



**THE DEVELOPMENT OF DUAL SYSTEM EDUCATION IN VOCATIONAL HIGH SCHOOL IN CREATING THE SCHOOL AUTONOMY**

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**Abstract**

The Role of Vocational High School (SMK) in preparing high school-skilled labors, is showing a less encouraging trend when viewed in terms of the number of competent graduates. It is caused by several factors, low quality of human resources, infrastructure, curricula and learning method, education management and management operational support that is not optimal because it comes from city and state budgets. The purpose of this study is to find a dual system education development model in creating an autonomous school. This study was conducted at SMK in the city of Semarang which is projected to be national and international standard by taking sample of 8 SMK. Respondents in this study were 59 SMK teachers and 86 SMK students. Data collection technique is using enclosed questionnaire which include open questions. Analysis technique is using descriptive analysis. The study results shows that dual system education materials taught is not complete and not as desired. Many SMK yet have a clear roadmap about the development of dual system education in SMK. Low of networking with the industry causes the dual system education learning is not effective. This study propose an integrated model, so that SMK is able to produce graduates with high motivation and entrepreneurial skills.

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## INTRODUCTION

The globalization occurred during this time has bring forth changes in all fields. The organization's environment is also change at any time, so that business organizations are required to always make changes and adapt in order to always be able to win the competition. Ulrich (1998) stated that the key to successfully deal with a change is lies in human resources. Free trade that will be realized in 2010 and 2020 requires the availability of skilled workforce and have high competency to compete in the labor market, whether it regional, national and international. Consequently, formal educational institutions such as the High School (SMU) and Vocational High School (SMK) are required to produce graduates who are ready to work, having entrepreneurial attitude, character and behavior and also life skill to work in all fields in accordance with the needs of industry.

On the other hand, with the presence of regional autonomy, the role of the city / county government is vital in developing education and improving the quality of education. The alignment of the central government and the city / county government in education development is reflected in the size of the education budget in the city budget and the state budget. All this time each of the city / county government has not been able to allocate the education budget by 20 percent in accordance with the mandate of the law. As a result, the education development has not been able to provide services equally to all levels of society. The average numbers of school participation (APS) group age of 13-15 years in 2003, 20 percent of richest group has reached 81.01 percent, while 20 percent of poorest group poorest has only reached 67.23 percent. For ages 16-18 years, the APS of richest group is 75.62 percent and the APS of poorest groups is only 28.52 percent. The Ministry of Education and Culture data show that about 88.4% of high school graduates do not go on to college, and 34.4% junior high school graduates do not go on to high school. This condition indicates that there is a gap between the poor and the rich people.

Looking at the phenomenon and the fact of educational conditions and increasingly difficult access to education by the society, it is required comprehensive actions to address the problems of education in Indonesia. The education world should be able to play an active role to prepare educated human resources capable of facing the challenges of life whether it local, regional and international. Students not only master the theories, but also willing and able to apply them in social life. One alternative to overcome the problem of education is through education oriented in the establishment of entrepreneurial spirit, that is the spirit of courage and willingness to face the problems of life appropriately, creative spirit to find solutions and resolve the problems, independent spirit and not depend on others. Entrepreneurial-minded education, is education that applies the principles and methodology toward developing life skills of the students through an integrated curriculum developed at the school. Presidential Instruction No. 4 of 1995 on national movement to promote and cultivate entrepreneurship, mandates to the entire community and Indonesian nation to develop entrepreneurship programs. According to Siagian (1999) entrepreneurship is spirit, behavior, and ability to respond positively to the opportunity to gain advantage for themselves and or a better service to the customer / community; by always trying to find and serve customers more and better, and creating and providing products that are more useful and implementing a more efficient way of work, through the courage to take risks, creativity and innovation as well as management capabilities.

