



## DEVELOPING TRAINING MANAGEMENT MODEL OF ENTERPRENURSHIP LEARNING BASED ON PRODUCTION UNIT TOWARD VOCATIONAL HIGH SCHOOL TEACHERS

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### Abstract

The study aims to: describe the design of the training model, obtain the experimental results of the model, and investigate the effectiveness of the training model. This study employs the approach of Research and Development (R&D). The stages are: undergoing a preliminary study, setting up the empirical models based on the results of the preliminary analysis, drafting the hypothetical model based on the empirical models, designing validation by some experts, improving the model design, testing the effectiveness of hypothetical models, refining the hypothetical model into a finding model. The data are collected through observation, interview, questionnaire, and documentation. The descriptive data are analyzed qualitatively and analytically, using a paired t-test at a significance level of 5%. The model is equipped with a manual book of management training as its outcome product. The hypothetical model validation results show: the model performs very high effectiveness toward the mean score of teachers' ability in designing entrepreneurship learning based on production unit after the application of the model at the score of 4.89 and before the application of the model at 1.36. The  $t$  value = 36,085 >  $t$  table = 2.776 at 0.05 significance level, the difference of mean scores of instructional practices in schools for trained and untrained teachers at SMK 1 Jepara is at 4.83 and 1.83; SMK Kedung is at 4.83 and 1.50; SMK Kalinyamatan is at 4.67 and 1.67; SMK Pakis Aji is at 4.83 and 1.67, and SMK Muhammadiyah Keling is at 4.33 and 1.50. The evaluation results of the hypothetical model effectiveness based on its mean score is at 4.26 (very high) over 13 indicators. The study concludes that the training model of entrepreneurship learning based on production unit is effective to improve the quality of teachers in teaching entrepreneurship.

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## INTRODUCTION

In order to reduce the number unemployment rate, one of the ways that can be done is by developing entrepreneurship education as early as possible. It is because a nation will be able to advance into a more prosperous nation when the amount of its entrepreneurs is at least reaching 2% of the total population. In 2007, the number of entrepreneurs in Singapore was 7.2%, in the United States was 2.14%. Indonesia, which had a population of approximately 220 million, the number of entrepreneurs was only 400,000 people (0.18%), which should have amounted at 4,400,000 people. Such number means that Indonesia lacks of entrepreneurs as many as 4 million people. Based on the facts, an entrepreneurship education in Indonesia actually receives very insignificant attention, both by education or society. Therefore, finding its solution is essential, especially in figuring out how education can transform a human being to have an entrepreneurial character. What provision should be given to the students to possess a strong entrepreneurial behavior, so they will be able to be individuals who are independent workers when they work in a company and the ones who even create new job fields at least for themselves.

However, the problem lies on the limited access of entrepreneurship education at school which mainly concerns to the values of introduction level, and not at the level of internalization and action in everyday life. Engkoswara (1999) states that human life in Indonesia by 2020 will be getting better and more dynamic. Therefore, the graduates are required to possess a strong quality and ability to self-reliance in order to encounter such challenges, threats, and barriers caused by the change. The challenge that mainly occurs within this global era is the depletion of independence within Indonesian human quality. Through the individual development, communities are

expected to experience "self-empowering" to be more creative and innovative.

The quality of education must be improved continuously. Djojonegoro in Supriya (1997: 7) argues that in the context of human resource development, education as conscious effort is directed to develop the potential of learners in order to manifest their abilities, skills, attitude and personality according to the national educational goals. Therefore, every young generation in Indonesia should have the following quality characteristics: (1) basic quality characteristics, which is being faithful and devoted to God Almighty, noble character, intelligent, disciplined, physically and mentally healthy, having independent personality, a civic responsibility, and nationality; (2) instrumental quality characteristics which include: the productive ability, the ability to use the resources, the ability to communicate, the ability to work, the ability to use data and information, having the problem-solving skills and the ability to use science and technology (Djojonegoro, 1999: 25).

