



Action in the Business Realm: Increasing Students' Entrepreneurial Spirit Through Production Unit-Based Teaching Factory Learning

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ABSTRACT

Purpose of the study: The aim of this research is to determine students' entrepreneurial spirit through production unit-based teaching factory learning.

Methodology: The type of research used in this research is quantitative with a quasi-experimental type. The number of samples taken was 60 students consisting of 30 students in class VIII A and 30 students in class VIII B. The data collection technique used included distributing questionnaires. The data analysis technique used in this research is comparative analysis or T-test between class data that implements production unit-based Teaching Factory learning and those that do not.

Main Findings: Based on the results of the T-test carried out, it was found that there was a difference in entrepreneurial spirit between the group who took part in learning at the teaching factory and the group who did not take part.

Novelty/Originality of this study: The novelty of this research is that it explores the transformative potential of production unit-based Teaching Factory learning in fostering a dynamic entrepreneurial spirit among students in the business realm.

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1. INTRODUCTION

Vocational education in Indonesia plays an important role in preparing a workforce that is competent and ready to compete in the job market. Vocational education programs offer a variety of options, from vocational high schools to technology colleges, emphasizing the development of practical skills in line with industry needs [1]–[3]. Even though there are various efforts to improve the quality of vocational education, challenges such as lack of adequate facilities, curriculum that is not yet aligned with the needs of the job market, and the lack of student interest in choosing a vocational education pathway are still a concern [4]–[6]. However, with government efforts and cooperation between educational institutions, industry and society, vocational education in Indonesia has great potential to make a significant contribution in creating a reliable workforce and advancing the industrial sector in the future [7]–[9].

Vocational high schools with a hospitality major have an important presence in preparing the younger generation to enter the rapidly growing hospitality industry [10]–[12]. This educational program not only provides knowledge about hotel operations, but also trains practical skills such as guest service, hotel management, and communication skills required in the industry [13]–[15]. In addition, with the existence of a vocational hotel school, students have the opportunity to gain direct experience through internships at leading

hotels, thereby increasing their readiness to face the challenges of the world of work [16]–[18]. [16]–[18]. The hotel industry itself is a sector that has great potential in providing employment opportunities, both at home and abroad, so the existence of vocational schools with hotel majors also makes a positive contribution in reducing unemployment rates and improving the quality of human resources in the tourism and hospitality sector [19]–[21]. Thus, vocational hotel schools are a relevant and strategic educational choice to open up promising career opportunities for Indonesia's young generation.

The aim of students studying production units in the hospitality program is to provide an in-depth understanding of the operational processes within a production unit in the context of the hotel industry. Through this learning, students are not only taught about standards of cleanliness, quality and efficiency in managing production units, but are also given the opportunity to develop practical skills such as planning, organizing and carrying out various operational activities in a hotel production unit, starting from the kitchen, service food and drinks, to the provision of other services [22]. Apart from that, this learning also aims to train students to face challenges that may arise in daily operations, such as stock management, cost control and customer service [23]. Thus, the main objective of learning production units in the hospitality program is to prepare students with relevant and practical skills and knowledge to become competent professionals ready to contribute to the dynamic and competitive hospitality industry.

Production unit-based Teaching Factory (TEFA) learning has the main objective of providing real-world oriented learning experiences and improving students' practical skills in an industrial context [24]–[26]. With this approach, students are not only taught theory, but are also directly involved in the production process in accordance with industry standards. Through this hands-on experience, students can develop necessary technical skills, such as designing, organizing, and carrying out various operational tasks related to production units [27]. Apart from that, TEFA also provides opportunities for students to learn collaboratively, adapt to the work environment, and hone their skills in solving problems that may arise in the production process [28]. Thus, TEFA learning not only prepares students to become skilled and work-ready workers, but also shapes them into individuals who are creative, independent, and able to contribute significantly to industry and advance the country's economy.

