2 Bitung. Preliminary data shows that the implementation of the Teaching Factory has not been carried out properly according to the correct Teaching Factory concept. The implementation at the SMK is still limited to learning with practical implementation in Production Units or a kind of mini-company held at schools. ¹ The Teaching Factory concept should produce graduates who are professionals in their fields, develop curricula that focus on modern concepts, demonstrate appropriate solutions to challenges faced by the industrial world, as well as transfer technology from industries that become partners with students and educational institutions.

The basic conception of Teaching Factory is "Factory to Classroom" which aims to transfer the real industrial production environment into practice spaces. Real production life is urgently needed to improve teaching competencies based on real activities from industrial practice every day. The Teaching Factory concept is a learning method that is able to lead students to achieve industry standard competencies through the stages of the process of achieving motor, cognitive, and affective mastery standards and bringing up inspirational-intuitive behavioral learning outcomes which are academically described as character learning. (Directorate of Vocational School Development).

Seeing the implementation of Teaching Factory in Vocational Schools and the concept that there should be a discrepancy between practice in schools and the program that should be achieved. Why did this happen? What causes the Teaching Factory program to not work? This problem needs to be studied and solutions sought so that human resources that are expected to have high competitiveness can be realized, especially in Bitung and North Sulawesi in general.

METHODS

The research design used is the case study method. This method is used to examine how the teaching factory is implemented at SMK Negeri 2 Bitung and the inhibiting and supporting factors for the implementation of the teaching factory. The stages in this case study include:

- a. Collecting data related to true teaching factory-based learning
- b. Collect data on supporting facilities for teaching factory implementation
- c. Collect curriculum data used by SMK Negeri 2 Bitung
- d. Collect productive teacher competency data available in schools

Data collection was carried out by observation, in-depth interviews, and Focus Group Discussion (FGD). Observation techniques, researchers come directly to the school to observe the situation and collect data. In-depth interviews took place through direct interaction with informants, both verbal and non-verbal. The interview used was an open system, meaning that the subject knew that they were being interviewed and understood the purpose of the interview. The FGD technique

was carried out to collect data that has not been explored from the results of in-depth interviews. The implementation of this technique is in the form of discussion groups between researchers and informants who are considered to understand the research problem.

DISCUSSION

The Teaching Factory at SMK Negeri 2 Bitung consists of several production units, namely motorcycle production units, woodworking, welding and computer network engineering. Products produced in superior production units are included in Teaching Factory products. Products that are not considered good or superior are not included as a result of the Teaching Factory.

According to the results of interviews with the person in charge of the Teaching Factory, so far the Timber unit has been able to produce products ordered by the public, including offices. These products are blanks, doors/windows as well as tables and chairs/furniture, mainly orders for offices and schools in Bitung. The advantage of the results of the Teaching Factory is that students get income and the production unit also gets a percentage of the sales of products or services. The role of the production unit is highly expected by the manager of the Teaching Factory because if the production unit is not productive then no products or services will be sold. This means that there is no income for the school.

Proceeds from the sale of products and services help finance operations in each production unit. Funds provided by the government, in this case PSMK for Teaching Factory, are up to IDR 300,000,000 to assist the operation of the Teaching Factory. In 2016, they did not receive assistance because there were 3 production units that did not carry out activities regularly and continuously.

The benefits of Teaching Factory are to support learning. The learning process in Vocational Schools requires high skills, therefore entrepreneurial groups are made effective. In the production unit there are entrepreneurial groups of students. The group is a forum for increasing experience in practice in order to produce superior products or services. Another benefit obtained from implementing

Teaching Factory learning is that students can win competitions at both the regional and national levels.

The obstacle faced by the Teaching Factory is cost because the funds given to SMKs are all the same, namely the procurement of materials and equipment for practice requires more. The lack of funds must be overcome with income earned from the sale of products so that learning activities in the Teaching Factory can be sustainable. Another obstacle faced is that not all teachers think about increasing student productivity through activities in the production unit and in the Teaching Factory. The leadership element has not fully supported the Teaching Factory activities.