Vocational education needs to also equip students with the entrepreneurial spirit that will not only lead the students to be a mere worker but also to be able to open up job vacancy (Djojonegoro, 1999: 23). Through training and work practices at school and at DU/DI, creativity and work ethic of the students are expected to improve. Work ethic as an impulse arising from a person to pursue high quality and productivity needs to be inculcated within students' personality so that they have productive capability and entrepreneurial attitude (Djojonegoro, 1999: 55). Myrah (2003: 38) states: entrepreneurship as a relevant economic and policy for the changing global market place that characterizes the developed nations of today. Ministry of Education Strategic Plan 2010 - 2014 (2010: 21) also states that vocational schools must provide the guidance toward the entrepreneurial development.

Government Regulation No. 19, 2005 on National Education Standards of Article 19 paragraph 1 states that the learning process in the unit must implement learning which is interactive, inspiring, fun, challenging, motivating the students to actively participate, and providing enough space for initiative, creativity, and independence in accordance with students' flair, interests, physical and psychological development. According to the observation of the researchers towards the entrepreneurial learning which is applied in vocational Jepara district, the entrepreneurial education tends to be taught in a conventional approach, giving lesser association with the problems in the students' daily life, and not integrated into the activities of production units. However, Siswanto research (2012) shows that production units can contribute to enhance the entrepreneurial spirit of students by involving students directly in the whole business process from planning, production, and marketing.

Kusdiyah (2008: 1) explains that there are two reasons why human resource is important for the success of the organization, namely: (1) human resource affects the efficiency and effectiveness of the organization in designing and producing the goods and services, monitoring the quality, marketing the products, allocating the resources financially, as well as determining the overall objectives and strategy of the organization, (2) human resource is the main organization expense in running a business. The development of human resource from the perspective of education should stem from the low quality of the resources. The problem of poor quality becomes the focus of the study toward human development human resources. The concept of human resource development is described by Muhadjir in Suryana (2008) that the development of human resources as a human quality improvement in physical and mental sense. Gilley (1995: 5) states that "the development of people within an organization is directed at the performance improvement so that the organization can

benefit a greater profitability (organizational development)". Furthermore, Gilley splits the concept of Human Resource into three categories: (1) human resource utilization, (2) human resource planning and forecasting, (3) human resource development.

Teachers are professional educators with the primary task of educating, teaching, guiding, directing, training, assessing, and evaluating students in a formal education. The main task will be effective if the teachers have a certain degree of professional competence reflected within their expertise, skill(s), and ability that meet the quality standards or specific ethical norms (Danim. 2010: 17). The statement is in accordance with the Act 14 of 2005 about teachers, stating that a professional is an activity or work performed by a person's life and a source of income that requires skill, finesse, or ability that meet certain quality standards or norms and requires professional education. Furthermore Djojonegoro (1998) in Danim (2010: 55) states that professionalism in a particular position is determined by three important factors, namely: having special expertise prepared by education or specialized skills, possessing the ability to improve skills and special skills that are mastered, and receiving adequate income in return for its special expertise.

The training needs to be designed through certain stages in accordance with the management functions which include planning, implementation, and evaluation. Jeffries et al (1993: 74) states that the process of training outline includes the stages: diagnosing (getting it right), doing it well (learning event), transferring the learning (making it stick), and evaluation. Irianto (2001: 17) mentions that in designing training, there are at least the following stages: (1) the analysis of training needs, (2) the implementation of training, and (3) the evaluation of training. Furthermore Sudjana (2007: 78) states that the management steps of training consists of: (1) the identification of needs, (2) the formulation of training objectives,

(3) the preparation of training programs, (4) the preparation of the preliminary evaluation tool and the final evaluation, (5) the preparation of the trainers, (6) the implementation of the initial evaluation, (7) the implementation of the training program, (8) the implementation of the final evaluation, (9) the assessment of the training process, (10) the assessment of the training outcomes, (11) the assessment of the impact of training, and (12) the assessment of the strategy of training model.