Entrepreneurship programs have been included in the school curriculum, especially curriculum in Vocational High Schools (SMK). Along with advances in science and technology in today's global era, Vocational High Schools (SMK) in global market competition have not been able to produce competent high school-skilled workers. This is because normative and adaptive programs are less desirable by most of the vocational high school students compared to productive program. This less desirable is caused

by the delivery of both learning programs do not encourage students to think creative, innovative and build students skills on solving the existing problems. In reality, normative and adaptive programs are very much relevant in providing a role for students' understanding related to productive learning program.

Activity program implemented in Vocational High Schools (SMK) is actually a collaboration program between educational program and training program. This can be noticed by the concept of activities in vocational high school which include the activities of normative, adaptive and productive aspects. The learning programs in vocational high school are addressed as the debriefing activities for the students, especially the aspect of skills, productive which can be used as a means to cope with life in the community. The learning process in vocational high school is addressed in response to conditions in society that demands the students ready for productive activities in their life. During this time, people have had the mindset about vocational high school graduates, that is as skilled workers who are ready to work as a high school-workman. The public demand for vocational high school output is such that the manager of vocational high school should really prepare learning activities and carry out activities that truly effective for the students.

However, so far the entrepreneurship program taught in vocational high school has not been able to produce students who have entrepreneurial attitude, character and behavior and life skills, so that many of vocational high school graduates still has not work because they are unable to meet the competencies required by industry as well as the inability to create their own job field. Often the industrial world finds that graduates who enter the work field do not have adequate provision for expected job requirements. Every graduates received, either from vocational high school or public high school, in job recruitment is not having the expected requirement. Therefore, the students must be fully prepared to be able to perform activities that make them have the ability to work and entrepreneurship. The mastery of dual

system education by students that are not optimal is caused by several factors such as students' response to the dual system education, the teachers' ability in delivering dual system education learning methods as well as the less involvement of the business community to help create students who have a strong entrepreneurial spirit. Therefore, schools should work together to establish a partnership with the business community and industrial world inherently, spatially and loosely. With this partnership model, then the students' preparatory program with complete skills, that is theory, practice and work for students can be maximally achieved.

Partnerships with the business world is not only to make students have a strong entrepreneurial skills, but also as a strategy to create a professional schools' business in creating an autonomous school. Autonomous school is a school that is able to explore, develop and empower all internal and external potential possessed, so as to reduce dependence, having independence and ability to provide contribution and beneficial to the school's progress and development. This is accordance with Kepmendikbud No. 080/U/1993 on vocational high school curriculum (Development of production unit). Under these conditions, this study is addressed to make a dual system education development model to create school autonomy because of the city budget and state budget funding that are not yet optimal and be able to make students skilled and experienced in entrepreneurship through the creation of professional schools' business. Based on the above phenomenon, the purpose of this study is to determine students' perceptions of dual system education learning, teachers' perceptions of dual system education policy implementation in school, teachers' passion, creativity and motivation in the dual system education, the ability of principals in establishing professional schools' business development strategy.

#### **Study of dual system education theory**

Entrepreneurship essentially is the nature, characteristics and personality of someone who

has the will to realize innovative ideas into real world creatively (Suryana, 2000). The terms dual system education derived from translation of "Entrepreneurship", can be interpreted as "the backbone of economy", which is the nerve center of the economy or controlling the economy of a nation (Soeharto Wirakusumo, 1997: 1). In epistemology, a dual system education is a value that is needed to start a business or a process of doing something new and different. According to Thomas W. Zimmerer, a dual system education is the application of creativity and innovation to solve problems and attempts to take advantage of opportunities faced everyday.

Dual system education is a combination of creativity, innovation and courage to face risks done by way of hard work to establish and maintain a new business. According to Usman, the notion of entrepreneurs in the context of management is someone who has the ability to use resources, such as financial, raw materials and labor to produce a new product, a new business, production processes or organizational development. Entrepreneur is someone who has the combination of internal elements that include a combination of motivation, vision, communication, optimism, encouragement and ability to take advantage of business opportunities. Entrepreneur is a pioneer in business, innovators, risk insurer, which has a vision for the future and has the advantage of achievement in business field. Entrepreneurship is a skill to think creative and has innovative behavior which form the basis, resources, propulsion, destination strategy, tips and processes in facing the life's challenges.