Production unit-based Teaching Factory (TEFA) learning has great potential to increase the entrepreneurial spirit among students. Through TEFA, students are not only given the opportunity to study business theories and concepts, but are also directly involved in the process of producing goods or services that can be sold on the market. This provides valuable practical experience in managing a business, from production planning, operational management, to product marketing [29], [30]. By being directly involved in business activities, students will experience for themselves the challenges and successes associated with running a business [31], [32]. This can trigger an entrepreneurial spirit, because students become more motivated to develop creative ideas, identify business opportunities, and take risks to create added value for society [33], [34]. Apart from that, TEFA also builds students' independent attitude, self-confidence and adaptability to a changing business environment [35], [36]. Thus, production unit-based TEFA learning not only produces technically skilled graduates, but also inspires and encourages the younger generation to become innovative and competitive entrepreneurs in the global market.

Previous research conducted by Mastur (2023) [37] which states that the implementation of the teaching factory learning model aims to instill an entrepreneurial spirit by providing work experience and skills to students. The difference between this research and previous research lies in the differences in location and institutional context. These differences indicate differences in social, cultural and economic contexts between the two locations, which may influence the implementation of TEFA learning and its impact on students' entrepreneurial spirit.

Research on increasing students' entrepreneurial spirit through production unit-based Teaching Factory learning has unique characteristics that differentiate it from previous research. The Teaching Factory concept itself is an innovation in the world of education that combines theoretical learning with practical experience in an environment similar to industry. The novelty of this research lies in its comprehensive approach to developing an entrepreneurial spirit. Through the use of the Teaching Factory, students are not only taught technical skills related to the production of goods or services, but are also given the opportunity to understand important aspects of running a business, such as planning, management, marketing and evaluation. In addition, this research can also explore the direct impact of TEFA learning on the development of students' entrepreneurial attitudes, including motivation, interest and confidence in facing business challenges. Thus, this research not only contributes to our understanding of the effectiveness of the Teaching Factory learning method in increasing students' entrepreneurial spirit, but also inspires changes in educational approaches that are oriented towards developing an entrepreneurial spirit among the younger generation.

This research is important because the increasing complexity of the global job market demands entrepreneurial skills as one of the main competencies. Thus, a deeper understanding of how TEFA learning can influence students' entrepreneurial spirit will provide valuable insights for the development of more relevant and adaptive educational curricula. This research also has significant implications in increasing students' ability to

contribute to the economy and community development. By encouraging an entrepreneurial spirit through TEFA learning, students can be better prepared to start and manage their own businesses in the future. This will not only create jobs for themselves, but also have the potential to drive local economic growth and sustainable business innovation.

2. RESEARCH METHOD

2.1. Research Type

This research uses a quantitative approach with a quasi-experimental type to investigate the effectiveness of implementing the Teaching Factory (TeFa) learning model in increasing students' entrepreneurial spirit in vocational schools. The quasi-experimental method was chosen because it allows researchers to control relevant variables and compare the impact of the treatment (application of the TeFa model) to the control group [38]–[40]. Using a quantitative approach, data can be collected systematically through survey instruments or psychometric scales to measure changes in students' entrepreneurial spirit before and after the intervention [41]. This research aims to provide strong empirical evidence about the effectiveness of TeFa learning in stimulating students' entrepreneurial spirit, thus providing a meaningful contribution to the development of entrepreneurship education at the vocational school level..

2.2. population and sample

This research was conducted at SMKN 6 Jambi City, with a population of students registered at that school. The number of samples taken was 60 students consisting of 30 students in class VIII A and 30 students in class VIII B, who were chosen randomly from various classes and departments at the school. Where, class VIII A will use the teaching factory learning model based on production units, while class VIII B will learn with another learning model. This sample was selected taking into account variations in gender, level of academic ability, and interest in entrepreneurial learning. By involving such a large sample, it is hoped that this research can provide representative and reliable results regarding the influence of production unit-based Teaching Factory learning on the entrepreneurial spirit of students at SMKN 6 Jambi City.

