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Quick Analysis of The Applied Teaching Factory in The Independent Learning Curriculum Towards the Readliness of Enterpreneurship

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Abstract: The intense competition in the food and beverage sector has led to increased consumptive behavior, which supports the economy. This presents a promising business opportunity for graduates of SMK Tata Culinary through Teaching Factory (TEFA) learning. This study aims to analyze the factors supporting and hindering TEFA's implementation, test its effectiveness, and describe the work readiness of students in Culinary Vocational High Schools in East Java. Using a mixed-method approach, the study sampled 6 schools from Surabaya, Sidoarjo, Ngawi, Lumajang, Tulungagung, and Magetan, with 50 culinary students from each school. Data collection included interviews, observations, and questionnaires, focusing on preparing students for entrepreneurship. Data were analyzed using one-factor ANOVA with SPSS 22. The results showed that student involvement in TEFA activities provided contextual experiences, enhancing critical thinking and problem-solving skills. In conclusion, TEFA's application in Vocational High Schools under the Independent Curriculum fosters creativity, innovation, and entrepreneurship, offering significant benefits for startups, business innovation, and job creation.

Keywords: Entrepreneurial readiness; Independent curriculum; Teaching factory

Introduction

Technological developments make it easier for people to get products and services. A big impact on increasing people's consumptive behavior, giving rise to intense competition in the food and beverage sector which can support the regional economy. The need for food and drink in modern society has changed their consumption pattern to processed food. The growth of culinary business products in Indonesia will continue to increase every year due to an increase in domestic demand due to the increasingly high growth of middle-class consumers. This can lead to more opening of business opportunities for culinary business products in the country (Olfert et al., 2020). The determination of products or services seen from the current economic value can be seen from the results of creativity and innovation that are utilized and created in accordance with technological developments. The progress of the need for food and beverage demands the ability of human resources to compete in a healthy manner. Increasing human resources is prioritized to bring up individuals who have skills, and talents to foster prosperity, creativity, and employment that are in line with activities in the creative economy, namely emphasizing and exploring the creativity and creativity of everyone (Siswandi & Sukoco, 2015). Vocational High Schools (SMK) are an alternative to training people's abilities to become superior human resources according to their field of need. Increasing human resources is prioritized to bring up individuals who have skills, and talents to foster prosperity, creativity, and employment

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that are in line with activities in the creative economy, namely emphasizing and exploring the creativity and creativity of everyone. Vocational High Schools (SMK) are an alternative to training people's abilities to become superior human resources according to their field of need. Increasing human resources is prioritized to bring up individuals who have skills, and talents to foster prosperity, creativity, and employment that are in line with activities in the creative economy, namely emphasizing and exploring the creativity and creativity of everyone. Vocational High Schools (SMK) are an alternative to training people's abilities to become superior human resources, according to their field of need (Mavrikios et al., 2019).

A teaching factory is a learning activity in which students directly carry out production activities in the form of goods or services within the school education environment (Suhartini, 2022), the goods or services produced have quality so that they are suitable for sale and are accepted by the community or consumers, and the profits obtained can increase the school's source of income for continuity of educational activities according to the Directorate of PSMK, 2008:55. Teaching factory is a learning concept in a real setting so that it can bridge the competency gap between industry needs and school knowledge (Summerville et al., 2020). So, it can be described that the teaching factory is the implementation of learning in schools as in the catering industry in the Catering Service Expertise Package. The teaching factory program consists of two main principles, namely competency-based training (CBT) and production-based training (PBT). Competency-based learning according Hadi et al. (2015) is learning that aims to help students acquire skills and knowledge so that they can carry out tasks according to predetermined standards. The second principle is production-based learning. Production-based learning means students are involved in the production process. The teaching factory program consists of two main principles, namely competency-based training (CBT) and production-based training (PBT). Competency-based learning is learning that aims to help students acquire skills and knowledge so that they can carry out tasks according to predetermined standards. The second principle is production-based learning. production-based learning means students are involved in the production process (Darmawan & Sumitro, 2014).

