

The Effectiveness of Teaching Factory Management in Improving the Quality of Business Administration Graduates at Politeknik Negeri Manado

Juliet Makinggung^{1*}, Christien Karambut², Jemmry Winokan³, Kevin Pangemanan⁴

Department of Business Administration, Manado State Polytechnic

Corresponding Author: Juliet Makinggung julietmakinggung22@gmail.com

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ABSTRACT

This research aims to obtain policy recommendations for the effectiveness of TEFA management as an effort to improve the quality of graduates from the Business Administration Department at Politeknik Negeri Manado or Polimdo. This research is a field study with descriptive analysis. Data was collected through observation and interviews with several informants involved in the TEFA of the Business Administration Department. The results showed that TEFA has not yet identified industry standards and work procedures, and does not have a mature planning process where the TEFA team has not been established along with the functions and duties of each part. Similarly, the involvement of the industrial world in TEFA is still minimal. TEFA has not been socialized to all internal elements and external parties such as the community and industry. The impact of this is that TEFA is less effective in improving the quality of graduates from the Business Administration Department.

INTRODUCTION

The management of skilled, competent, and competitive human resources can be done through educational programs. Therefore, the quality of education in Indonesia is expected to be able to keep up with the developments of the industrial world (DUDI) such as quality standards for work process flows, output of products or services produced which are based on this, it is expected to be able to increase the number of competent, ethical, and globally competitive higher education graduates. Vocational education in Indonesia plays a very important role in producing skilled, competent, ethical, and competitive human resources. Through the vocational education pathway, students have been prepared to enter a specific field of expertise such as choosing a career as a company employee, as an investor, or choosing to become an entrepreneur. To produce graduates with such expertise, a learning model is needed that can sharpen their abilities, skills, and practical competencies, and be ready to face the labor market in Indonesia and even in the global business world.

One of the main problems faced by vocational education institutions today is the gap between the curriculum taught and the real needs of industry. Many vocational graduates have difficulty in directly entering the workforce due to a lack of understanding of managerial aspects, investment choices and decisions, and entrepreneurial skills. This causes high unemployment rates or a mismatch between the skills possessed and the demands of the job market. To solve this main problem, one of the efforts made by vocational education is to collaborate with the industrial world (DUDI). With the cooperation and spirit of collaboration between higher education, especially vocational education, and DUDI, it is hoped that a learning model will be created that forms the quality of graduates in accordance with industry work process standards, has the mentality and ethics as expected by the industry.

As a vocational education institution, Politeknik Negeri Manado (Polimdo) also faces the challenge of developing a Learning Model that is in line with the demands of industry and is able to equip students with the investment, managerial, and entrepreneurial competencies needed in today's workforce. Departing from this, the Business Administration Department of Polimdo develops a teaching and training system based on TEFA (Teaching Factory) which can help improve the managerial, investment, and entrepreneurial competencies of vocational students. The increased competencies are expected to be directly proportional to the chances of students' success as learners in pursuing their careers in the future.

The existence of TEFA in the Business Administration Department has been effectively running since 2022. TEFA in the Business Administration Department consists of several TEFA Investment Galleries, which include two integrated laboratories: the Business Investment Gallery and the Capital Market Investment Gallery. In addition, there are TEFA Polimart and TEFA Polimdo Salon. All existing TEFAs are connected to several courses in the three study programs at the Business Administration Department of Polimdo. With the existence of several TEFAs in the Business Administration Department of Politeknik Negeri, it is expected to achieve the goals of TEFA itself, namely to

form and train soft skills, creativity, innovation, and collaboration among students, to instill a mindset and hone skills and applied expertise for students according to the needs of industry. In addition, the purpose of having TEFA is expected to be able to develop insights and hone thinking skills and be able to work together as a team across disciplines and diverse student origins in solving problems faced by producing solutions and strategies, providing work experience, investment experience, and entrepreneurship for vocational students. Departing from the above, and seeing the existence of TEFA in the Business Administration Department for the past two years, the author is interested in researching to what extent The Effectiveness of Teaching Factory Management in Improving the Quality of Business Administration Graduates at Politeknik Negeri Manado.

