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DEVELOPMENT OF PRODUCTIVE VOCATIONAL PROGRAM LEARNING MODELS TO SHAPE THE ENTREPRENEURSHIP CHARACTER OF GRADUATES

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ABSTRACT

This study aims to produce a productive vocational program model to shape the entrepreneurial character of graduates. The design applied in this research is research and development. The results of the application of the research and development approach, in the areas of expertise in Technology and Engineering, Tourism, and Business and Management, can develop a productive vocational program learning model that includes three aspects, namely learning materials, learning methods, and evaluation of productive learning outcomes. Learning materials need to be designed by focusing on productive activities (making or creating products, both goods and services) that emphasize the entrepreneurial character, learning methods are assignment or project-work, and evaluation of learning outcomes needs to apply performance evaluation techniques by emphasizing process and product evaluation. Based on the results of the study, it is suggested: to ensure that vocational graduates enter DU/DI and work independently, it is necessary to be equipped with entrepreneurial productive competencies; and so that the learning outcomes of entrepreneurship can be put into real practice in DU/DI or starting a business, it is necessary to choose a learning model that is considered effective to be applied in learning.

1. Introduction

In the process of implementing learning in Vocational high School, it is known that there is a productive program learning. This learning contains a set of subjects (training) that specifically aim to equip students to have productive competencies through practical learning in schools and/or in the business/industrial world, in accordance with the Indonesian National Work Competency Standards (SKKNI).

The strategic position of learning in vocational productive programs is basically a bench mark that should be a reference for quality in the implementation of education in vocational schools. However, in reality it has not been used optimally, especially for developing the character and entrepreneurial spirit of Vocational high School graduates. Productive program learning in Vocational high School is still more oriented towards debriefing and achieving hard competence, namely technical competence/skills according to work competency standards (SKKNI). Meanwhile, aspects of soft competence, especially entrepreneurial skills, have not been developed optimally. The impact that emerged later was the trend of increasing job seekers (job seekers) from vocational school graduates from year to year. While the number of graduates continues to increase every year, it will certainly increase the number of unemployed graduates. In 2006 nationally there were 628,285 Vocational high School graduates, 736,981 in 2007 and 925,543 in 2008 (Depdiknas, 2008). Data from the Central Statistics Office of DKI reported that in 2009 Vocational high School graduates were the largest contributor to open unemployment (TPT), with 170,232 people, while SMA graduates were 139,754 people, Diploma graduates 20,253 people, S1 and S2 graduates 30,452 people. Nationally, high school graduates still occupy the highest rank in the open unemployment workforce (TPT), and vocational graduates are the biggest contributors. Data in August 2008 presents the percentage of openly unemployed workers based on education graduates as follows: (1) Vocational high School: 14.59%; (2) SMA: 14.50%; (3) Diploma: 13.66%; and (4) universities 13.08% (Ministry of Manpower and Transmigration, 2010). Learn from the large number of Vocational high School graduates who are not

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absorbed in the job market (in 2007 there were 385,986 vocational school graduates absorbed out of 628,285 graduates or around 61.43%) (Depdiknas, 2008). If it is associated with limited employment opportunities, while the number of graduates is increasing sharply every year, then the development of an entrepreneurial mental attitude for Vocational high School graduates has strategic value. This is because the development of character and an entrepreneurial spirit means that the implementation of education in vocational schools is not only focused on preparing graduates to become workers in the business/industrial world, but also focuses on building the entrepreneurial character of graduates.

The need for entrepreneurial character development is actually in line with the results of research at Harvard University in the United States, which states that a person's success is not determined solely by knowledge and technical skills (hard skills), but rather by the ability to manage oneself and others (soft skills).). This study reveals that a person's success is only determined about 20% by hard skills and the remaining 80% by soft skills (Kemendiknas, 2010).