The advantages of the teaching factory program are the better process of planning, implementing, managing, organizing, and documenting program administration (Meutia, 2013). This includes all lines of the program that must be properly documented and administered. The shortcomings of the teaching factory program are the teaching factory equipment and the human resources (HR) who run it, meaning that this weakness is more focused on the process of how to run the teaching factory program properly and the infrastructure that supports production learning activities. Human resources as managers, in terms of the organizational structure of the instructors, are still not focused on their respective tasks, because each task is still being carried out together (Chiang & Sheu, 2020).

The teaching factory aims to empower SMKs in creating graduates who are entrepreneurial and have competency skills through the development of cooperation with industry and relevant business entities. Teaching factories aim to increase the competence of SMK graduates, increase the entrepreneurial spirit of SMK graduates, produce products in the form of goods/services that have added value, increase collaboration with relevant industries/business identities, increase sources of school income (Puspita et al., 2020; Winarno & Sari, 2019).

Method

This study aims to analyze the supporting and inhibiting factors in the implementation of the TEFA learning program, then to test the effectiveness of the TEFA implementation and to describe the work readiness of students in SMK Tata Boga in East Java. The sample of this study involved 6 SMKs from 6 regencies/municipalities, namely, Surabaya, Tulung Agung, Magetan, Lumajang, and Banyuwangi, 50 culinary students were taken from each school as samples in the study. Data collection techniques by interviews, observation, and documentation for the application of TEFA and questionnaires for student entrepreneurship readiness with the instruments used in this study are observation forms for products sold in production units. Questionnaires were given to students about the readiness of students about work readiness, especially entrepreneurship.

The data obtained will be analyzed using one-factor Anava with the help of the SPSS 22 program. The steps for carrying out the research are shown in the diagram in Figure 1 below. The left channel is qualitative research, the right channel is quantitative research. To obtain qualitative data, the application of TEFA by planning and evaluating indicators in the application of TEFA was then implemented, and the research data was carried out through interviews, observations, and documentation. Meanwhile, quantitative data was obtained from distributing questionnaires related to the readiness of culinary students to become entrepreneurs. Both data were analyzed to obtain findings that support this research.

Collecting data by distributing questionnaires. Calculation Student Readiness Category: highest score 5x25=125 and lowest score 1x25=25. Range (125-25)/4=25, then the category of Student Readiness is as follows:

Table 1. Student readiness criteria for entrepreneurship

Classified Score	Criteria
25-50	Not Ready
51 - 75	Poorly prepared
76 - 100	Ready
101 - 125	Very prepared

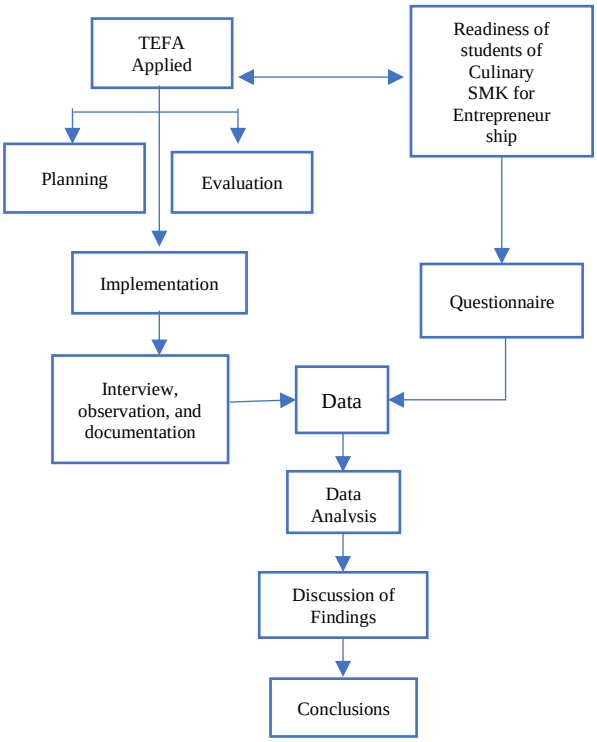

Figure 1. Research Flow Diagram (Gray, 2014)

Result and Discussion

The results of the statistical analysis show that in table 2 students who are very ready for entrepreneurial work are students at SMKN 2 Boyolangu, Tulungagung district, as much as 77%, while the lowest for entrepreneurial work readiness are students at SMKN Geneng, Ngawi district, as much as 48.1%. Based on the results of data analysis, it was found that SMKs received the highest entrepreneurship readiness criteria from the results of the questionnaire and observations of carrying capacity, including schools being able to create an entrepreneurial atmosphere from students and all school leaders and residents.

