The Improvement of Education to Become a Center of Excellence (COE) in Voational High Schools

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Abstract. **:** This research aims to describe the improvement of education quality to become Center of Excellence at SMKN 1 Adiwerna Tegal Regency such as the concept, quality assurance, and strategy of vocational high school as a Model Center of Excellence. This research uses a qualitative approach use descriptive qualitative. Data collection is drawn from observations, interviews, and documentation. The results of this study are (1) Improving the quality of education by revitalizing vocational schools in human resources and focusing on.developing their company relation. On other hand, vocational high schools' development can be seen by their development to build and certification institute in their. However quality assurance framework of Vocational High Schools towards the Center of Excellence is based on inputs, processes, outputs, outcomes, and impacts. The strategic steps in developing the quality of vocational schools through the Center of Excellence are training center, elevate their innovation improvement, develop student career centers, improve and expand company relation, then renewal of facilities and infrastructure..

Keywords: Education Quality, Vocational High School, Center of Excellence

1. Introduction

Vocational High School is one of the institutions that organize vocational training that must be able to provide the best educational services to its students even though the conditions of the facilities are very diverse. Vocational High School's job is to do what's best for its students by utilizing all available internal and external resources. Competency-based training learning patterns are expected to help Vocational High Schools gradually improve their programs' quality and relevance. By providing the best educational services to its students, vocational high schools also mean that they have done the best for the business industry and the world of work and society[1].

Vocational High School / Madrasah Aliyah Vocational, called SMK / MAK is a formal educational institution designed to prepare its graduates directly into work. Vocational high schools must produce graduates as expected by schools, society, the business industry, and the world of work[2,3].

The competencies of vocational education graduates as a sub-system of the national education system, according to the [4] , are: producing graduates who have skills and mastery of science and technology with fields of expertise level per development (2) producing graduates who have productive abilities, producing themselves, changing the status of

graduates from burden status to independent national assets, (3) producers of drivers of the development of Indonesian industry that are competitive in facing competitive global market, (4) graduate generation and a solid mental attitude to be able to develop itself sustainably

These competencies can be obtained through education at SMK. Furthermore, vocational education is an institution that can carry out the learning process of specific skills along with competency-based evaluation. It can prepare students to become workers at the level of its graduates, to be directed to become an educated, trained, and skilled workforce needed in the industrial sector of the business world and the world of work, to hope to reduce unemployment that is not educated, untrained and does not have Skills. Another thing that can be expected is that SMK can compete in the business and industrial world, especially in entering the Asian Economic Community (AEC), becoming the government's concern for employment in Indonesia and Asia

Based on the demands of the constantly developing science, authority holders in Vocational Schools seek to realize a dream of making a school a Center of Excellence. However, schools face many obstacles, one of which is the limitation of improving the quality of schools, limitations in meeting the school education process based on the Center of Excellence so that it can make its students absorbed in the business and industrial world quickly and correctly. Therefore, many schools compete to realize it optimally in various ways. This requires an accurate strategy to realize it. In line with [5] opinion on "The Principal's Strategy in Improving the Quality of Education in Vocational High Schools (Case Study of SMKN 1 Mojokerto), it is stated that the quality of education is a pillar to producing good and reliable human resources so that efforts to improve it must always be carried out continuously so that the quality of education is getting better. Therefore, it is necessary to carry out a special policy for improvement. One of them is to innovate education management through the concept of Internal Quality Assurance Standards as a requirement to become a Center of Excellence school.

SMK as a Center of Excellence (SMK Center of Excellence) is a SMK development program with certain expertise competencies in improving quality and performance, which is strengthened through partnerships and alignment with the business world, the industrial world, the world of work, which eventually becomes a vocational reference school that can function as a driving school and a center for improving quality and performance. SMK Center of Excellence (SMK Center of Excellence) is school that can produce graduates who are competent in certain skill competencies and are absorbed in the business world, the industrial world, and the world of work. It can continue to the higher education level, through a systematic and comprehensive vocational education alignment program with the business world, the industrial world, and the world of work.

In line with the Regulation of the Director General of Vocational Education Number 24 of 2020, concerning Vocational High Schools which are developed into Centers of Excellence (Centers of Excellence) priority for the creative economy sector, it is conveyed that the development and development of Vocational High Schools (SMK) is currently facing multidimensional challenges, especially in seeking the suitability of graduates with the dynamics of existing employment needs, both at the regional, national and international levels.

Globalization, especially the impact of the Industrial Revolution with a touch of advanced ICT, has spread and applied rapidly throughout the world to become a trending emergence of a new era called the Industrial Revolution or RI 4.0. The structure of the employment needs of all countries is affected and directly affected at least in the manufacturing industry sector with the increasing use of automation and robotic systems,

which replace the position of a large number of skilled operators who are generally Vocational High School graduates

Domestically, due to the onslaught of economic development programs carried out by the government, the dynamics of labor needs are not much different. National priority programs, development and acceleration of the government's economy in 6 (six) sectors or fields, manufacturing, agribusiness, tourism, health workers, creative economy and migrant workers as well as a program of 10 (ten) tourism destinations, special economic zones (SEZ), as well as various government programs at the district / city and provincial levels to support, develop and improve and explore the advantages and wisdom of each local, obviously all require workers with different skill competencies to support them [4].

Thus, the qualifications of Indonesian Human Resources, especially the middle level, most of whom are vocational high school graduates, must be prepared in order to be able to anticipate the dynamics of labor needs at the regional, national, international or global / international levels. The revitalization of Vocational High Schools with programs and strategies implemented starting in 2020 aims to solve all obstacles, shortcomings and problems that exist in schools until they are completed or called "multiple treatments", so that in the end they are able to improve the quality of the teaching and learning process that produces graduates in accordance with the demands of the employment dynamics mentioned above.