LITERATURE REVIEW

Teaching Factory Concept

According to Kuswantoro (2014), the teaching factory is a learning method conducted in real-world conditions to bridge the gap between the knowledge provided in vocational education and the needs of industry. This method is an innovative and practical approach that focuses on student management to align with the demands and requirements of the industry. Moerwismadi (2009) stated that in a teaching factory, vocational education conducts production or service activities as part of the learning process. Therefore, vocational education requires facilities such as factories, workshops, or business units to support the implementation of this learning model.

Sudiyanto (2010) revealed in his research that the Teaching Factory involves students in producing goods or services within the vocational education environment. The products or services produced have a marketable quality and are accepted by consumers. The income from these sales can be an additional source of income for vocational education, which will support the continuity of the teaching and learning process. The Teaching Factory creates an industrial atmosphere in vocational education, thus being able to prepare students to be ready to enter the workforce. The optimization of the implementation of the Teaching Factory is expected to be able to improve students' competencies in accordance with the specific needs of the industrial world. The Teaching Factory is a learning concept in vocational education that emphasizes the production process or services in accordance with the standards and procedures applied in the industry. This learning is conducted in an environment that resembles the industrial world.

The characteristics of vocational education include: (1) preparing students to enter the workforce; (2) based on the needs of the labor market; (3) mastery of competencies required by industry; (4) student success in practical skills in the workplace; (5) close relations with industry; (6) adaptation to technological developments; (7) learning through direct practice; and (8) requiring higher costs compared to general education (Herminarto Sofyan, et al.). According to Lamancusa (2008), there are three basic principles in the Teaching Factory concept: (1) conventional learning is not enough; (2) students benefit

from hands-on practice; and (3) team-based learning experiences involving students, teachers, and industry enrich the educational process and provide real benefits for all parties involved.

The Effectiveness

Mardiasmo (2017) explained that effectiveness is an indicator of an organization's success in achieving its goals. According to Ravianto (2014), effectiveness is a measure of how well a task or project is executed, determined by how well the output aligns with expectations. If a task is completed as planned, in terms of time, cost, and quality, it can be considered effective. Siagian (2008) stated that effectiveness is related to the utilization of resources, facilities, and infrastructure that have been consciously planned to produce goods or services through an activity. Effectiveness measures success based on whether previously set targets are achieved. The closer the final result of an activity is to the target, the higher its effectiveness. The effectiveness of a program can be measured by comparing the initial goals with the results achieved. A program is considered effective if it successfully achieves the predetermined goals. Human factors, including skills, knowledge, and attitude, significantly influence effectiveness. This means that improving skills, abilities, and attitudes will have a positive impact on task performance, leading to greater effectiveness.

There are several criteria for program effectiveness according to Primanda, in Al Hadi, et al (2021), such as target accuracy, program socialization, program objectives, and program monitoring. Mardiasmo (2017) stated that the Teaching Factory aims to improve the quality of vocational school graduates by achieving organizational goals through the efficient use of available resources, both in terms of input, process, and output. These resources include personnel, facilities, and methods used. An activity is said to be efficient if it is done correctly and according to procedure, while an activity is said to be effective if it produces appropriate and beneficial results. The measurement of a program's effectiveness can be done through various approaches, depending on who is assessing it and how it is interpreted. Effectiveness can also be measured by comparing the plan with the actual results achieved. However, if the actions taken are inappropriate and the goal is not achieved, then it is considered ineffective.

Several indicators of effectiveness used in achieving goals according to Siagian (2008) include: a) Clarity of the goal to be achieved, so that every employee can carry out tasks with clear targets and in accordance with the organization's goals. b) Clarity of the goal achievement strategy, the strategy is a guide in achieving organizational goals, so that its implementation does not deviate. c) Analysis and formulation of appropriate policies, the policies made must be able to bridge the gap between goals and operational implementation. d) Thorough planning, which means deciding on the organization's steps for the future. e) The formulation of the right program, even though the plan is good, it must be elaborated in a clear program so that the implementer has a guideline. f) The availability of facilities and infrastructure, organizational productivity is highly dependent on the available facilities. g) Effective and efficient implementation, without good implementation, organizational goals will not be

achieved. h) An educational supervision and control system, to ensure organizational effectiveness because humans tend to be imperfect.

Graduate's Quality

The Great Indonesian Dictionary defines quality as a measure of the goodness or badness of something; a level or degree (of intelligence, skill, etc.); quality: While the word "lulus" (pass) means to succeed or be able to go through something successfully (KBBI, 2024). According to Pramulyani (2019), quality in the context of education is the effort of educational academics to produce students who are able to face challenges and survive in their future lives. Based on the Department of National Education in general, quality is a description of the overall characteristics of a field or service that is shown in the ability to satisfy explicit or implied needs, in the context of education, the meaning of quality encompasses education inputs, processes, and outputs (Depdiknas, 2001).