Teaching Factory learning at SMK Negeri 2 Bitung is not fully in accordance with the principles of Teaching Factory learning itself because it has not utilized industries or institutions related to Teaching Factory products. Do not yet have cooperation with industry either in terms of experts or in terms of marketing Teaching Factory products. Thus, for certain products and services, if there are no orders, production will not be carried out.

Teaching factory is a concept that combines learning and a realistic work environment and to bring up relevant learning experiences (Nayang Polytechnic, 2003 in Siswandi). This learning is a practical process that integrates application-oriented training with a problem-solving approach.

Siswanto (in Siswandi), stated that the teaching factory process that had been carried out at RSBI Vocational Schools in the Yogyakarta area was influenced by supporting and inhibiting factors. Factors supporting the implementation of the teaching factory are: (1) good equipment facilities; (2) human resources; (3) products produced; (4) market influence; (5) leadership; and (6) marketing. The inhibiting factors for the implementation of teaching factories are: (1) regulations regarding the legality of production units; (2) lack of marketing; (3) parents' perceptions; (4) prices from producers are too high; and (5) the busyness of teachers and students. Hasbullah (2010), concluded that one of the learning approaches based on production and learning in the world of work is the learning factory, also known as the teaching factory (TEFA).

The results of Siswandi's research (2015) found that in the implementation of the teaching factory model learning process there are several special parts that distinguish it from the non teaching factory practice model applied at Karsa Mulya Palangka Raya Vocational School, namely: (1) students do real work according to SOPs like in the industrial world ; (2) practical materials that are used are real objects or vehicles owned by consumers; (3) work jobs based on problems found in consumer vehicles; (4) work based on work standards is supported by a service manual for the type of vehicle being worked on; (5) students are required to work based on the same time as working hours in the industrial world; (6) work safety is further improved both for tools, people and work objects; and (7) instilling a greater sense of responsibility, especially towards consumer satisfaction. The conclusions of Siswandi's research (2015) show that the teaching factory model developed is in accordance with the required criteria, namely: (1) the availability of a room as a place for practice; (2) There is a production unit as a place for process implementation; (3) available supporting facilities and infrastructure such as tools, keys, and machines; (4) have taken advantage of local environmental conditions in the process of practical learning; (5) human resources involved in the implementation, namely teachers/instructors and students; (6) there is cooperation between the industry and the school; (7) practical subject teachers, instructors have a commitment in implementing and applying the concept of practical learning of the teaching factory model; and (8) students are fully involved in the process. The effectiveness of the process of developing the teaching factory model that was carried out was shown by the students' ability to complete the work.

Based on observations and interviews with teachers/instructors who handle workshops or places where teaching factories are held at SMK Negeri 2 Bitung, what happened at Karsa Mulya Vocational School, Palangka Raya regarding the supporting and inhibiting factors for implementing the teaching factory, was not much different. This, according to the experience of researchers as KTI national assessors/benchmarks for SMK principals, complaints from school principals, for example, there is no legality/strong legal basis for developing production

units/teaching factories, especially for participating in large project tenders (government/private).

CONCLUSION

The Teaching Factory learning carried out at SMK Negeri 2 Bitung in particular is as follows:

1. Learning for practicum is carried out in the production unit. Timber/Furniture production units are productive. The implementation of the Teaching Factory is carried out based on the production units of each department.
2. Certain Production Unit facilities are still being improved so that productivity is not maximized.

SUGGESTION

1. The government through President Jokowi's policy since the end of 2016 has begun to pay a lot of attention to the development of vocational and vocational education, in this case Vocational High Schools and Polytechnics. For this reason, SMK as vocational education must continue to improve itself in producing graduates who are ready to use skilled in certain fields, which of course increases practical activities through production units and teaching factories.
2. The commitment of school principals and Productive Program teachers is needed to continue carrying out production unit/teaching factory activities at SMK Negeri 2 Bitung

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