TEFA learning development infrastructure duplicates industrial facilities and infrastructure. The school constantly updates students' competency skills by collaborating with industry experts, including the Chef of Hotel Grand Surya Kediri and Crown Victoria Tulung Agung. Chef Holland bakery and pastry is a stakeholder of SMK graduates (Hidayati et al., 2020). The management of TEFA in Vocational Schools provides opportunities for students to be creative in determining menus in entrepreneurship to compete for profit units with other groups of friends. To motivate students to actively participate in TEFA activities, get a net profit sharing of 70% for students and 30% percent for school management. All teachers are committed to supporting the achievement of TEFA goals. The schools with the lowest TEFA readiness were Geneng Vocational High School, Ngawi district, with 48.1%.

Application of TEFA in the Free Learning Curriculum for Entrepreneurial Readiness in Boga Vocational Schools in East Java. Vocational education has always been dedicated to preparing its graduates to work in the workplace, usually in businesses that exist in society. TEFA learning is important for preparing students in entrepreneurship learning in the culinary field to foster entrepreneurial motivation for vocational graduates (Kurniawan, 2017). The application of the Independent Curriculum can produce entrepreneurial behavior and leadership spirit, which is related to how to manage a business to equip students to be able to work independently. Entrepreneurial readiness provides students with the opportunity to help them anticipate and respond to changes in doing business in every situation and collaborating strategies to compete in a healthy manner with competitors. The application of TEFA in Vocational High Schools in the Independent Curriculum learns to produce creativity, innovation, and growth; unlimited benefits for start-ups; innovation of a business and a new job. In this case, entrepreneurship refers to individuals, the ability to turn ideas into action. This is a key competency for all, especially in helping students become more creative and confident.

The implementation of government policies has an impact on the development of the SMK: SMA ratio = 70:30 will increase the competition in the labor market in the industry to become increasingly tight. Labor growth that is not matched by employment growth will cause the level of employment to tend to decrease and the unemployment rate to increase. This is because the addition of a new workforce is greater than the growth in productive employment that can be created each year. In order for the absorption of graduates from a number of SMKs to be high, one of the government's efforts that need to be carried out is the existence of a regulatory policy.

Table 2. Vocational schools category of entrepreneurship readiness Crosstabulation

Schools		Enterpreneurship readiness category		Total
		Ready	Very ready	
SMKN 8 Surabaya	Count	21	31	52
	% within SMK	40.4%	59.6%	100.0%
SMKN 1 Geneng	Count	28	26	54
	% within SMK	51.9%	48.1%	100.0%
SMKN 2 Boyolangu	Countt	12	42	54
	% within SMK	22.2%	77.8%	100.0%
SMKN 1 Poncol	Count	20	39	59
	% within SMK	33.9%	66.1%	100.0%
SMK PGRI Giri Banyuwangi	Count	17	34	51
	% within SMK	33.3%	66.7%	100.0%
SMKN 2 Lumajang	Count	30	52	82
	% within SMK	36.6%	63.4%	100.0%
Total	Count	128	224	352
	% within SMK	36.4%	63.6%	100.0%

Application of TEFA in the Free Learning Curriculum for Entrepreneurial Readiness of Boga Vocational High School Students in East Java. The entrepreneurship program at SMK aims to instill entrepreneurial values through habituation, cultivating attitudes, and maintaining entrepreneurial behavior. Entrepreneurship is essentially the nature, characteristics, and character of a person. The current challenges related to education include those currently related to education, including increasing the quantity and quality of vocational education to meet local needs. and nationally, able to compete globally, and produce creative human resources (HR) through education needed in the development of a creative economy, especially the 2045 generation. At the same time, society is faced with big global challenges (Jamian et al., 2022). The year 2045 will be a milestone in the history of the Indonesian nation. There is a reasonableness and even a necessity that in 2045, it will be used as a benchmark to determine the performance of the Indonesian nation during its one hundred years of independence and determine its competitiveness in the international arena.