The business of finding work for vocational school graduates is a striking phenomenon and deserves serious attention. Principals, teachers, parents, and students themselves admit that schools in Vocational High Schools are indeed the foundation for getting jobs. The data about this are presented in Table 1. In Winarno's research (2009) concluded that the teaching materials and entrepreneurship learning strategies provided in Vocational High Schools are currently not effective enough in developing students' entrepreneurial values. Likewise, the entrepreneurial understanding and experience of the managers (homeroom teachers, teachers and supervisors) has not fully supported the achievement of the goals of developing entrepreneurial character. The development of entrepreneurial values primarily in vocational schools requires the right approach in education and training (training), both education in schools and work practices in the business/industry world. The development of teaching materials, learning methods, and learning outcomes assessment systems that focus on indicators of entrepreneurial character in productive program learning can basically develop and shape the competence and entrepreneurial character of graduates. Based on the background description in the introduction, the objectives of this study are described as follows. First, describe the need for developing productive program learning models in order to form graduate entrepreneurship. Second, finding a learning model design that integrates teaching materials, learning methods, and evaluating the learning outcomes of productive vocational programs to shape the entrepreneurial character of graduates.

Table 1. Phenomenon of Vocational High School Graduates Looking for Work (%)

Head of Vocational High School	Vocational High School Teacher	Parents of Students	Vocational High School students
70.59% admitted that Vocational High School graduates are still oriented to find work/become employees.	100% admit that Vocational High School graduates are still oriented to find work/become employees.	• 67.64% stated that Vocational High School graduates are still oriented to find work/become employees. • 82.35% said they believed their child would find a job after graduating from Vocational High School • 60.00% said it was a problem if their child after graduating from vocational school did not get a job	• 71.88% stated that after graduating from Vocational High School will look for a job / become an employee. • 100% sure that after graduation it will be easy to get a job • 84.37% stated that it is a problem if after graduating from vocational school they do not get a job

2. Methods

The design applied in this research is research and development (Borg & Gall, 1993). The location of this research is in the city of Probolingo, with research subjects determined purposively, namely Vocational High Schools in the fields of technology and engineering expertise, business and management, and tourism. At each Vocational High School one competency is taken to develop teaching materials, learning methods, and evaluation systems with reference to indicators of entrepreneurial character. The preliminary study was carried out using a questionnaire technique and a literature review. At the development stage, the FGD technique was used, with the main data collection technique being a questionnaire. At the model trial stage, the data collection technique used is the assessment of the results of applying the model to the formation of the entrepreneurial character of graduates. The data collection instruments used in this study were: (1) a questionnaire (question list) was used to collect data at the preliminary study and development stage; (2) a

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questionnaire (assessment scale) is used to assess the results of applying the model to the formation of the entrepreneurial character of graduates. The preliminary study was carried out in a descriptive-analytic manner, to describe and analyze factual models of productive program learning, especially teaching materials, learning methods, and evaluations, in shaping entrepreneurial character. Based on these findings, the researcher formulated a development model. The steps of developing and validating the model are carried out to describe the implementation of the model and assess the results of applying the model to the formation of graduate entrepreneurship. The analysis technique at the preliminary study stage is that the findings or facts of the productive program learning model are described in the form of data presentation (mean, median, mode, etc.), then analyzed (interpreted) in a descriptive-analytic manner. The development and validation stages of the model use a descriptive analysis approach in the form of data presentation; as well as in the size of the applicability of the model and the results of the application of the model were analyzed descriptively-analytically. This research and development flowchart are shown in Figure 1