Secondary vocational education cannot be separated from DU/DI as a labor-absorbing institution. Therefore, vocational education should be designed, implemented, and evaluated within an integrative link with DU/DI, hence the results are appropriate, suitable, and equivalent with the demands and needs of DU/DI. To be able to achieve the necessary qualifications and competence of DU/DI, SMK should then design a set of concrete activities relevant to the needs of students while studying and after graduation later. Related to the preparation of this labor, it is explicitly mentioned in the Government Regulation No. 29 of 1990 in Article 29, paragraph 2, that: "In order to prepare SMK students into the market, the SMK can set up a production unit operational in a professional manner". In addition, graduates of vocational schools must not only be prepared to be able to work professionally in the DU/DI, but also to work independently through entrepreneurship in the field. The presence of the production unit at the SMK can provide a real work experience for students to master productive competencies professionally. In addition, students are also prepared to become entrepreneurs when they are graduated and not only to be a job seeker but also to be a job creator. The entrepreneurial competence can be obtained through learning in a school production units. This is in line with the statement of the President, that the entrepreneurial spirit must be nurtured from childhood so that national education is not only

being the birth of job seekers but job creators (Communications Newsroom, 2009: 1).

This study aims to develop a model of entrepreneurial learning based on training management of production units toward vocational teacher. Specifically, the research objectives are: (1) to describe the design of management models to increase the competence of entrepreneurship of vocational teachers in Jepara in implementing the entrepreneurial learning based on production unit, (2) to obtain the results of the trial design models, and (3) to determine the effectiveness of the training management model of entrepreneurial learning based on production units.

Theoretically, the significance of the research is to increase the repertoire of knowledge and to contribute the ideas about concepts, strategies, and information of training management model development based on the entrepreneurial learning production unit. While practically, the study can obtain the results of the development of entrepreneurial learning of training management model based on the production units that is beneficial for education managers.

## METHODS

This study employs Research and Development research design. In accordance with the definition of R&D as described by Nusaputra (2011: 78-79), that (1) R&D refers to the effort which is required to create new products, which includes the exploration stage determining the viability of the project and the methods to process design which required to produce the product. (2) R&D is a term which is used to describe the activities associated with the creator or new discoveries, methods, products and/or services which is required in meeting the needs of the market (demand). The stages which have been undergone in this study follow the simplified model of Borg and Gall, namely: conducting a preliminary study to carry out the literature review and field observations,

setting up the empirical models based on the analysis of results of preliminary studies, drafting the model (hypothetical models) based on the empirical models, validating the design by the experts and practitioners, improving the design models, testing the design, evaluating the design refinement to produce a model of the findings, writing the research reports, seminars, and publishing the result in the scientific journals.

This study uses a purposive sample, which means that the subjects who are used to provide information about the circumstances of the research background, research purpose, and research questions as mentioned above. Subjects in this study include: (1) entrepreneurial teachers of SMK in Jepara about 20 people as participants, (2) students of five schools with 2 classes each for the experimental group and control group, namely SMK 1 Jepara, Kedung SMK, SMK Kalinyamatan, SMK Pakis Aji SMK, and SMK Muhammadiyah Keling. The variables in this study are the entrepreneurial competence of teachers, the implementation of learning, the ability of trainers, the students' abilities, and the students' entrepreneurial attitude.

The data in this study are collected through: observation, document study, interviews, task collection, focus group discussions (FGD), questionnaires, and field notes. The research instrument used for the application of the model for the training and data collections are: (1) the information sheet; used to measure the entrepreneurial ability of the training participants based on the production unit. The measured aspects are (a) the ability of teachers to design entrepreneurship learning before and after the training; (b) the ability to apply the entrepreneurial learning in the classroom based on the production unit for the trained teachers as an experimental group and the untrained teacher as a control group; (c) the attitudes and abilities of students in entrepreneurship for the experimental and control groups. The preparation of this

observation sheet is in the form of a score ranging from 1 to 5, with a score of 1 indicates the lowest ability, and a score of 5 indicates the highest ability; (2) closed questionnaire; developed to measure the ability of the management team of entrepreneurial learning training based on production units. Questionnaires are addressed to the trainees to provide a response on the implementation of training and response to the trainer's ability.

