



## Enhancement of Students' Interest in Entrepreneurship: Based on Creative Entrepreneurial Products through Teaching Factory (TEFA) Learning

Nandar Adi Setiawan; Wiedy Murtini; Kristiani

Magister Economic Education, Universitas Sebelas Maret Surakarta, Indonesia

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### **Abstract**

Due to the era of the Industrial Revolution 4.0, which currently impacts the employment and education sector in Indonesia, it should be revitalized learning that focuses on innovative and entrepreneurial products. Students' potential for their interests and talents in entrepreneurship needs to be explored to generate added value for themselves and the wider community. This study aimed to determine the factors and efforts that have been prepared by the Yogyakarta 7 Vocational School (SMK Negeri 7 Yogyakarta) using the descriptive qualitative research method. The findings in this study revealed that the Teaching Factory (TEFA) learning process based on Entrepreneurial Creative Products is a crucial factor in increasing students' interest in entrepreneurship. Meanwhile, the experience of teachers and the school environment also play a role in efforts to enhance students' interest in entrepreneurship in SMK.

**Keywords:** *Entrepreneurship Education; Entrepreneurial Interest; Businessman; Teaching Factory*

### **Introduction**

Industry 4.0 arises with various job applications operated by robots in industrial fields such as three-dimensional printers, artificial intelligence, and big data studies. The presence of this technology is an opportunity and a challenge in education. Therefore, to answer these challenges, it is necessary to provide adequate skills for every student in Vocational High Schools (SMK). Changes to the emergence of Industry 4.0 are known as the Internet of Things, Internet of Everything, and Industrial Internet. These changes are marked by four distinguishing features from the previous industrial revolution, including Cyber-Physical Systems (CPS), Big Data and Digital Information Exchange, Smart Robot, and Digital Industrialization. Robot technology has been promised as an impact due to the Industrial Revolution 4.0 (Yüksekbilgili & Yüksekbilgili, 2018). This condition will certainly impact the transformation and employment model currently running. New jobs are expected to emerge, and some jobs will disappear or be replaced by new technologies (Kurt, 2019). This condition is undoubtedly worrying and will lead to high job competition. In addition, the wave of layoffs and unemployment will increase. The opening of a free market that brings in foreign workers with specific competencies and expertise is also one of the competitive factors faced in addition to high-tech machines (Asih et al., 2020).

The unemployment rate in Indonesia currently reaches 6.26%, but in August 2020, it decreased by 0.81%. The unemployment rate is still relatively high, coupled with the COVID-19, resulting in the unemployment rate continuing to grow (Central Bureau of Statistics (BPS), 2021). BPS data for 2021 showed that the unemployment rate in the education unit has continued to decline in the last three years. Meanwhile, SMK graduates still contribute to the highest unemployment compared to other educational units, 8.49% in 2020. The unemployment rate that occurs in SMK graduates must be used as evaluation material to improve the learning process. Through (Inpres Number 9 of 2016, 2017), President Jokowi has instructed for overhauling the education system and vocational training in a demand-driven direction. In addition, the president also emphasized that revitalization needs to be carried out immediately to improve the quality of human resources. One of the revitalizations conducted is to create a mind map regarding the development of Vocational Schools by perfecting and harmonizing the Vocational High School curriculum by producing graduates following the competencies required in the workforce (link and match) (Ministry of Education and Culture, 2017). Entrepreneurship education needs to be encouraged to generate new jobs, reduce the unemployment rate, and help develop a country's economy (Nian *et al.*, 2014).

One way to reduce the unemployment rate is to enhance interest and provide entrepreneurial spirit as early as possible (Research Agency and Center for Curriculum Development, 2010). Entrepreneurship education aims to improve competence and prepare students to become entrepreneurs (Robles & Zárraga-Rodríguez, 2015) (Din *et al.*, 2016). The procurement of Entrepreneurship Education based on Creative Products and Entrepreneurship (PKK) is expected to enhance students' interest in entrepreneurship, which will affect reducing the unemployment rate. Entrepreneurship Education is a learning scheme aiming to develop individuals for entrepreneurship through developing a mindset as an entrepreneur (Hastuti *et al.*, 2020). Entrepreneurship education can also be the initial foundation and provision for school graduates (Pangesti, 2018). According to (Bischoff *et al.*, 2018), Entrepreneurship Education is related to teaching entrepreneurship, both curricular and extracurricular. In addition, currently, entrepreneurship has become a major competency for European citizens, with particular attention focusing on developing entrepreneurial skills because it is considered a major factor in building a person's initial foundation to be competitive, grow, and become European innovations (Ruskovaara & Pihkala, 2015).

### **Research Methods**

This research was conducted at SMK Negeri 7 Yogyakarta using the qualitative descriptive research method. Researchers were looking for a topic related to Teaching Factory (TEFA) learning with data collection techniques through observation, interviews, and documentation. The data source in this study was the subject from which the data can be obtained. Meanwhile, the data analysis techniques employed included (1) Data Collection; (2) Data Reduction (Data Reduction); (3) Data Display (Data Presentation); (4) Conclusion Drawing/Verification (Conclusion). Additionally, the informants in this study were the Principal, Head of Department (Online Business and Marketing), and Deputy Principal (Curriculum Sector), then Teachers (Creative Product Entrepreneurship and Public Relations).