Entrepreneurship learning is one of the supporting theoretical training subjects. Entrepreneurship in Vocational Schools is currently only implemented in around 1.93% of all study hours in Vocational Schools for six semesters. This has not yet allowed the formation of independence and has not been able to fully instill an entrepreneurial spirit in Vocational High School graduates, therefore the entrepreneurship learning design in Vocational High Schools needs to be reviewed starting from the curriculum, learning strategies, methods, media, and ways of teachers who support entrepreneurship. To make it more effective in cultivating students' entrepreneurial spirit, an effort is needed to increase it, one of which is through entrepreneurship classes. The entrepreneurship class applies the integration of entrepreneurship subjects to every productive content. Entrepreneurship classes are expected to emphasize the cultivation of an entrepreneurial spirit. By having an entrepreneurial spirit, institutions and individuals will have a sense of optimism to create new ways that are more effective, efficient, and practical. Based on the previous description, the development of the entrepreneurship class is very important because entrepreneurship class is the most appropriate vehicle for preparing graduates who are competent in their fields, who are expected to be able to compete in the job market or to be able to create their own jobs through established creative businesses so that people's welfare can be fulfilled. The Catering Vocational High School program has the main competency of Catering and Patisserie Services which support the Restaurant and Hospitality program in the Tourism Vocational School. In this entrepreneurship class, it is hoped that it will be more effective in cultivating an entrepreneurial spirit and cultivating independence in the Culinary Tourism Vocational High School so that students are more independent and professional in all business situations. With the structuring of an entrepreneurship curriculum that is integrated with existing productive learning, it is hoped that with this entrepreneurship class, the cultivation of entrepreneurial spirit, values, and behavior will become more effective and efficient (Khoiron, 2016).

Linkage with MBKM program

The linkage of this research with MBKM is that all research activities carried out in the field and in the laboratory are carried out with the guidance of accompanying lecturers. Students who are involved in this research activity are expected to be able to provide contextual experiences in the field so that students can build critical thinking skills and problem-solving. These

two competencies are very much needed for various scientific groups at the higher education level. So that students can deepen their abilities and understand critical thinking and problem solving, so that they are able to do research well, especially students who have an interest and desire to work in the research field. This research activity program also implements the Main Higher Education Performance indicators at IKU 2 for students to gain experience off campus. Students will conduct a study of problems in society and help overcome them through research (Fisher & Louw, 2020).

The results of conducting research on 6 Culinary Vocational Schools in the East Java TEFA learning program

The data obtained from observations and interviews with teachers managing TEFA, questionnaires to determine student readiness for work/entrepreneurship for students of 6 vocational schools in East Java which are then used as data in this study. The results of data collection from schools in the form of raw scores are converted into standard scores. Data description was carried out to present data from interviews and observations to identify supporting and inhibiting factors for the implementation of the TEFA learning program at Tata Boga Vocational Schools with school TEFA managers and from researchers' observations about the results found in school TEFA. Meanwhile, to describe the effectiveness of the TEFA learning program at SMK Tata Culinary, observation and interviews were carried out. As for work readiness/entrepreneurship for SMK Tata Boga students, this is done by filling out a questionnaire.

Factors supporting and inhibiting the implementation of the TEFA learning program at culinary Vocational High School

SMK students are given guidance through TEFA learning to innovate food and beverage products. Students have new ideas as the basis for developing products that are of public interest. Product development is through the application of product variations and variants as well as using production processing techniques. In line with research results Ko & Chiu (2011) that in the food industry creativity is needed to form its own characteristics in culinary evolution. If previously these food products did not last long, using the Frozen food technique is more durable and durable to store. In this context, the teacher helps or guides students to innovate on the products being sold. But in terms of marketing their products, students seem to be more innovative and creative through social media for marketing their products. Tata Boga Vocational School is a school capable of creating products through TEKA learning at Vocational High Schools students are motivated to create innovative, creative, and productive products. SMK as an educational institution that prepares the workforce, does not only focus on preparing workers to fill industrial jobs,

Creativity and innovation in TEFA learning are important elements of entrepreneurship. Creativity, innovation, and entrepreneurship are three things that synergize with each other to form a single entity that cannot be separated in business activity. Creativity is the emergence of new ideas. Innovation is the implementation of this idea so that it can become a product that can meet the needs and desires of society. With creativity and innovation, a business or business can have a competitive advantage and can maintain its survival longer. With creativity and innovation, a business or business can be superior and different from its competitors' products (Hakim, 2010).