The aspects which are measured in the training are: (a) the context of training, (b) the inputs of training, (c) the process of training, (d) the results of the training, (e) the benefits of training, and (f) the impact of training. The aspects of trainers' capabilities include: (a) the ability to prepare materials; (b) the ability to carry out the training. Sugiyono (2009: 306) argues that the qualitative researcher as a human instrument, functions to set the focus of research, to select the informants as a source of data, to collect the data, to analyze the data, to assess the quality of the data, to interpret the data, and to draw conclusions. The focus of the research problems that must be answered is about "how the planning, implementation, organizing, and controlling in the management training model of entrepreneurial learning based production units is and how far the effectiveness of the model is". Based on these objectives, in this dissertation study, researcher uses the technique to the analysis of qualitative and quantitative approaches. Two approaches which are chosen in this study are based on the opinion of Bogdan and Biklen characteristics of qualitative research, Creswell and opinion regarding the characteristics of quantitative research.

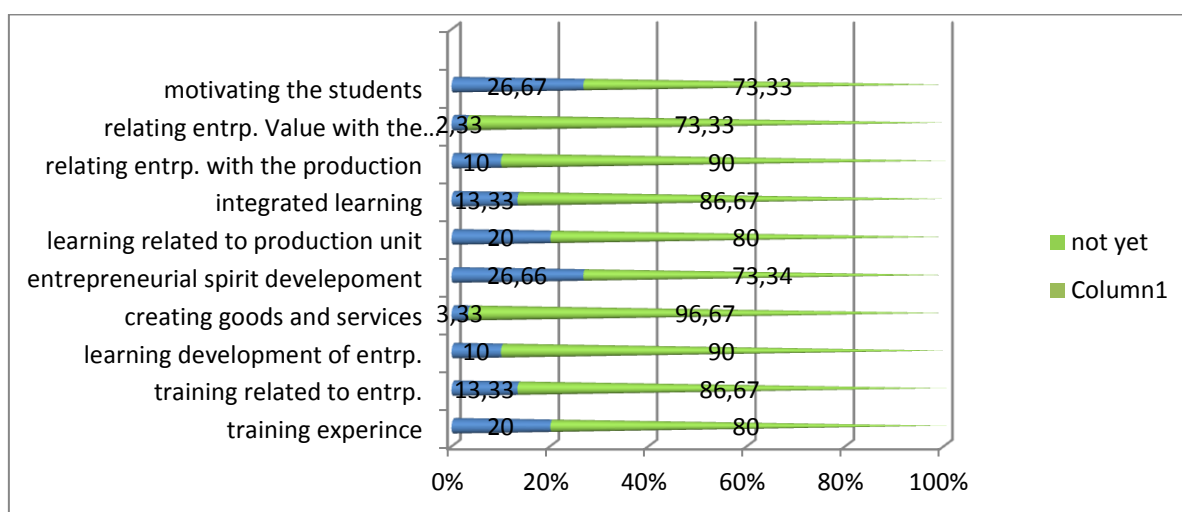
The descriptive qualitative analysis is needed to describe the management training model of entrepreneurial learning based on production unit and to describe its effectiveness. Quantitative analysis is needed to measure the variables of teacher competence, training, trainers' ability, students' ability, and to

measure the effectiveness of the model through a t-test to test group and control group.

**RESULTS AND DISCUSSION**

The Initial data retrieval is done by using observation sheets and interviews with the entrepreneurial teachers in Jepara regency. This observation is to unravel the training experience which has been undergone by teachers and to describe the entrepreneurial teacher profiles

before joining the training. It is also needed to obtain the information about the condition of the empirical experience of teachers in training and also the type of teachers' competence which should be developed for the analysis of the needs in the training materials model development. The results of the observations on the preliminary study on the experience of training teachers and implementing entrepreneurial learning based on production unit is shown in the figure 1 below:



**Figure 1.** Observations of Entrepreneurship Vocational Teacher Experience in Joining Entrepreneurship Training

The above background explains that the training is a strategic way in order to increase human resources particularly to improve the quality of teachers. The training program is designed to encourage a continuous improvement toward teachers' quality that ultimately has an impact on the quality of the graduates. Although the government has tried to increase the professionalism of teachers by providing opportunities for training, not all teachers can attend the professional development of teacher training. According to the observations results of 30 SMK entrepreneurship teachers who have been interviewed provides information that their experience in joining entrepreneurial training is still very limited (only about 20%), so the needs

for the training models for the development of teacher competencies related to entrepreneurial learning based on production units is very high. Based on the results of empirical studies in the field of vocational profiles of teacher competence in implementing entrepreneurial learning based on production unit, it is assumed that we need to design a training model focusing on the vocational teacher professional development practices in implementing entrepreneurial learning based on production units.