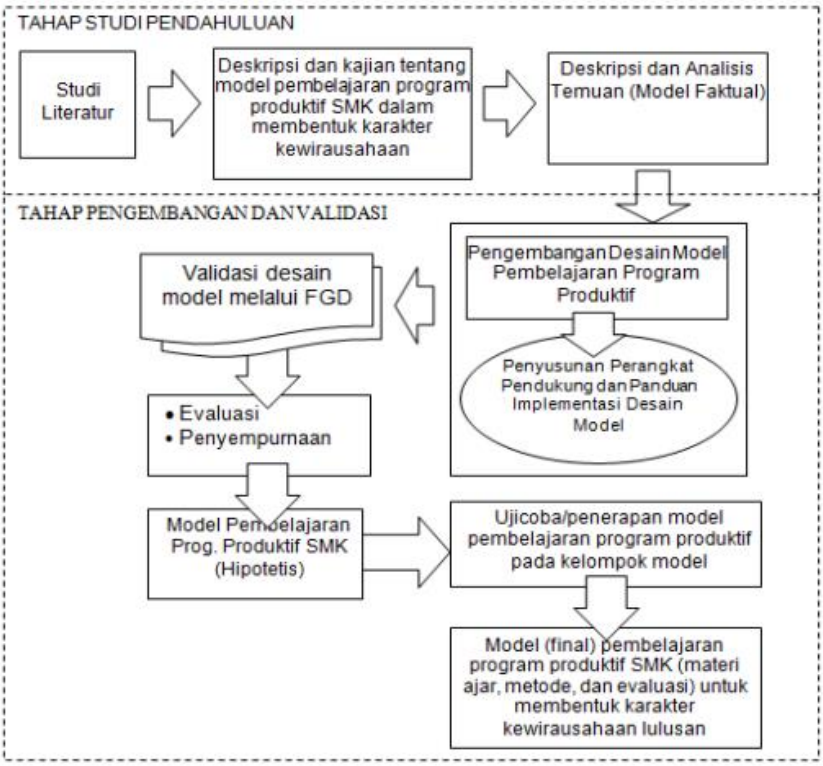

Figure 1. Flowchart of Research Development Process

3. Results And Discussion

The results of the preliminary study are twofold, namely: (1) needs analysis on the development of productive learning models for Vocational High Schools to shape the entrepreneurial character of Vocational High School graduates; and (2) a description of the factual model of the implementation of the Vocational High School productive programs.

3.1 Needs Analysis Results

The results of the needs analysis were obtained from two groups of data sources, namely human resources and the type of Vocational High School. Analysis of the needs of the HR group involved respondents from the Principal of Vocational High Schools, teachers, DU/DI instructors. Needs analysis through the type of Vocational High School, involving the Vocational High School in the Business and Management Skills Program, Tourism, and Technology. The variables that become the focus of model development include: learning materials, learning methods, and evaluation of learning outcomes. The findings are described in the form of data presentation (mean, median, mode), then analyzed (interpreted) in a descriptive-analytic manner. The processed data can be seen in Table 1 and Figure 2. Referring to the Likert scale concept, the meaning of the score range is as follows: (0.00 to 10.00) is very much needed; (11.00 to 20.00) required;

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(21.00 to 30.00) not required; and (31.00 to 40.00) is not really needed. Based on this, Table 1 and Figure 2 above mean that teachers, principals, and DU/DI instructors generally say that in terms of materials, methods, and evaluation of productive program learning, development is needed to form graduate entrepreneurship.

Table 2. Respondent Data Based on Human Resources

Resource	Theory	Method	Evaluation
Teacher	19.69	17.14	19.03
Principal	21.14	17.71	18.43
Instructor	18.54	16.98	18.23

