



The Influence of the Teaching Factory Learning Program on the Interests and Motivation in Entrepreneurship of Vocational High School Students

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Abstract. Vocational high schools are crucial in developing skilled workers and enhancing human resource capabilities. They serve as centers of excellence for vocational education, preparing students with practical and relevant training to succeed in the workforce. In doing so, Vocational High Schools play a pivotal role in shaping the labor market and driving economic growth. This study aims to determine the implementation of the teaching factory program in Vocational Schools in Makassar City and its effect on students' interest and motivation to become entrepreneurs. This research is a quantitative descriptive and correlational study, with a total sample of 111 respondents selected using a stratified random sampling technique. Data collection methods used include documentation and questionnaires. The study results show that implementing the teaching factory program at Vocational High School in Makassar City can be good. Furthermore, this study found a significant positive effect of the teaching factory program on students' interest in entrepreneurship and a significant positive effect on students' motivation to become entrepreneurs. These findings indicate that Vocational High School in Makassar City must continue implementing and developing teaching factory programs to increase students' interest and motivation in entrepreneurship.

Keywords: Teaching Factory · Interest · Motivation · Entrepreneurship

1 Introduction

According to Law No. 20 of 2003 of the Republic of Indonesia, which pertains to the national education system, education is a purposeful and systematic endeavor aimed at fostering an environment and process of learning that enables students to actively cultivate their potential for spiritual and moral fortitude, self-regulation, personality, intellect, virtuous character, and the competencies required by themselves, their community, their country, and their government. The primary objective of national education is to foster the growth of students' abilities and character, thereby contributing to the nation's development. The desired outcome is the creation of individuals who strongly believe in God

Almighty, exhibit noble character, maintain good health, possess knowledge and skills, demonstrate creativity and independence, and are capable of functioning as responsible and democratic citizens.

A vocational high school is an established educational institution that offers vocational education at the secondary level, serving as a progression from primary education at the level of junior high school (SMP), Islamic junior high school (MTs), or other comparable educational programs. Schools at the education and vocational level can be named Vocational High Schools (SMK), Vocational Aliyah Madrasah (MAK), or other equivalent forms. Government Regulation Number 66 of 2010 explains that Vocational High School (SMK) is a secondary education level that explicitly prepares its graduates to be ready for work.

Vocational education organized by vocational high schools is expected to play an essential role in producing the workforce and as a center for developing excellence and strengthening human resource capabilities. However, according to data from the Central Statistics Agency, the open unemployment rate for high and vocational schools is the most significant contributor in 2021. Based on education level, the open unemployment rate in August 2021 at the elementary level was 1,393,492 people; for junior high schools, there were 1,604,448 people. School students, 2,472 high school students, 859 people, and vocational high schools, 2,111,338 people [1].

The government is endeavoring to enhance the caliber of education in Vocational Schools by implementing Presidential Instruction No. 9 of 2016, which aims to revitalize Vocational High Schools and enhance the quality and competitiveness of human resources. Enhancing the caliber of human capital is being pursued through educational interventions catering to the industrial sector's skill requirements. The Directorate of Vocational High School Development has identified five critical areas for revitalization: curriculum, teachers and education staff, collaboration with the Business/Industry sector, certification and accreditation, and infrastructure and institutions. Each of the five revitalization areas needs to be implemented in concrete steps to create superior human resources in each field [2]. The formation of quality human resources aims to increase productivity so that the role of HR in the development process is maximized. However, the excess quantity of human resources in Indonesia has encouraged the government to not only direct the population to become workers or employees but also job providers [5].

One of the government's efforts to make Vocational High School graduates ready to work in the industrial world and can become superior resources is teaching factory learning [3]. The teaching factory is a learning model that utilizes the basic structure of schools to create an industrial atmosphere in schools to increase the ability to produce subjects for students [4]. Teaching factory learning emphasizes students' learning skills in carrying out business and production activities following the industrial world. Therefore, the practical activities carried out in teaching factory learning are structured in such a way as to provide an entrepreneurial experience for students.

The government has implemented various initiatives to equip graduates of Vocational High Schools with the necessary skills to succeed in the industrial sector and become valuable resources. One such initiative is implementing factory learning [3], a learning model that aims to create an industrial atmosphere within schools by utilizing their basic

structure. This learning model emphasizes developing students' business and production skills in alignment with the industrial world [4]. Practical activities within teaching factory learning are designed to provide students with an entrepreneurial experience.