The effectiveness of hypothetical model is seen from the aspects of the ability improvement of participants in the entrepreneurial learning model based on production units before and after training, the capability of trainers, the

aspects of training implementation, and the aspects of student learning outcomes. As noted by Marwansyah and Mukaram (2000: 78) that measuring the effectiveness of training is based on several categories, namely: (1) learning outcomes that include knowledge and skills in participants after training, (2) reaction of the participants in the form of opinions and attitudes about the trainers, the way presenting the training, the usefulness of materials, and the discipline during the training, (3) outcomes which are associated with the quality improvement and have a high motivation to apply the training, and (4) changes in behavior that occurs as a result of a training program that includes a sense of responsibility for the tasks given.

Taking into account the evaluation results of the ability of entrepreneurial learning based on production units before and after the training, the result shows an increasing total score of mean at 2.7 to 4.6. Each indicator has simultaneously increased, namely: (1) formulating learning goals which is increased from 2.9 to 5.0 (2) setting of learning activities which is increased from 2.8 to 4.6 (3) creating the summary of learning materials which is increased from 2.9 to 4.7 (4) making the clue production which is increased from 2.7 to 4.6, (5) making an assessment sheet products which is increased from 2.5-4.5, and (6) making a presentation assessment sheet which is increased from 2.4 to 4.2.

The researcher and his team conduct an evaluation before training on entrepreneurial learning design made by the teacher toward the determined material which are applying the technique of materials converting (bread donuts), analyzing the business opportunities (handicrafts), planning a small business / micro (screen printing fabric), and achieving work behavior (octopus balls). The choice of material is based on the preliminary observational analysis where teachers really wish that such materials must be taught in the production unit. The results of the evaluation of learning design

give the average score of all indicators below 3. This shows that the ability of teachers in designing entrepreneurial learning before the training is still low. The results also demonstrates that the learning objectives made by the teacher have not shown a significant relationship between production unit and entrepreneurship, teachers also have not integrated the entrepreneurship with the production unit adequately, the teachers have not included the product manufacturing instructions, product assessment, and presentation assessment. The fact is also supported by the preliminary observation which shows that more than 66.67% out of the 30 observed teachers have never implemented the entrepreneurial learning based on production units, because it is difficult to create the lesson plans by integrating entrepreneurship with a production unit to enhance students' skills in practicing production unit and to foster an entrepreneurial attitude. Therefore, the learning needs to be designed to create the learning activities in accordance with the expected goals.

The evaluation of the participants in designing learning after the training shows a very high level of capability, which is indicated by the mean score of all indicators at 4.6. And the score of each indicator is above 4. The level of ability in designing the entrepreneurial learning based on production units shows very high criteria. This can be seen from the results of the assignment given to the participants by the trainer to draft after learning theories. Based on the evaluation of participants' submission, it is indicated that the participants have formulated learning objectives by linking the concept of entrepreneurship to the production unit, setting the entrepreneurial learning activities by integrating the production unit, involving the instructions of product manufacturing, product assessment and presentation assessment. The increasing ability of the participants is also supported by trainers who have a very high level of ability, shown by the mean score of more than 1 for the trainer.

A brief description of finding model is a model of training program management to improve the teachers' competence in implementing entrepreneurial learning. Implementation of the training program is managed by applying the functions of planning, organizing, implementing, and controlling. The implementation of each management functions is conducted through monitoring as the improvement feedback before moving to the next stage. This training management model is a hypothetical model of development that has been empirically tested with a very high effectiveness in improving the competence of teachers who are applying the entrepreneurial learning based on production units. This model is intended to managers of training programs, especially program managers of quality improvement of teachers, in order to be implemented continuously.