### **Integrating Dual System Education Values Into Training**

Integration is teachers' conscious and deliberate (programmed) effort, with the aim of combining the dual system education values into all training, in the learning process resulting in internalization and personalization of the dual system education values to be known, understood, internalized and implemented (in action) regularly (consistently). Integrating the

dual system education values is in line with the concept of the 2004 curriculum that emphasizes the ability to do (competency) a variety of tasks with specific performance standards, so that the result is a mastery of a particular set of competencies, as a combination of knowledge, skills, attitude values and interest as a learning outcomes reflected as habit to think and act economically when faced with problems. Integrating dual system education values should consider the potential of each local area, according to the location/place where students live.

Another consideration is the heterogeneity of students' background, such as family life, school, community, and the age level of students' progress, which in turn students will have a spirit of entrepreneurship and high consciousness to actualize their potential intelligently in public life. Integrating dual system education training should emphasize the creation of an entrepreneurial spirit embodied in teaching materials that are being discussed, so that teachers do not need to seek specific material for the formation of an entrepreneurial spirit taught in training. In dual system education learning, the role of the teacher is very important and decisive. Methodologically it is difficult to explain, but the creativity of the teacher is the best model for the students. Inviting students to practice dual system education values, is a concrete example for teachers in implementing dual system education values in their everyday lives.

### **Partnership Concept**

According to Saroni (2009), a work system partnership is the kind of partnership that is conducted by schools with DU/DI by getting a job as a training facilities for the students from DU/DI along with the materials used to make the goods or the intended job. At this partnership system, DU/DI have direct access to the job so for this, the instructor must attend training or understanding the provisions applicated to the job. The DU/DI side submit work, both material and type, to schools and instructors. Furthermore instructors provide

guidance on students while they are doing the task or job. Instructors are checking as well as being a quality control for goods resulting from the work of students. For this, the teacher, instructor should really be competent on the fields.

Furthermore, after the work is completed, then the schools get coaching funds or compensation for work done in the school workshop. The amount of benefits obtained actually is not the only orientation to the school because its main purpose is to provide opportunities for students to apply skills obtained from the learning process in working condition. Therefore, then the next to consider is setting schools' benefits obtained from DU/DI which provide jobs for them. Those benefits shall be managed in such a way that the students also get a share from those benefits. Students given a share is as a morale trigger and booster and thus, they directly apply all the theory and practice material at a real job. With a share of the benefits, then the students will be encouraged to be more serious in doing their job. They will try to improve the performance and results of their work.

### **Studies That Have Been Conducted**

Study results of entrepreneurial workshop activity conducted by Ardian Adiatma et al (2008) about the ability of vocational high school teachers and principals in the entire former residency of Semarang in making business planning and schools' business development strategies concluded that the poor ability of teachers and principals in making business planning and the weak efforts to draw up schools' business development strategy.

Study conducted by Yon Rizal (2007) about Entrepreneurship Learning Process Analysis in Vocational High School (Public Vocational High School) in Bandar Lampung concluded that in terms of the smoothness of the learning process and the role played by teachers in managing learning activities and effort of instill on entrepreneurial character and attitude on the students are good enough and adequate. In terms of infrastructure, the dual system education learning process in vocational high

school in Bandar Lampung is insufficient, it can be seen from the lack of books/teaching materials of dual system education that is accessible for teachers and students as well as the lack of props media that can be used by teachers in the learning process in school.

Study conducted by Hartati (2009) about Student Entrepreneurship Development Management in SMKN 4 Yogyakarta using qualitative method with phenomenological approach, that is comprehensive and natural understanding and interpretation of the meaning of phenomena that exist in the field. The subjects of this study is the principal, vice principal of curriculum field, vice principal of public relations field, entrepreneurship field teacher, guidance counselor of entrepreneurial group of Beauty, guidance counselor of entrepreneurial class of dressmaking, and Catering production unit Manager. Data were collected through thorough interviews, observation, and documents scrutiny.