### **Results and Discussion**

Increasing entrepreneurial interest in schools can be successful if the learning objectives have been achieved. Entrepreneurship education in schools must continue to be developed to adapt to the needs in the field and keep abreast of existing developments. The direction of development of entrepreneurship education, according to (Subijanto, 2012), must (1) be oriented towards the formation of creativity and entrepreneurial interest from an early age; (2) create access to creative economy information exchange; (3) create connectedness and integration among SMK graduates associated with the needs of creative economy development; (4) encourage successful entrepreneurs to share their experiences and expertise in

vocational schools in developing the creative economy. Then, these efforts have been made by the school to enhance students' interest in entrepreneurship which is explained as follows:

### 1.) Creative Products and Entrepreneurship (PKK)

Teachers at SMK Negeri 7 Yogyakarta have prepared the learning targets to be achieved. Teachers who support Entrepreneurial Creative Products have also implemented Student-Centered Learning-based learning strategies with the main focus on Entrepreneurial Creative Products through practice. Practical experience is provided so that students have the opportunity to practice and develop skills to stimulate creativity in whatever they are involved in and can develop into business opportunities.

Development of Creative Product and Entrepreneurship purposes to provide knowledge, improve skills, and shape student attitudes so that they can be entrepreneurs. These subjects require a product design based on creativity created by students following the development of the Industrial Revolution Era 4.0, such as creativity, communication, and collaboration. The implementation of these subjects by the school is carried out through learning referring to the syllabus as outlined in the RPP (Learning Implementation Plan, Practical Activities, and various training such as; multiplying tasks in the form of practice, business training accompanied by experts, and seminars attended by successful practitioners and alumni) (Fejes et al., 2019).

The application of learning creative products and entrepreneurship at SMK Negeri 7 Yogyakarta is divided through assignments given by two teachers. This application aims to divide the focus of each field occupied by these teachers according to their economic education background and practical teachers who have a side business or as business actors. The background of teachers who have businesses or entrepreneurial practitioners positively affects students' entrepreneurial interests in schools (Ruskovaara & Pihkala, 2015). Thus, the application of this learning positively influences the students' interest in entrepreneurship at school. It is revealed that more than 50% of students have an online business and marketing. The income they acquire comes from selling through online media. It is expected that these results will be a provision for these students to continue entrepreneurship so that they do not need to look for a job.

SMK Negeri 7 Yogyakarta has succeeded in increasing the interest in entrepreneurship of its students, as indicated by the results of business practices by 54% of all students majoring in BDP. These business practices include; Sales in several markets (Shopee, Tokopedia, and the like). Business branding for products produced through several shops and selling ornamental plants through Whatsapp and Facebook. In addition, 9.7% of 2018-2020 alumni graduates have succeeded in opening their jobs and even provided job opportunities to others.

### 2.) Teaching Factory Learning

The implementation of the Teaching Factory plays an essential role in achieving the effectiveness of the practices performed by employees and students. The concept of the Teaching Factor, among others, connects the industrial world (the field) with learning activities in the classroom to achieve two-way knowledge through the exchange of Information and Communication Technology (ICT) (Mourtzis et al., 2021). Human resources can design engineering and apply quality, a sense of efficiency, and a sense of innovation—Directorate General of Primary and Secondary Education, (2016). Then, the ratio between the number of teachers and students must be considered in each learning process. Performing two teachers with a practitioner background (entrepreneur) in classroom learning and entrepreneurial practices shows a positive result for the students. They can practice by making and branding products that are then sold through several market places.

The collaboration performed by SMK Negeri 7 through Teaching Factory learning requires students to create products that are marketed in the business center provided by the school. The students also sell these products through online media, including Instagram, Facebook, Shopee, Whatsapp, and several other marketplaces. Students are also allowed to carry out fieldwork practices for three months targeting students to gain experience in the business world. Teaching methods based on work experience in the field show a positive response by educators and schools concerning entrepreneurial learning, increasing the need for developing entrepreneurial skills (Olokundun et al., 2018).

The Teaching Factory (TEFA) learning implemented at SMK Negeri 7 Yogyakarta has succeeded in encouraging its graduates to become entrepreneurs. Students at the school also obtain a sales turnover for the business practices conducted. It is in line with the results revealed by (Amalina et al., 2018) that the Teaching Factory program significantly affects students' interest in entrepreneurship for the success of the program run by the school. The impact of the Teaching Factory learning will make students realize the importance of creating business opportunities that can compete in the business world, which will continue to be developed to generate vast employment opportunities for the general public.

## Conclusion

Entrepreneurship education at SMK Negeri 7 Yogyakarta has a positive impact on increasing students' interest in entrepreneurship. Through Teaching Factory learning based on Creative Entrepreneurship Products, it is expected that it will create new entrepreneurs who can create job opportunities to reduce the unemployment rate, which impacts increasing the country's economic growth. Furthermore, Teaching Factory learning also helps reduce the unemployment rate produced by SMK graduates. Another benefit is that it will impact the growth of innovation in terms of technology and increase the productivity of goods produced by a country, which yields resource efficiency. Currently, entrepreneurship education is also the focus of government and policymakers to continue to be evaluated to improve the learning process that can produce excellent and competitive graduates in the business world. In the end, education is not only limited to transferring new knowledge but also can improve the economic condition of a country.

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