2.3. Research Prosedure

The research procedure began with the distribution of questionnaires to 60 students of SMKN 6 Jambi City who were randomly selected as research samples. The questionnaire is focused on measuring the level of students' entrepreneurial spirit before and after participating in the production unit-based Teaching Factory learning. The collected data will then be analyzed to identify changes in students' entrepreneurial spirit before and after TEFA learning. In addition, the research also includes secondary data collection through literature studies to provide context and theoretical support for the findings produced. Thus, it is hoped that this research procedure can provide an in-depth understanding of the effectiveness of TEFA learning in increasing the entrepreneurial spirit of students at SMKN 6 Jambi City. The procedures for this research can be seen in the picture below:



Figure 1. Research Procedure

2.4. Data Collection Technique

Data collection techniques in this research mainly use surveys and observations. The survey was conducted by distributing questionnaires to 60 randomly selected students at SMKN 6 Jambi City to collect data about their level of entrepreneurial spirit before and after taking part in the Teaching Factory learning. Observations were carried out by researchers to directly monitor the Teaching Factory learning process in the classroom and document student participation and interaction with the learning material. By utilizing these two techniques, it is hoped that this research can provide comprehensive information about the effectiveness of TEFA learning in increasing the entrepreneurial spirit of students at SMKN 6 Jambi City. The grid for the student entrepreneurial spirit questionnaire sheet through production unit-based teaching factory learning can be seen in the table below:

Table 1. Student Entrepreneurial Spirit Grid through Production Unit-Based Teaching Factory Learning

Grille	No. Statement
Interest in becoming an entrepreneur in the future	1,2,3,4,5
Optimism about the success of the business that will be run	6,7,8
Creativity in generating business ideas	9,10,11
Confident in having the skills and knowledge necessary to become an entrepreneur	12,13,14,15,16
Activities seeking information or opportunities related to the world of business or entrepreneurship	17,18,19,20

2.5. Data Analysis Technique

The data analysis technique used in this research is comparative analysis or T-test between class data that implements production unit-based Teaching Factory learning and those that do not. Data will be analyzed using SPSS (Statistical Package for the Social Sciences) software to ensure the accuracy and validity of the analysis results [42]. Data on students' entrepreneurial spirit before and after learning will be compared directly to evaluate the changes that occur. The analysis will focus on identifying patterns or trends of change in students' entrepreneurial spirit after participating in the lesson, as well as factors that might influence these changes. The results of the analysis will provide in-depth insight into the impact of Teaching Factory learning on the entrepreneurial spirit of students at SMKN 6 Jambi City.

3. RESULTS AND DISCUSSION

Before carrying out a comparative test or T-test, an assumption test must first be carried out in the form of a data normality test and a data homogeneity test.

3.1 Normality Test

The purpose of testing data normality in the t-test is to ensure that the data used meets the assumption of normality of distribution. Data normality is important because the t-test is a parametric test that is based on the assumption that data is taken from a normally distributed population [43], [44]. By checking the normality of the data, researchers can determine whether the t-test results are reliable and valid. The results of the data normality test in this study can be seen in the following table:

Variable	Sig.	Distribute
Entrepreneurial Spirit	.200	Normal

Based on the results of the normality test that was carried out, it was found that the data had a normal distribution. This can be seen from the acquisition of the Sig value. > 0.05 .

3.2 Homogeneity Test

The purpose of the homogeneity test in the t-test is to ensure that the variability between different groups or treatments is uniform or homogeneous. In other words, the homogeneity test aims to test whether the variance of each group or treatment is the same or not. This is important because when the variance between groups or treatments is not uniform, it can affect the reliability and validity of statistical analyses, such as t-tests. Thus, the homogeneity test helps ensure that the assumption of homogeneity of variance is met before carrying out the t-test, so that the analysis results become more accurate and reliable [45]. The results of the data homogeneity test in this study can be seen in the following table:

Variable	Sig.	Distribute
Entrepreneurial Spirit	0.432	Homogen

Based on the results of the homogeneity test that was carried out, it was found that the data had a homogeneous distribution. This can be seen from the acquisition of the Sig value. > 0.05 .