The analysis was performed with a model from Miles and Huberman, which includes the steps of data reduction, data display, and conclusions drawing. The study results showed that (1) the preparation of the syllabus is still not in accordance with the characteristics of SMKN 4 Yogyakarta where learning and evaluation only touched cognitive area without giving practices to manage business; (2) a group of entrepreneurs attended by 10 students and only 3 of them after graduating won the trust of the salon's owner to manage salon management of their place of work, so that the school management enhance these programs especially in the aspect of program objectives, selection system, implementation system, work location selection and development of other skill programs; (3) entrepreneurial class program has not reached the goal, due to the lack of legal clarity of the implementation and understanding of entrepreneurial class curriculum so that the implementation is stopped to be evaluated, in terms of skills achieved by entrepreneurial class students is pretty good, although the profoundness of productive material is not as deep as the regular class; (4) training in

production unit can improve the students' skill and fostering their entrepreneurial spirit, although on the other hand students are not involved in management and; (5) the industry practice is giving hands-on experience for students to work and learn to manage a business in an industrial actual conditions.

Study conducted by Duduk Iskandar (2005) about the influence of entrepreneurship training and implementation of dual system education on entrepreneurial attitudes of 3<sup>rd</sup> grade students of culinary skills program at SMKN 4 Surakarta years of training 2005-2006 aims to determine the effect between dual system education training and implementation of dual system education on students' entrepreneurial attitudes, between the dual system education training towards students' entrepreneurial attitudes as well as the effect of the implementation of dual system education on entrepreneurial attitudes of 3<sup>rd</sup> grade students of culinary Skills Program at SMKN 4 Surakarta years of training 2005-2006. The study's population were 3<sup>rd</sup> grade students of culinary skills program at SMKN 4 Surakarta years of training 2005-2006. The result study concludes that there is a significant effect between dual system education training and the implementation of dual system education on students' entrepreneurial attitudes. There is a significant effect between the dual system education training towards students' entrepreneurship attitude. There is a significant effect between the implementation of dual system education on entrepreneurial attitudes of 3<sup>rd</sup> grade students of culinary skills program at SMKN 4 Surakarta years of training 2005-2006.

## METHODS

The method and technique used in this study include: questionnaire, interview, and literature study.

The analysis used in this study is descriptive analysis to examine variables conducted using SPSS program. Qualitative analysis is also used in this study, that is with

focus group discussion among researchers, students and teachers.

## RESULTS AND DISCUSSION

Based on the findings of field data indicates that the dual system education is seen as an important subject for vocational high schools (SMK), especially for students and teachers. The results study showed that the vocational high school students' perception of the dual system education learning at school conducted by the teacher is averagely good, that is to say that in general every vocational high school has been able to implement good dual system education teaching system. However, the dual system education learning system at vocational high school in this study have not been fully having humane learning atmosphere that involve all aspects of taxonomy, whether students' cognitive, affective and psychomotor.

Humane atmosphere in question is a kinship atmosphere, warm, open, objective, honest and free from any form of force. In terms of presentation quality and the systematic of the material, although the majority of students rate good, but the teachers not yet fully value-based act (having guidance/rules) and has a target of any material being taught. Without this reference, then the learning process will be unfocused, and learning objectives will not be achieved. In dual system education teaching required teachers' teaching ability to stimulate creativity and innovation of the students. The teachers' appearance, attitude, personality and mastery of the learning process will be very decisive for the students' involvement and engagement in learning activities, as a stage of extracting the creativity values from the students. Field findings show that although students assess good in learning interactions, but in practice it is still not completely good, this is reflected in the students' answers were pretty much neutral category. Teachers should have a learning method presented in a form that can be understood, impregnated and internalized by students. Teachers should be able to change the concept of matter into the language of the

student, or in the form of application in real life phenomenon. So it is expected the scholarly theoretical material can be converted into a stimulus that stimulates students' cognitive, affective and psychomotor aspects. In the case of the use of sample or dual system education teaching media, although in average the respondents' answers are in good category, but the answers in neutral category are pretty much so that it is indicated that there is still a lack of dual system education teaching infrastructure. Field findings show that many teachers complaint on the completeness of dual system education laboratory, so the effectiveness of the dual system education teaching to the students become shallow and less can thoroughly be understood.