The inhibiting factor for the creation of TEFA learning is when the process of producing innovation and creativity in processing and presenting food products that compete with the established catering industry in society cannot be ignored, because creativity in food products will have selling points and attractiveness to potential consumers. Innovation and creativity keep up with the rapid development of information technology while still emphasizing the originality of Indonesian cultural identity and no less important in carrying out innovation and creativity requires collaboration with relevant agencies. Implementation of SMK Tata Culinary learning requires multi-sector cooperation that supports to overcome product competitiveness so that it can be in demand by consumers.

The effectiveness of the TEFA learning program at Tata Culinary Vocational Schools

The results of the research findings indicate that TEFA learning at the Tata Culinary Vocational School can improve the ability and readiness for entrepreneurship implemented at the Vocational School is appropriate, the learning resources used by students include books, assistance from industry from chefs to hotels, bakery and pastry and industrial visits. Another finding is that to create graduates who are work-ready, SMKs need to align student competencies with industry and the world of work (IDUKA). Meanwhile, innovation and creativity need to be carried out while still emphasizing the identity of the character of food products and by using social media as marketing for their products (Mourtzis et al., 2021).

Entrepreneurship currently, there is no Basic Competency for making products. So that this Basic Competence needs to be revived and adapted to current needs for innovative product results (Olaniran, 2018).

Simplification of Basic Competences conducted by researchers about Creative Products and

Entrepreneurship so that the material presented is in accordance with the development of current needs. The meaning of offline and online is an adjustment to the development of technological advances in the current era (Hadi et al., 2015). Furthermore, based on the research findings mentioned above, it is recommended for Vocational High Schools, especially the Culinary Skills Program to align learning materials with the needs of industry and the world of work. This alignment is carried out by collaborating with related industry parties, as has been done with hotels and bakeries (Chai et al., 2022).

Collaboration with the food production industry can take the form of apprenticeships, as instructors/teachers teach in class. The involvement of this industry also aims to overcome the competency gap needed by the industrial world which is related to the competence of graduates of Culinary Skills Vocational High Schools. In addition, involve related agencies such as the Manpower Office, both at the city and at the province level, to access data and information on job vacancies related to graduates (Olfert et al., 2020). The following is an illustrative image of the development of a TEFA learning design to increase entrepreneurial readiness which can be integrated with basic competency recommendations. The following is a graphic illustration.

Table 3. Basic competency recommendation for TEFA entrepreneurship learning for culinary vocational high school students (Siswandi & Sukoco, 2015)

Knowledge	Skills
Understanding entrepreneurship and self-employment	Grouping Entrepreneurial Character
Analyzing business opportunities for goods/services products	Planning business products
Understanding/analyzing innovative creative products	Creating/producing innovative creative products
Implement business administration documents	Make planning business resource requirements
Analyze business resource needs	Make planning business resource requirements
Analyzing business service systems	Planning a business service system
Implement business services	Perform business services
Calculating Cost of Production (HPP)	Determine the Break Even Point (BEP) and business profits
Analyzing simple financial reports	Create simple financial reports
Evaluate the results of business activities	Make a follow-up plan on the results of the business evaluation
Implement promotional media for offline and online marketing	Creating promotional media for offline and online marketing
Analyze marketing offline and online	Doing offline and online marketing
Applying for Intellectual Property Rights (IPR)	Make submission of documents for the acquisition of intellectual property rights

Table 3 is a recommendation from researchers regarding Basic Competencies that should be used in learning entrepreneurial creative products, especially students at Culinary Vocational Schools. There are additional Basic Competency. Similar Basic Competences are Understanding/analyzing production systems (knowledge) and Producing Crafts (Skills). But in the subject of Entrepreneurial Creative Products currently, there are no Basic Competencies for making products anymore. So that this Basic Competence needs to be revived and adapted to current needs for innovative product results (Summerville et al., 2020).