In the *Entrepreneurship Book Building, the Entrepreneurial Spirit of Children Through Vocational Education* says that entrepreneurship is the ability to think creatively and behave innovatively, which is used as a basis, resource, driving force, goals, strategies, tips, and processes in dealing with Life challenges [5]. Entrepreneurship is a dynamic behavior that dares to take risks and is creative and developing, while an entrepreneur is an innovator who can turn an opportunity into a business idea with added value [6, 7]. Through the teaching factory learning model, it is hoped that students will be interested in and motivated by entrepreneurship.

Teaching factory has been implemented since 2016, but until now, not much has been studied to what extent the influence of entrepreneurial interest and motivation on the learning program. Based on the evaluation of the teaching factory's implementation, the teaching factory has positively contributed to improving the quality of graduates and has also contributed to the provision of school operational funds [6]. It is just that the implementation of the evaluation was carried out at the tourism vocational school on the island of Java; for this, it is necessary to study further the implementation of the teaching factory program in Makassar City.

From the data above, it can be seen that the Department of Light Vehicle Engineering is the most department that has implemented a teaching factory program. Implementing the teaching factory program in Vocational Schools affects students' interest and motivation in entrepreneurship. Therefore, it is necessary to study the effect of the teaching factory learning program on the interest and motivation of entrepreneurship in Vocational High School students in Makassar City.

2 Methods

This research study is a type of quantitative research that has a descriptive and correlational design. The primary objective of the research is to investigate the relationship between teaching factory activities and students' competence in Light Vehicle Engineering expertise programs. The research was conducted in several vocational schools in Makassar City, including Makassar 3rd Vocational School, Makassar 10th Vocational School, and Makassar XX-1 Kartika Vocational School.

The researchers used a sampling technique called stratified random sampling, which involves dividing the population into subgroups or strata and randomly selecting samples from each stratum based on their proportion to the population size. To determine the appropriate sample size, the researchers used the Slovin formula, which considers the population's size and the desired precision level. The sample used was 111 respondents.

The data collection techniques used in the study are documentation and questionnaires. Documentation involves reviewing existing records, reports, and other documents related to the teaching factory activities and the student's competence in Light Vehicle Engineering expertise programs. A self-administered questionnaire contains questions designed to gather information directly from the students about their perception of the teaching factory activities and their competence in the field of study.

3 Results and Discussion

3.1 Implementation of Teaching Factory

Data from the variable implementation of the teaching factory was obtained through a Likert scale questionnaire distributed to students. This questionnaire aims to measure the implementation of teaching factories in vocational high schools from the student's perspective. The questionnaire instruments total 20 statements consisting of 13 teaching factory implementation indicator items and seven teaching factory facility and infrastructure indicators. This questionnaire was declared valid and reliable through the validity and reliability tests.

Based on Fig. 1, it can be seen that 22.54% (25 students) said the implementation of the teaching factory was in the very good category, 58.56% (65 students) said the implementation of the teaching factory was in a good category, 17.10% (19 students) said the implementation teaching factory was in the quite good category, 1.80% (2 students) said the implementation of the teaching factory was in the unfavorable category. No students said the implementation of the teaching factory was in the very unfavorable category.

Based on Fig. 2, it can be seen that 54.97% (61 students) said the teaching factory facilities and infrastructure were in the very good category, 35.13% (39 students) said the teaching factory facilities and infrastructure were in the good category, 8.10% (8 students) said the teaching factory facilities and infrastructure were in the fairly good