The teachers' ability to motivate students is good, it is supported by the field findings that the majority states good. Nevertheless, it should be developed further ways to motivate students to want to explore and implement the dual system education after they graduate later. This is in accordance with the study conducted by Yon Rizal (2007) about dual system education learning process analysis in vocational high school (SMK) in Bandar Lampung concluded that in terms of the smoothness of the learning process and the role played by teachers in managing learning activities and effort of instill on dual system educational character and attitude on the students are good enough and adequate. In terms of infrastructure, entrepreneurial learning process in vocational high school in Bandar Lampung is inadequate, it can be seen from the lack of books/teaching materials of entrepreneurship that is accessible for teachers and students as well as the lack of props media that can be used by teachers in the learning process in school.

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Without a strategic plan for the development of entrepreneurship in school, it will be difficult to score vocational high school

graduates who become strong, independent and professional entrepreneurs. Some vocational high school has make a partnership with industry in providing training, capital assistance, advice and infrastructure, however, has not been able to generate business units that exist both for laboratory utilities and to contribute to the school development. Availability of laboratory with minimum facilities cause students' skills of entrepreneurship is still weak. Entrepreneurship teaching system carried by each vocational high school has not been able to contribute significantly in helping schools to create entrepreneurship fields in collaboration with industry.

Some constraints in the development of entrepreneurship in schools are limited infrastructure for entrepreneurship practice, the ability of the principal to establish partnerships with the industrial world is still low, the lack of entrepreneurship training for teachers and students as well as unmet capital and infrastructure in entrepreneurship practice towards school autonomy. By paying attention to the two study findings that is students' perceptions on entrepreneurial learning and teachers' perceptions on entrepreneurship implementation policy in school, it needs to be integrated into an entrepreneurship development model in schools towards school autonomy.

## CONCLUSION

Based on the study findings, it can be concluded that in general, the average student's perception on entrepreneurial learning by vocational high school teachers is relatively sufficient and adequate, however, in terms of entrepreneurial material presentation and systematic, need a better sharpening so that students are able to well absorb the entrepreneurial materials. The study findings concluded that the support of entrepreneurship infrastructure and laboratory and lack of the teachers' entrepreneurial training from the industrial world led to the entrepreneurial learning in vocational high school is still shallow and has not been touch the actual substance of

entrepreneurship.

Entrepreneurship implementation policy in school by the school principal is generally perceived well enough by teachers, but in terms of the preparation of the strategic plan as an entrepreneurship development roadmap in school in all vocational high schools that become object of this study is still not available and not well-structured and systematic, so that vocational high school does not have a clear direction in entrepreneurship development in schools. A partnership with industry has not been fully performed by some of vocational high school that become object of this study due to the limited ability of the school principal in establishing partnership/networking with the industry.

Entrepreneurship development model in schools in order to achieve school autonomy is performed by involving learning quality improvement by the teachers, the school's ability in composing entrepreneurship development strategy in schools, partnership with industry, government policy (the ministry of education and culture) to support the partnership with industry so as to create business units in vocational high school as a means of internships, laboratories as well as a funding source for school towards school autonomy. Based on the study findings, then it's required improvement of entrepreneurship curriculum and syllabus at vocational high school so that teaching materials, methods, props/sample more well implemented and easily understood and mastered by vocational high school students. The ability of principals to create network with PKBL/industrial world to support the mastery of skill of vocational high school students in the form of training for teachers and students, capital, infrastructure support and laboratory completeness is indispensable. The need for improvement of the completeness of infrastructure and the establishment of entrepreneurial laboratories to support the quality of vocational high school graduates in entrepreneurship.



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