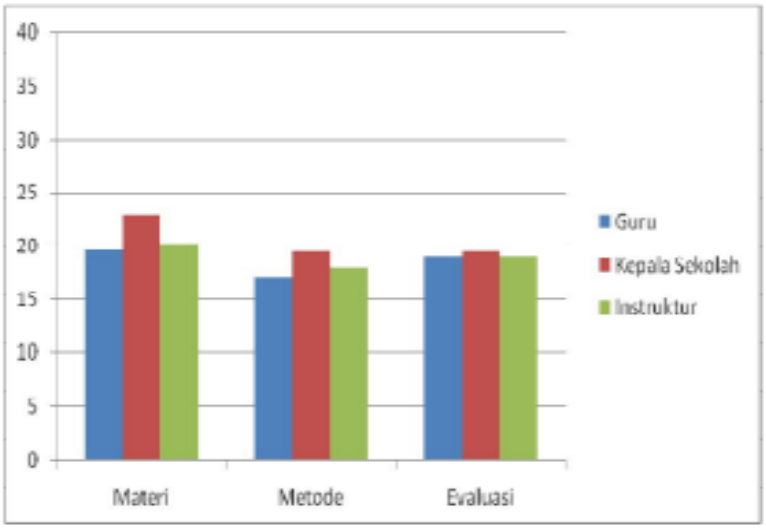

Figure 2. Graph of HR-Based Model Development Needs Analysis

Table 3. Respondent Data by Type of Vocational School

Resource	Theory	Method	Evaluation
Business	16.71	13.86	16.86
Tourist	19.71	17.02	18.88
Technology	22.17	20.17	20.17

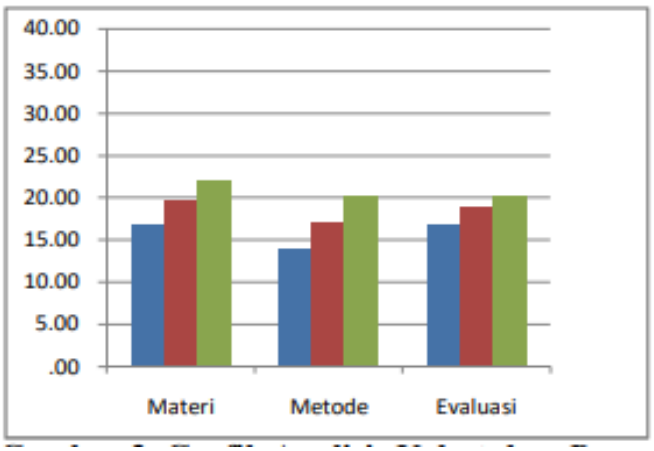

Figure 3. Graph of Model Development Needs Analysis

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Based on Vocational High School Expertise Table 3 and Figure 3 above show that the Business and Tourism Vocational School group considers the material, method, and evaluation aspects of productive program learning to be needed for development to form graduate entrepreneurship. The Technology Vocational School group considers it less necessary to develop.

3.2 Model (Factual) Learning Program

Productive Based on the results of data collection from respondents (principals, productive teachers, and DU/DI instructors) both at Vocational Schools in Technology and Engineering, Business and Management, and Tourism, it can be described that: (1) productive learning materials so far contain more skills technical (productive) by emphasizing the manufacture/creation of products or services, but not related to the development of entrepreneurial character; (2) productive learning methods that are preferred by teachers are lectures and assignments; (3) assessment of learning outcomes of productive programs emphasizes less on process assessment, and emphasizes more on outcome (product) assessment.

Figure 4. Chart of the Factual Model of Vocational Productive Program Learning

Facts that occur, materials, methods, and assessment of learning outcomes of productive programs are not carried out in a unified whole so that they cannot form and develop entrepreneurial skills. The results of implementing productive program learning also cannot be used to assess and measure the development of entrepreneurial skills.

3.3 Design Results Model Development

Productive Learning Based on the results of needs analysis and description of factual model findings, the development design is focused on three aspects in an integrated manner as follows. (1) The development of learning materials is focused on technical (productive) activities by emphasizing the manufacture/creation of goods or services, but at the same time being associated with the development of entrepreneurial character. (2) The learning method emphasizes assignments and/or project-work. (3) The assessment applies performance appraisal techniques by emphasizing the learning process and results (products). Schematically, the development model is presented in Figure 5. This development model is applied by teachers since the preparation of the lesson plan (RPP) by aligning materials, methods and assessments as the main components in learning scenarios that contain entrepreneurial content. The material is designed based on the manufacture/creation of products or services with an entrepreneurial character emphasis; the method is designed with assignments and/or project-work, while the assessment is designed with a performance technique that emphasizes process and product assessment. The designs for the three main components (materials, methods, and assessments) are implemented in learning activities, in order to obtain learning outcomes (students) who have technical competence (productive) and entrepreneurship. This development design can be applied to Vocational Schools in the areas of expertise in Technology and Engineering, Business and Management, and Tourism.