Graduate quality is the quality of the characteristics of educational output, namely graduates who are inseparable from the learning process. The quality or standard of graduates can be produced from educational inputs, educational processes, and educational outputs. Inputs refer to various resources and various devices needed in an education. The educational process is the activity and process of changing and making something. The educational process can be in the form of managing educational institutions, managing educational programs, managing the teaching and learning process, the process of monitoring and evaluating the educational process, and development. Output is what becomes the output or what is produced from the input and process. In the world of education, the output of education is graduates and the quality of graduates produced from an educational process.

METHODOLOGY

This study employs a qualitative case study approach to investigate the effectiveness of TEFA management in enhancing the quality of Business Administration graduates at Politeknik Negeri Manado. Qualitative data were collected through surveys, observations, and in-depth interviews with key informants. The survey method involved gathering primary data directly from the Business Administration Department's TEFA, encompassing its conceptual framework, implementation process, and supporting elements. Additionally, direct observation and in-depth interviews were conducted to gain a comprehensive understanding of the TEFA's learning method implementation. Secondary data were sourced from TEFA data and guidelines issued by the Ministry of Education and Culture regarding the education system and teaching factories, as well as data from the Business Administration Department pertaining to the TEFA Management Team Decree and TEFA Assessment Format. Primary data were obtained through observations, interviews with six informants (Program Coordinator, Laboratory Head, two Lecturers, a Student, and an Industry representative), and the analysis of relevant data such as the TEFA Team, its roles and responsibilities, industry involvement, and TEFA socialization to both internal and external stakeholders.

The research focused on the Business Investment Gallery TEFA, which has been operational for two years. The analysis framework was grounded in the Teaching Factory Guidelines developed by the Directorate of Vocational High Schools and the Directorate General of Vocational Education under the Ministry of Education, Culture, Research, and Technology in 2023.

RESULTS AND DISCUSSION

TEFA Program at Polimdo

The existence of TEFA is mandated by Law No. 20 of 2003 concerning the National Education System and is elaborated in Government Regulation Number 41 of 2015 concerning the Development of Industrial Human Resources. This regulation states that the implementation of Competency-Based Vocational Education must be equipped with a Professional Certification Body (LSP), a Competency Assessment Center (TUK), and an in-school factory. Politeknik Negeri Manado, as an implementer of competency-based vocational education, has had a Professional Certification Body (LSP) P1, and each department, including the Business Administration Department, has had a Competency Assessment Center (TUK) and has had an in-campus factory. The term in-school (campus) factory is Teaching Factory (TEFA) as a container and learning medium for students designed to exist as it is in industry.

TEFA Planning and Management

According to the Teaching Factory Guidelines issued by the Ministry of Education, Culture, Research, and Technology (2024), TEFA is a learning model believed to be able to improve students' competencies and character according to world work standards. Based on this explanation, TEFA can be defined as a learning model that combines the achievement of school curriculum competencies and production processes according to world work procedures and standards, to produce competent and character-based graduates through the completion of products as a learning medium in the form of goods and/or services. For this reason, a set of TEFA instruments needs to be prepared in planning, implementing the TEFA process, and evaluating and developing TEFA at the Politeknik Negeri Manado institution. The aspects of its management consist of several parts as follows:"

- 1. The TEFA Team:** In the TEFA planning process, the research findings revealed that the Business Administration Department has not conducted thorough planning related to TEFA. This is evidenced by the finding that a TEFA Team for the Business Administration Department has not yet been formed. TEFA management has so far been limited to parties who are organizationally involved in the structure, such as the Department Head, Program Coordinator, Laboratory Head, and Lecturers who are assigned additional duties as TEFA managers but are not proven by a Letter of Appointment or Decision Letter for the TEFA Team. Without a specific TEFA Team as TEFA managers, the results of work at TEFA have not been optimal. The party directly responsible for management is still unclear. In view of this, the first

step that needs to be taken in TEFA planning is: Forming a TEFA Management Team accompanied by the Duties and Functions of each part.