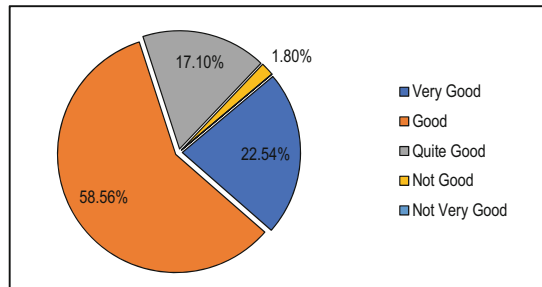


Fig. 1. Teaching Factory Implementation Data

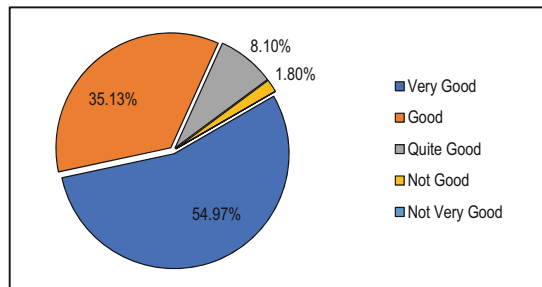


Fig. 2. Data on Teaching Factory Facilities and Infrastructure

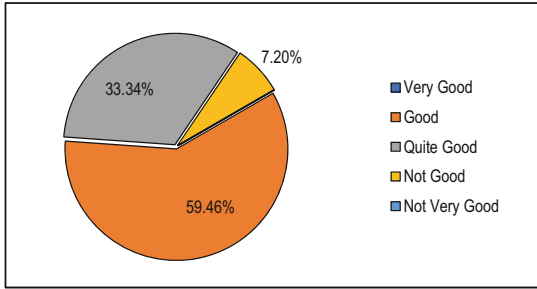


Fig. 3. Student Entrepreneurial Interest Data

category, 1.80% (2 students) said the teaching factory facilities and infrastructure were in the poor category. No students said the implementation of the teaching factory was in the inferior category.

3.2 Student Entrepreneurial Interest

Data from students' interest in entrepreneurship was obtained through a Likert scale questionnaire distributed to students. This questionnaire aims to measure students' interest in entrepreneurship. The questionnaire instrument totals 30 statements. This questionnaire is declared valid and reliable through the validity and reliability tests.

Based on Fig. 3, it can be seen that 59.46% (66 students) said their interest in entrepreneurship was in a good category, 33.34% (37 students) said their interest in entrepreneurship was in the pretty good category, 7.20% (8 students) said their entrepreneurial interest is in the poor category. No students say their entrepreneurial interest is in the very good and very poor categories. Based on the above calculations, it can be concluded that students' interest in entrepreneurship is in a good category.

3.3 Student Entrepreneurial Motivation

Data from students' entrepreneurial motivation variables were obtained through a Likert scale questionnaire distributed to students. This questionnaire aims to measure students' entrepreneurial motivation. The questionnaire instrument totaled 30 statements. This questionnaire is declared valid and reliable through the validity and reliability tests.

Based on Fig. 4, it can be seen that 54.95% (61 students) said their entrepreneurship motivation was in a good category, 42.35% (47 students) said their entrepreneurship motivation was in the pretty good category, 2.7% (3 students) said their entrepreneurial motivation was in the poor category. No students said their entrepreneurial motivation was excellent or inferior.

3.4 Hypothesis Test

The t-test and simple linear regression test were carried out at the hypothesis testing stage. The following is the result of calculating the t-test and simple linear regression test using SPSS:

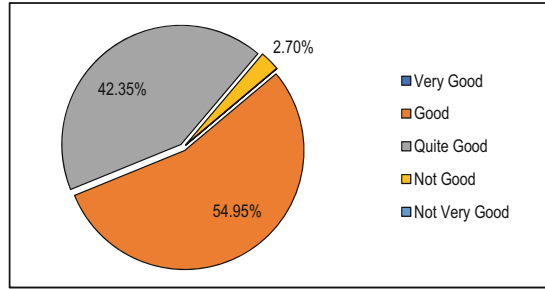


Fig. 4. Student Entrepreneurial Motivation Data

3.4.1 Effect of Teaching Factory Implementation (X) on Interest in Entrepreneurship (Y1)

The results of the t-test presented in the table indicate that implementing a teaching factory has a significant effect on entrepreneurial interest, with a t-value of 3.480. To obtain the t-table values, one can refer to statistical tables using a significance level of 0.05 (two-tailed test) with degrees of freedom (df) equal to n-k or 111-3 = 108. The obtained t-table value is 1.982. Thus, it can be concluded that the t-value for the variable of implementing the teaching factory (X) on entrepreneurial interest (Y1) is greater than the t-table value, with a value of 3.480 > 1.982 (Table 1).

Table 2 presents the correlation coefficient (R) value of 0.316. The obtained result indicates that the coefficient of determination (R-Square) is 0.100, signifying that the impact of the independent variable (Implementation of Teaching Factory) on the dependent variable (Interest in Entrepreneurship) is 10%. Thus, implementing the teaching factory has a 10% impact on the level of interest in entrepreneurship.