The expected competencies in this training are the ability in: designing, implementing, and evaluating students in entrepreneurial learning based on production units. The characteristics model of training management of entrepreneurial learning based on production unit consist of the several stages: planning, organizing, implementing, and controlling. The planning stage is the first step to identify the needs, which consist of: (1) the needs priority, (2) the needs of learning material, (3) the formation of committee, (4) the formulation of objectives, program curriculum and teaching methods in training, (5) the recruitment of participants, (6) the recruitment of coaches, (7) and the facilitator of training materials, (8) the discussion and coordination. The organizing stage is a step in determining the program design which consists of the following elements: (a) basic implementation, (b) purpose of training, (c) type of activity, (d) training materials, (e) participants, (f) facilitator, (g) committee, (h) training schedule, (i) training place, (j) training costs, (k) learning process, and (l) evaluation. The implementation stage is the training process consisting of the following

elements: (a) opening, (b) technical explanation, (c) learning of theory, (d) assignment, (e) learning practice, (f) teaching practice in schools with mentoring and (g) reflection. The control stage is the evaluation activities which are consisting of the following elements: (1) the evaluation plan, (2) evaluation of the implementation, (3) evaluation of the participants.

The final model is obtained through the following stages: conducting the needs assessment, designing the model, implementing the model, and evaluating the model. It is in accordance with the agreement among management experts stating that a good training needs to be designed through certain stages according to the management functions which includes planning, implementation, and evaluation. Jeffries et al (1993: 74) states that the process of training generally involves the following stages: diagnosing (getting it right), doing it well (learning event), transferring the learning (making it stick), and evaluation. Irianto (2001: 17) mentions that in drafting the training, there should be at least the following stages: (1) analysis of training needs, (2) implementation of training, and (3) evaluation of training.

This training model is developed with the reference design and evaluation models developed by Parker as published by Craig in the book *Training and Development Handbook: A Guide to Human Resource Development* (1976: 19-20). According to them, the training model consists of seven phases of activities, namely: (1) carrying out the identification and analysis of training needs, (2) formulating and developing the training objectives, (3) designing a training curriculum, (4) selecting and developing the training methods, (5) defining the training evaluation approaches, (6) implementing training programs, and (7) implementing the results of the measurement exercise.



## CONCLUSION

The conclusions of this study are: planning the training model which involves an exploratory study, verification and analysis of data, coordination and socialization of training programs, discussions with experts associated with the study design, establishment of factual models (empirical models), and development of the empirical models into a hypothetical model; Implementation of the training model involves the following stages: planning which includes: establishment of the learning needs, establishment of the committee, formulation of goals and curriculum, determination of the learning strategies, determination the means of learning, plan funding, and mentoring plan; Organizing which includes: specification of the committee task, coordination within task implementation, recruitment of potential participants and trainers, participants, and provision of facilities; Implementation which includes: registration, opening of the training, learning the theory, learning by doing, learning and mentoring the practices in schools; Evaluation which includes: evaluation of the ability of teachers, evaluation of the ability of students, evaluation of the training, and evaluation of the program. The effectiveness of a hypothetical model of the mean score of 4.26 is obtained from the 13 indicators, namely: the ability of teachers to design learning at 4.64; the ability of teachers to implement learning at 4.64; the ability of teachers to evaluate learning at 4.36; the ability of teachers to make the product at 3.88; the ability of the students to present the results at 3.69; the student entrepreneurial attitude at 4.33; the aspect of the process at 4.37; the aspect of the results at 4.36; the aspect of usefulness at 4.15; the aspect of impact at 4.38; the aspect of context at 4.23; the aspect of input at 4.14; and the ability of coaches at 4.22.

This study suggests: for training managers, to implement a management model of entrepreneurial learning based on production units with different subject matter, because the

model is effectively proven in improving the ability of the teacher; For trainers, to create a conducive learning, to exercise the skill to make the product, to motivate students with the entrepreneurial spirit, to apply the values of entrepreneurship, and to evaluate the participants; For entrepreneurship teachers, to initiate the network within a group of vocational teachers to help socializing the entrepreneurial learning models based on production units in order to improve the quality of teachers and learners in a sustainable manner; For other researchers, to develop the training models with different subject matter and to test it on a wider scale; For schools, to be able to organize the training because it is very helpful to improve the competence of teachers in designing learning and in increasing students' motivation to learn entrepreneurship; Needs to test on a larger scale; And the needs of further analysis and interpretation of the monitoring and evaluation results on each function of planning, organizing, implementing, and monitoring as the feedback to increase the quality of initial and ongoing training services.

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