- 2. Duties and Functions of the TEFA Team:** When the TEFA Team is formed, it is necessary to create an organizational structure for the TEFA Management so that the roles and responsibilities of the parties involved will be clearer. Based on the research findings, the TEFA of the Business Administration Department does not yet have an Organizational Structure for the TEFA Management Team, and there is no written document of the Duties and Functions of the Team. Based on the findings and informant statements, a TEFA Management Organization Structure for the Business Administration Department is urgently needed, which outlines the duties and functions of each part so that the roles and responsibilities of each part can be known. As with the function of an organization, the existence of the TEFA Management Team will provide clarity regarding the responsibilities of each party, clarity regarding the position and coordination line of each party, explain the lines of communication between each party involved, and provide a clear description of the duties and functions assigned.
- 3. Identification of Industry Standards and Work Procedures:** The findings of this research indicate that the institution has not yet identified Industry Standards and Work Procedures to be adopted as TEFA Standards and Work Procedures. Therefore, in order to achieve the desired goals of TEFA, before the implementation process of TEFA, it is necessary to identify Industry Standards and Work Procedures that will be adopted to be carried out in TEFA so that it is expected that there will no longer be a gap in Learning Methods in Higher Education with the needs of industry. These Industry Standards and Work Procedures are written to become TEFA Standards and Work Procedures which are then implemented in the TEFA Learning Program.
- 4. Socialization of TEFA to Internal and External Parties:** The findings of this research indicate that the institution has not yet intensively socialized TEFA to internal parties, namely all elements within the Politeknik Manado institution, and has also not yet socialized it to external parties such as industry and the surrounding community. The delivery of TEFA information is limited to management meetings and has not been able to accommodate all institutional elements. Similarly, socialization to external parties is only limited to presentations to guests who visit the institution.

The Effectiveness of TEFA Management

According to Ravianto (2014), effectiveness is how well a job or project has been done and to what extent people produce output as expected. Based on the research findings, the Politeknik Manado Business Administration Department has been trying to implement and develop an industry-based TEFA that can minimize the quality gap of higher education graduates. Various serious efforts have been made for TEFA development, such as the availability of adequate, representative, and modern buildings and rooms. The TEFA

environment and situation is comfortable, clean, and beautiful, which refers to industry standards. Infrastructure such as facilities and equipment is adequate and meets industry standards. However, there needs to be improvement in planning and implementation so that the goals of TEFA can truly be achieved. To assess the effectiveness of TEFA management in the Business Administration Department in improving the quality of graduates, several improvements need to be made in the planning and implementation of the TEFA Business Administration Department. Several things that need to be improved for the effectiveness of TEFA management are:

1. **The effectiveness of TEFA Management through the TEFA Team** can be seen from the existence of a TEFA Team in the institution. So far, there has been no specific TEFA Team to handle the Business Administration Department's TEFA. Therefore, the effort that needs to be done by the institution is to form a TEFA Management Team accompanied by the Duties and Functions of each part. The existence of a TEFA Team will facilitate the management of departmental TEFA, where some of the responsibilities of the TEFA Team are:
 - a) as the driving force of all elements involved in TEFA,
 - b) as a part that strengthens collaboration between the Politeknik Manado institution and industry,
 - c) as a party that analyzes all Learning Outcomes whether they are in accordance with those produced in industry-based TEFA.
 - d) The TEFA Team will determine and set the type of projects to be carried out in line with the competency needs of students, the community, and industry.

2. **For the effectiveness of TEFA Management through the Duties and Functions of the TEFA Team**, there needs to be a picture of the TEFA Team Organizational Structure along with a written document containing the Job Descriptions and Functions of each part of the TEFA Team so that the roles and responsibilities of each part can be known. As with the function of an organization, the existence of the TEFA Management Team will:
 - a) provide clarity regarding the responsibilities of each party,
 - b) provide clarity regarding the position and coordination line of each party,
 - c) explain the lines of communication between each party involved and provide a clear description of the duties and functions assigned.

3. **The Effectiveness of TEFA Management through the Identification of Industry Standards and Work Procedures**, which can be seen from how educational institutions design TEFA work processes that align with industry work processes. In order to achieve the desired goals of TEFA, before the implementation process of TEFA, it is necessary to identify Industry Standards and Work Procedures that will be adopted to be carried out in TEFA so that it

is expected that there will no longer be a gap in Learning Methods in Higher Education with the needs of industry. These Industry Standards and Work Procedures are written to become TEFA Standards and Work Procedures which are then implemented in the TEFA Learning Program.