Simplification of Basic Competences conducted by researchers about Creative Products and Entrepreneurship so that the material presented is in accordance with the development of current needs. The meaning of offline and online is an adjustment to the development of technological advances in the current era. Furthermore, based on the research findings mentioned above, it is recommended for Vocational High Schools, especially the Culinary Skills Program to align learning materials with the needs of industry and the world of work. This alignment is carried out by collaborating with related industry parties, as has been done with hotels and bakeries. Collaboration with the food product industry can take the form of apprenticeships, as instructors/teachers to teach in class. This industry engagement also aims to overcome the competency gap needed by the industrial world related to the competencies of Culinary Skills Vocational High School graduates (Hsieh & Muhammet, 2020). In addition, involve related agencies such as the Manpower Office, both at the city and at the province level, to access data and information on job vacancies related to graduates (Suhairom et al., 2019). The following is an illustrative image in the development of TEFA learning design to improve entrepreneurial readiness that can be integrated with basic competency recommendations Here is an illustration of the Figure 2.

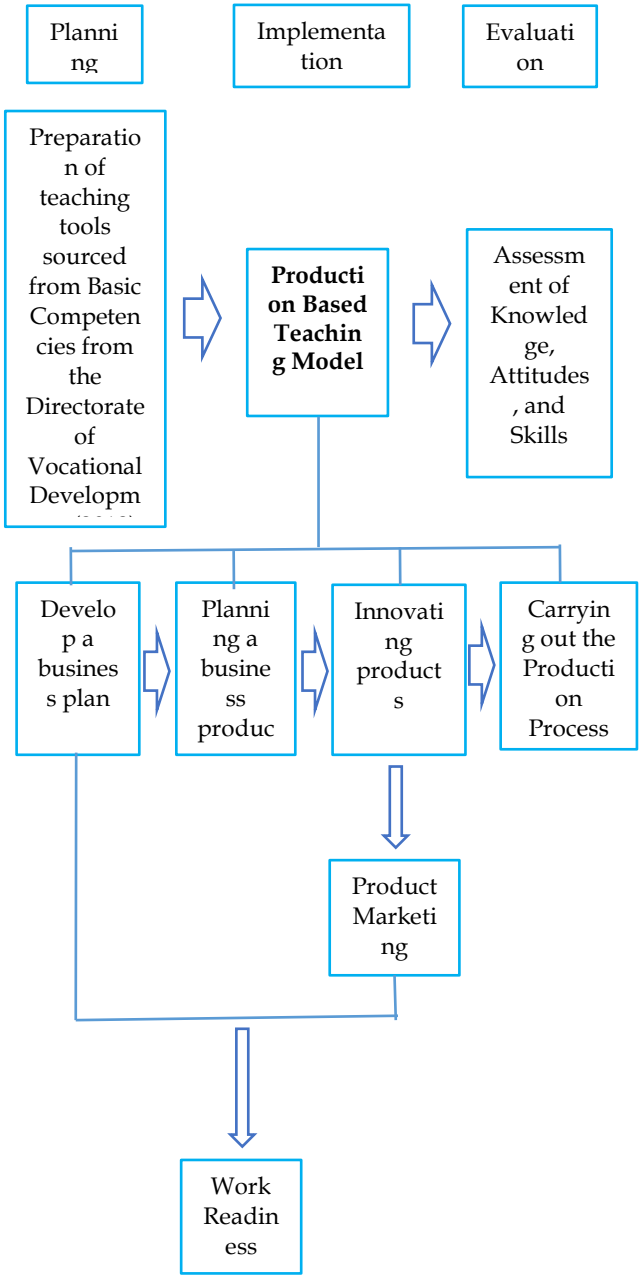

Figure 2. Recommendations for creative product and entrepreneurship learning design

Based on the research findings on Basic Competency Learning TEFA Entrepreneurship Learning for Culinary Vocational High School Students for Culinary Skills Vocational High School students at Vocational High Schools that have been described, by paying attention to the stages of the learning model, it can be described.

Planning the product

Making a product plan can be in the form of production objects which can be done from starting to draw details/making a pamphlet (containing the date of the performance, calculating the needs for materials, equipment, and workmanship techniques as well as workflow/work coordination. The research findings show that in this planning there are 4 (four) the principles applied, that in planning the manufacture of products namely 4P (Price, Place, Plan and Promotion). Students have more up to date ideas about products that are currently booming/trend in society today.

Carry out the production process

In this syntax, students are invited to carry out production stages based on plans for product objects/services/performance planning, workflow/work coordination and monitoring the production process.