3.3 T-test

The purpose of conducting a T-test in research regarding Production Unit-Based Teaching Factory Learning on entrepreneurial spirit is to assess whether there is a significant difference in entrepreneurial spirit

between the group who took part in learning at the Teaching Factory and the group who did not take part. By using the T-test, the research can identify whether the learning program is effective in increasing entrepreneurial spirit statistically, as well as providing a basis for evaluating the success of the program. The results of the Production Unit Based Teaching Factory Learning T-Test on students' entrepreneurial spirit can be seen in the table below:

Table 4. T-Test Results of Teaching Factory Learning Based on Production Units on Entrepreneurial Spirit

Class	Sig.(2-tailed)
VIII A	0.039
VIII B	

Based on the results of the T-test carried out, it was found that there was a difference in entrepreneurial spirit between the group who took part in learning at the teaching factory and the group who did not take part.

Based on the results of the normality test that was carried out, it was found that the data had a normal distribution with a Sig value. > 0.05 , namely 0.200. Based on the results of the homogeneity test that was carried out, it was found that the data had a homogeneous distribution with a value of Sig. > 0.05 , namely 0.432. Based on the results of the T-test carried out, it was found that there were differences in entrepreneurship between the groups who took part in learning at the teaching factory and the groups who did not take part, this can be seen from the Sig value. < 0.05 , namely 0.039.

Teaching Factory learning based on production units has proven to be an effective method in increasing the entrepreneurial spirit of students at various levels of education. In an environment that resembles the real world, students are given the opportunity to experience firsthand how various business concepts are applied in practice [46]. They not only learn about business theory, but are also involved in production processes, marketing and operational management. In doing so, students can experience the real challenges they will face in the world of work, better preparing them to become successful entrepreneurs in the future.

One of the main advantages of this approach is the holistic development of entrepreneurial skills. Students are not only trained in the technical aspects of production, but are also given the opportunity to hone their creative, innovative and analytical thinking skills. They learn to identify business opportunities, overcome obstacles, and manage risks effectively. Thus, Teaching Factory learning not only equips students with practical knowledge, but also cultivates the mental attitude necessary for success in the dynamic world of entrepreneurship [47].

In addition, production unit-based learning also promotes collaboration and teamwork, which are very important skills in the modern business world. In the Teaching Factory environment, students work together in interdisciplinary teams to achieve common goals [48], [49]. They learn to communicate effectively, appreciate the contributions of each team member, and solve problems collectively [50]. This not only strengthens social relationships among students, but also teaches them the importance of cooperation in achieving success in business. Thus, Teaching Factory learning based on production units not only produces technically skilled students, but also forms individuals who are mentally and socially ready to pursue new opportunities in the world of entrepreneurship.

The novelty of this research is that it not only introduces students to business concepts through theory, but also provides direct experience in an industry-like environment. This research will deepen understanding of the direct impact of this practical learning on the development of students' entrepreneurial skills. By exploring Teaching Factory's learning potential holistically, this research is expected to provide valuable new insights for the development of entrepreneurship education that is more effective and relevant for future generations.

Research on Increasing Students' Entrepreneurial Spirit Through Production Unit-Based Teaching Factory Learning has great potential to produce a significant impact in various aspects. Through a deeper understanding of the effectiveness of this learning method, educators can develop more effective approaches to teaching entrepreneurship. In addition, this research can also influence changes in educational policies that better support the development of entrepreneurial skills at all levels of education. Therefore, research on production unit-based Teaching Factory learning is not only relevant for education, but also has the potential to have a broad and positive impact on society as a whole.

4. CONCLUSION

Based on the results of the research that has been carried out, it is concluded that there is a difference in entrepreneurial spirit between the group that took part in learning at the teaching factory and the group that did not. Recommendations for further research are to use other learning models that can increase students' entrepreneurial spirit.

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