Table 1. Results of the teaching factory implementation t-test (X) on interest in entrepreneurship (Y1)

Model	Standardized Coefficients	t	Sig.
	Beta		
(Constant)		9.906	0.000
Teaching Factory Implementation	-0.316	-3.48	0.001

Dependent Variable: Interest in Entrepreneurship

Table 2. Correlation of teaching factory implementation (X) and interest in entrepreneurship (Y1)

R	R-Square	Adjusted R Square	Std. Error of the Estimate
0.316	0.100	0.092	14.97

Predictors: (Constant), Teaching Factory Implementation

Several studies have investigated the impact of Teaching Factory implementation on interest in entrepreneurship. A study by Boubker et al. found that Teaching Factory positively affected students’ entrepreneurial intentions and improved their understanding of entrepreneurship [8]. Another study by Hattab shows that entrepreneurship education significantly influences students’ entrepreneurial intentions. Furthermore, the research findings indicate that the entrepreneurial experience in entrepreneurship education influences students’ intentions [9]. The results of other studies indicate that entrepreneurship education has a significant positive effect on students’ entrepreneurial intentions.

Furthermore, the research findings indicate two factors influencing students’ entrepreneurial intentions: entrepreneurial knowledge and skills and perceptions of the social support available to start a business [10]. These studies suggest that implementing Teaching Factory can positively impact students’ interest in entrepreneurship. By providing practical experience and promoting teamwork, creativity, and problem-solving skills, Teaching Factory can inspire students to pursue entrepreneurship as a career option.

3.4.2 Effect of Teaching Factory Implementation (X) on Motivation in Entrepreneurship (Y1)

One of the aims of this study was to determine the effect of implementing a teaching factory on the entrepreneurship motivation of Vocational High School students in Makassar City. Entrepreneurial motivation is encouragement from within. One of the data collection techniques is by distributing student entrepreneurship motivation questionnaires. This questionnaire has three indicators, namely, the need for success, the need for power, and the need for affiliation. In the indicator for the need for success, there are bioindicators’ the courage to take responsibility, the courage to take risks, and the satisfaction of what is done. In the indicator of the need for power, there are sub-indicators of the ability to lead, express courage, and have great enthusiasm. Meanwhile, in the indicator of the need for affiliation, there is a sub-indicator of cooperation with other parties and a sub-indicator of high social interaction (Table 3).

Table 4 explains the correlation/relationship (R) value of 0.196. From this output, the coefficient of determination (R-Square) is 0.038, which implies that the influence of the independent variable (Teaching Factory Implementation) on the dependent variable (Entrepreneurial Motivation) is 3.80%. So, in conclusion, there is an influence of 3.80% between the implementation of the teaching factory on entrepreneurship motivation.

Table 3. Results of the teaching factory implementation t-test (X) on motivation in entrepreneurship (Y2)

Model	Standardized Coefficients	t	Sig.
	Beta		
(Constant)		8.547	.000
Teaching Factory Implementation	-.196	-2.085	.039

Dependent Variable: Motivation in Entrepreneurship

Table 4. Correlation of teaching factory implementation (X) and motivation in entrepreneurship (Y2)

R	R-Square	Adjusted R Square	Std. Error of the Estimate
.196	.038	.030	14.664

Predictors: (Constant), Teaching Factory Implementation

The implementation of teaching factory learning can be an effective way to improve student interest in entrepreneurship, particularly in vocational schools that focus on multimedia competencies [11]. By providing students with hands-on experience in a simulated industrial environment, teaching factory learning can help them develop practical skills and knowledge related to entrepreneurship, including product development, marketing, and financial management.

Research has shown that teaching factory implementation can positively impact students' entrepreneurial interests and motivation [12]. Factory-based learning models can be an effective way to improve students' entrepreneurial interests and soft skills. By providing practical experience and exposure to real-world industry practices, these models can help students to develop the skills and knowledge necessary for success in entrepreneurship [13].

4 Conclusion

After analyzing and discussing the data, it can be concluded that the implementation of teaching factories in Vocational High Schools in Makassar City has been effective, as shown by the positive results of the descriptive analysis. Furthermore, the study revealed a significant correlation between the implementation of teaching factories and students' interest in entrepreneurship, as well as their entrepreneurial motivation. In other words, the teaching factory model has a significant impact on shaping the mindset and motivation of students towards entrepreneurship, which is an essential factor in preparing them for future careers and contributing to the local economy.

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