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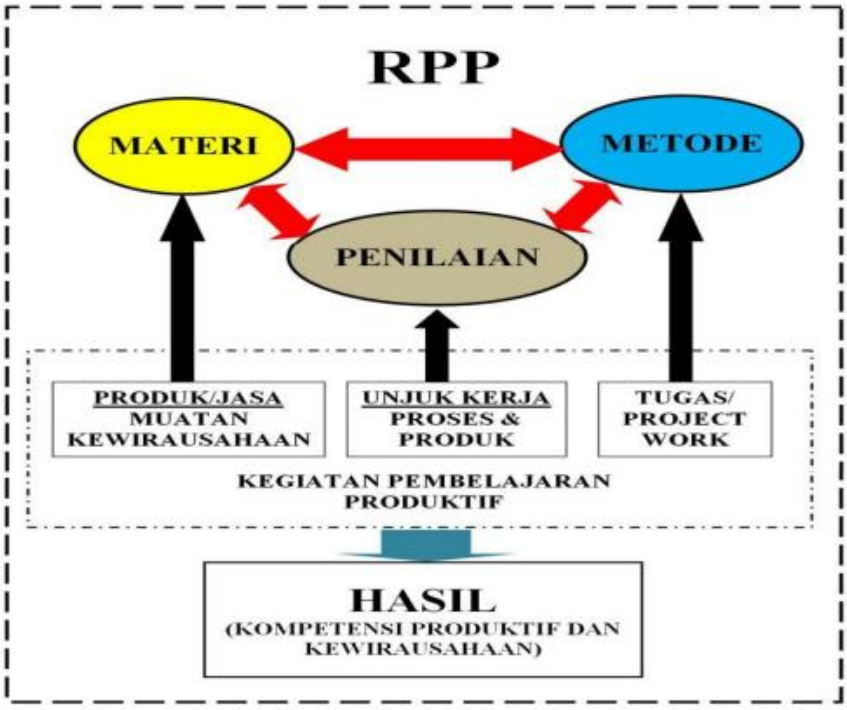

Figure 5. Chart of Productive Program Learning Development Models for Shaping Graduate Entrepreneurial Character

3.4 Discussion

Vocational High School as a secondary education institution so far has only been prepared to fill the existing job fields, not yet as a job creator. Meanwhile, universities that are expected to produce graduates who have knowledge, skills, creative power and high fighting power to open and develop job opportunities have also not succeeded in carrying out their duties. This is because the learning model and/or method used has not been able to internalize the entrepreneurial attitude, spirit and character to students. So far, the entrepreneurship learning methods that take place in Vocational high School are generally lectures, assignments to sell products, and observations. So that entrepreneurship education needs to be revitalized, which includes: structuring the curriculum, the role of schools, organizing the learning process, improving the teachers themselves to be able to produce graduates who are competitive. Entrepreneurship learning should take place in an inspiring, interactive, challenging, fun, and motivating interaction (Inang, Thaitami & Mulia, 2019).

The purpose of Vocational high School as stated in Law Number 20 of 2003 concerning the National Education System, Article 15 states that vocational education is secondary education that prepares students specially to work in certain fields. In order for Vocational high School graduates to be able to work with other people or work independently (entrepreneurial), then Vocational high School must provide skills that really match the needs of the business/industry world. For this purpose, this paper provides a model of work-based subjects based on research results (Usman, Raharjo & Haryanto, 2016).

The learning process in Vocational high School uses the 2013 Curriculum as the basis for learning. The 2013 curriculum uses a scientific approach which consists of observing, asking questions, gathering information, associating, and communicating in accordance with the views of the Ministry of Education and Culture Article 81A of 2013, that knowledge cannot be simply transferred from teachers to students. Learners are subjects who have the ability to actively seek, process, construct, and use knowledge. Therefore, in active learning, it is determined by the learning components that make up a learning system (Aqsa, Nur & Lamasitudju, 2020).