Evaluating the product (conducting quality control)

In this step students are invited to examine product results by comparing them with demands on technical planning. Product is anything that can be offered to a market to satisfy a need or want. Through products, producers can pamper consumers. Because of the product, it will be known how much the satisfaction and need for the product itself is in the consumer's life.

Develop a marketing plan

Students are invited to prepare marketing plans both online and offline in the form of brochures/pamphlets and present them. Research findings, marketing methods that have been carried out by Culinary Skills Vocational High School Students include: products made by students in the form of food and beverages are introduced/traded offline and online. Online marketing so that products are more widely known and offline marketing is used so that product results are right on target (door-to-door sales); creative ideas alone are not enough to be competitive; innovation is needed to produce creative products. Gojek as an online transportation service, which originally only provided public transportation services with motorbikes, has now developed its products into 12 service products: Go-Ride, Go-Car, Go-Food, Go-Send, Go-Mart, Go-Box, Go-Massage, Go-Clean, Go-Glam, Go-Tix, Go-Busway and Go-Pay; and implement the core promotion in selling, then open a Pre Order (PO) system. PO is an online buying and selling transaction, where the buyer when ordering an item must pay a certain amount of money in advance, then the ordered item will arrive after a few days later, then the item will be sent to the buyer's address. If later there is a problem, namely a problem with goods that have been ordered by the buyer, but cannot be picked up, the owner/seller will sell it at the store and market it to another party or hand it over to the buyer who ordered the pre-order.

By considering the various institutional conditions of Vocational High Schools to become more professional

formal Education Institutions and to be able to graduate their students to be ready for work, based on the research results and research conclusions, the following suggestions are made (Sohidin, 2018).

To the superintendent of high school

Conduct coaching and direction in the schools that are under its guidance, so that graduates of the Culinary Skills Vocational School can have an entrepreneurial attitude, can work independently, and are able to open a business by preparing business plans, carrying out production, and becoming graduates who are ready to work in the business world and the industrial world and ready to compete in the global era.

To the principal of SMK

Efforts should be made to encourage Creative Entrepreneurship Product teachers to carry out assignments based on an attitude of wanting to develop themselves continuously and sustainably by considering the characteristics of students. It is necessary to proportionally facilitate teachers, especially teachers of Creative Entrepreneurship Products at Vocational Schools in applying TEFA, both in order to improve the quality of learning by making innovations that can be applied in learning Creative Entrepreneurship Products at Vocational Schools.

To teachers of creative entrepreneurship products

First, in carrying out their duties the Creative Product Entrepreneurship teacher should be able to motivate Culinary Skills Vocational High School students so that they can become entrepreneurs who are reliable, tenacious, creative, critical, able to solve problems faced and able to work independently to open their own businesses and market their products using the media social.

Second, to make learning Creative Products and Entrepreneurship effective, teachers need to apply the TEFA learning model with the Production Based Teaching Model design found in research to be applied to Culinary Skills Vocational High School Students in Vocational High Schools.

To industry and the World of Work (IDUKA)

To synchronize or align the competencies of Culinary Vocational High School graduates with the needs of the business world and the world of the culinary and culinary industry, it is necessary to have a collaboration (MoU) between industry and the world of work (IDUKA) by collaborating between IDUKA and schools in order to provide support to the school in order to create graduates who have the competencies needed by IDUKA. Collaboration both in improving the curriculum and acting as resource persons and practical mentors in the business world and the world of the culinary and catering industry.

Conclusion

Based on the discussion of research results, it can be concluded that the implementation of TEFA at Culinary Vocational Schools to prepare SMK graduates who are able to apply skills in the catering business sector, SMKN 2 Boyolangu, Tulungagung district, is as much as 77%, while the lowest for entrepreneurial work readiness are students at SMKN Geneng district. Ngawi as much as 48.1%. the highest entrepreneurship readiness criteria from the results of the questionnaire and observation of carrying capacity include schools being able to create an enthusiastic entrepreneurial atmosphere and completeness of facilities and infrastructurem. The ability of SMK catering products that apply TEFA is able to compete and is quite ready to explore the implementation of TEFA and entrepreneurship towards the work readiness of SMK Catering students. Free Learning Curriculum.

Author Contributions

All authors reviewed the results and approved the final version of the manuscript.

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Conflicts of Interest

The authors declare no conflict of interest.

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