4. **For the effectiveness of TEFA, the institution needs to introduce TEFA to internal and external parties.** It is highly expected that the institution will conduct more intensive socialization or similar activities to all elements within the Politeknik Negeri Manado institution and external parties such as the community and industry. This socialization aims to:
 - a) build a proper mindset in the form of a common perception from all elements within the institution on how to improve the quality of graduates who meet industry standards
 - b) a means to build a shared commitment in planning, developing, implementing, and developing TEFA. This commitment will create collaboration in producing graduates who have the competencies, are competitive, ethical and comply with applicable regulations in accordance with what has been built in TEFA with industry standards.
5. **The effectiveness of TEFA Management through Industry Involvement in TEFA** which can be seen from the involvement of industry in the learning process at the institution. Therefore, it is necessary to build a more intensive cooperation between the Politeknik Manado institution and industry. Specifically, the Business Administration Department is expected to prioritize and optimize the role and potential of industry partners, especially micro, small, and medium enterprises around the campus, so that the products and services produced by TEFA can contribute to the internal campus and the surrounding community with competitive products and services that are needed by the surrounding community.

The Effectiveness of TEFA Management in Improving Graduate Quality

The effectiveness of TEFA Management in the Business Administration Department in improving graduate quality can be seen from:

1. **Accuracy of TEFA Program Targets.** The accuracy of the target relates to how far the TEFA program is truly on target as determined before the program was implemented. The target of the Business Administration Department's TEFA is the Politeknik Negeri Manado as Vocational Education and all elements involved in it such as students, lecturers, institutional leaders, industry, and the community.
2. **Socialization of the TEFA program.** This is related to the institution's ability as the organizer of the TEFA program in introducing the TEFA program that has been created. So that information about the TEFA program can be

conveyed to the target parties of the program. Improvement efforts that need to be made are that the Politeknik Manado institution needs to conduct more intensive socialization to all elements, both internal, namely all elements within the Politeknik Manado institution such as all lecturers and all students, and also socialization needs to be carried out to external parties such as industry and the community. This socialization is expected to build perceptions and foster a shared commitment in developing and developing the Business Administration Department's TEFA so that the goals of TEFA are expected to be achieved.

3. **Objectives of the TEFA program.** This relates to the consistency between the results in the form of output from the implementation of the TEFA program and the objectives of the TEFA program that have been previously set. The purpose of TEFA is as a means or medium in providing education, teaching, and practice to student participants with soft skills and hard skills through learning methods that have been designed, developed, implemented, monitored, and evaluated based on industry work standards and work procedures and producing quality products or services as they exist in the industry that are adjusted to the competencies of the study program. Based on this goal, there have been efforts made by the institution to achieve the learning objectives of TEFA. However, improvements need to be made, such as identifying work standards and work procedures as they exist in the industry to be developed in TEFA. One assessment of the effectiveness of TEFA management is the implementation of TEFA in accordance with the objectives of TEFA. So far, the goal of TEFA is to provide teaching and training practical skills to students has been implemented in TEFA, however, improvements need to be made to the learning methods, namely the institution must identify Industry Standards and Work Procedures to be implemented in TEFA. By doing this identification, it is expected that TEFA Management will be more effective in improving the quality of graduates.
4. **Monitoring of the TEFA Program.** Monitoring a program is related to the activities that are carried out. In the implementation of TEFA, monitoring of the program's progress needs to be done. For this reason, the institution needs to prepare a TEFA Monitoring document that contains several instruments needed to be able to monitor the achievement of the program and evaluate the implementation of the program so that corrective action can be taken if needed and improvement steps for program development. All processes of monitoring the TEFA program require written document records so that every decision made can be accounted for for the development of TEFA in the future.

CONCLUSION

Based on field findings through observations, interviews, and discussions as explained in the previous section, the author concludes the following:

1. Strengthen TEFA Team: Establish a dedicated TEFA team with clear roles and responsibilities.

2. Align with Industry: Identify and adopt industry standards and work procedures to ensure TEFA aligns with real-world practices.
3. Enhance Socialization: Conduct comprehensive socialization of TEFA to both internal and external stakeholders.
4. Foster Industry Collaboration: Actively engage industry partners to provide practical insights and resources.
5. Regular Monitoring and Evaluation: Implement a robust monitoring and evaluation system to track progress, identify areas for improvement, and make informed decisions.

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