Several concepts of the learning approach in Vocational high School have harmony in the formation of entrepreneurial character, so that they can be implemented in the learning of the Vocational Productive Program. Sudarmiatin (2009) describes several appropriate approaches in learning Entrepreneurship in Vocational High Schools, namely: (1) problem-based learning (problem-based learning); (2) project/task based learning (project based learning); (3) work-based learning (work-based learning); and (4) service-based

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learning (service learning). The implementation of several education and training approaches can be independent, or integrated between several approaches. However, what is essential is that the development of Entrepreneurship for Vocational high School students is expected to contribute to several things, including: (1) increasing the competence of graduates; (2) sharpening productive competencies through the development of entrepreneurial skills according to their field of expertise; (3) the ability to seize and create opportunities based on the information obtained; (4) the habit of working independently and full of initiative; (5) have a creative and innovative attitude in the face of change (Depdiknas, 2008). Productive program learning is basically dual-based, namely learning in schools, and strengthening in the business/industrial world, especially in developing productive competencies. Al-Farsi & Lee (2008) explain that vocational learning will be effective in developing work and entrepreneurial competencies if it is carried out collaboratively between schools and the business/industry world. Based on research findings, aspects that need to be developed in productive program learning are learning materials, methods, and assessments. These three aspects are the main components in the curriculum. Thus, the curriculum factor becomes important in the development of learning to shape employability, and graduate careers. As explained by Smith (2007), the formation of employability and career skills of graduates must be designed in the school curriculum. In line with this, the development of materials, methods, and assessments in productive program learning will strengthen the development of employability and career skills of graduates.

The ability of teachers and instructors of vocational education also gets very important attention. Mdebele (2006), considers the ability of teachers and instructors of vocational education to be important in the development of graduate entrepreneurship. In line with the findings of this study, the ability of teachers and instructors in designing learning/training will improve the quality of materials, methods and assessment of productive program learning outcomes.

4. Conclusion

Based on the results of the research and discussion above, the following conclusions can be drawn. First, the need to develop learning models for productive vocational high school programs to form graduate entrepreneurship is considered important by principals, productive teachers, and DU/DI instructors, especially development in aspects of learning materials, learning methods, and evaluation of learning outcomes.

Second, the learning model of the Vocational High School productive program that is currently being implemented can be described as follows: (1) productive learning materials contain more technical (productive) skills by emphasizing the creation/creation of products or services, but not related to the development of entrepreneurial character, (2) the productive learning model that teachers choose more is lectures and assignments, (3) the assessment of learning outcomes in productive programs emphasizes less on process assessment, and emphasizes more on outcome (product) assessment.

Third, the design of a productive program learning model is produced which is carried out in a unified whole to develop entrepreneurial skills, including: (1) the development of learning materials focused on technical (productive) activities by emphasizing the manufacture of goods or services, but at the same time being associated with the development of entrepreneurial character. through the formulation of indicators of achievement of learning outcomes, (2) the learning model emphasizes assignments and/or project-work, namely directing students to systematic and standard work procedures to make or complete a product (goods or services), through a production process/work that actually, (3) the assessment applies performance appraisal techniques by emphasizing the process and results (products) of learning, namely observing the activities of students in doing something from planning, implementing learning, collecting data, organizing, processing and presenting data.

Referring to the conclusions above, the following suggestions are put forward. First, to ensure the readiness of Vocational High School graduates to enter DU/DI or work independently, Vocational High School graduates need to be equipped with entrepreneurial competencies. Second, so that entrepreneurship learning outcomes can be absorbed and durable and can be put into practice in DU/DI or starting a business, it is necessary to choose a learning model that is considered effective to be applied in entrepreneurship learning for Vocational High School graduates.

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