SMKN 1 Adiwerna is five of the SMKs located in Central Java that have received high trust from region IV Central Java which is mandated to organize a Center of Excellence, when viewed from the internal conditions of the school, the readiness and requirements that must be met or owned by the school in order to get it as a Center of Excellence are; 1) There is a proposal for submitting assistance approved by the Education Branch Office, 2) a decree for the appointment of a definitive principal, 3) a decree for the CoE development/development team, 4) a decree for the technical team of planners and supervisors, 5) a decree for the inspection team and recipients of equipment procurement results, 5) a decree for strengthening the industrial-based learning process, 6) Permission for the establishment of school operations, 7) Certificate of accreditation of at least B, 8) Land ownership, 9) Photos of land conditions, 10) Site plan / master plan, 11) layout of mechanical and electrical network equipment / furniture, 12) availability of electrical power, 13) Aerial photos of school locations, 13) Analysis of renovation needs, 14) Number of students, 15) Certificate of managerial training of the head of SMK from the Ministry of Education and Culture, 16) Certificate of teacher competence from company at least 2 teachers, 17) Cooperation with active and credible industries, and 18) Evidence of previous TAKOLA uploaded reports. The readiness and requirements mentioned above have been owned by SMKN 1 Adiwerna

This research uses a qualitative approach with a qualitative descriptive type of research. The data collection techniques are obtained based on the results of observations, interviews and documentation. Then check the validity of the data using triangulation techniques. The data analysis techniques used by researchers start with data collection, data reduction, presenting data and finally verification (drawing conclusions).

2. Method

This research is a qualitative descriptive study. Descriptive research seeks to describe and explore, to explain and predict a symptom that applies, based on data findings in the field. This research uses a qualitative approach that according to Lexy J. Moleong (2012: 6) qualitative research is research that intends to understand phenomena about what the research

subjects experience, for example: 1) behavior; 2) perception; 3) motivation; and 4) action holistically in a descriptive way in the form of words and language in a special, natural context and by utilizing various scientific methods.

This study uses qualitative descriptive research to describe a systematic, factual and accurate picture of the phenomenon being investigated. The phenomenon investigated in this study is the implementation of the Center of Excellence, the important idea is that the researcher goes to the field to make observations about a phenomenon in a scientific state. So during this research process, researchers will have more contact or contact with research subjects at SMK Negeri 1 Adiwerna, Tegal Regency.

This research was carried out at SMK Negeri 1 Adiwerna, located at Jalan Raya II Po.Box 24 Pesarean, Adiwerna District, Tegal Regency. The selection of the research site is because this school is one of the schools designated as the Center of Excellence School for the Creative Economy Sector in 2020 based on a letter from the Ministry of Education and Culture of the Director-General of Vocational Studies Number 24 of 2021 in Annex Number: 9557 / D2.3 / TU / 2020 by the Director of SMK that SMK Negeri 1 Adiwerna.

The subjects of this study were all residents of SMK Negeri 1 Adiwerna in general and students of SMK Negeri 1 Adiwerna in particular. The research time was conducted for 2 months, namely January 2022 to February 2022.

In this study, the populations and samples are: 1) the principle, 2) the vice-principal for curriculum, public relations, infrastructure, student affairs, and SPMI, and 3) LSP-P1 head, 4) school committee head, 5) company, 6) Network Computer Engineering and Welding Engineering productive/vocational instructor, (7) SMK Negeri 1 Adiwerna Network Computer Engineering and Welding Engineering students While the data used in this study comes from two (two) different sources: primary data and secondary data.In this study, the populations and samples are: 1) the principle, 2) the vice-principal for curriculum, public relations, infrastructure, student affairs, and SPMI, and 3) LSP-P1 head, 4) school committee head, 5) company, 6) Network Computer Engineering and Welding Engineering productive/vocational instructor, (7) SMK Negeri 1 Adiwerna Network Computer Engineering and Welding Engineering students While the data used in this study comes from two (two) different sources: primary data and secondary data..

This study's data collection techniques and strategies used two methods: observation and Interviews. The data was obtained by observations, researchers directly observe at the location and object of study. An important data source is a human being who is positioned as a source or informant. The second data collection is interview. The interviews focused on questions related to the opinions, assessments and experiences of the research subjects, and the decision-making officials.

The researcher identify the documents during the study, in the form of photos, videos, archives, recordings of interviews with the concerned informant and other data related to research problems. The research approach used is qualitative. Thus, the main instrument of this study is the researcher himself (key instrument) who goes directly into the field, as explained by [6]

Triangulation was considered relevant to test the validity. The triangulation technique means that researchers use different data collection techniques to obtain data from the same source [7] In carrying out data processing and analyzing data, steps are carried out including; data collection, data reduction, presenting data (display data), verification.

3. Result & Discussion

Based on the results of assessment data in the realization of improving the quality of education towards Center of Excellence at SMK Negeri 1 Adiwerna has done various things including revitalization of 1) the main office to support public activities and services, 2) human resources to improve the managerial capability of the head of an industry-based vocational school internship teachers in industry, and industrial class activities in each expertise competency, 3) Collaborated by sign in Memorandum of Understanding (MoU) with company, 4) curriculum synchronization with company, 5) teaching factory-based learning activities, 6) professional certification test, 7) facilities and infrastructure, in each expertise competency has been arranged and approached with company standards, 8) the school has implemented a Mou with the kaliwadas village government with SMK mbangun desa, with various activities, 9) the school has implemented a program of caring and cultured schools for the environment and green schools, 10) academic achievements have been achieved by many students in several events of activities.

The concept of Vocational High School as a model at SMKN 1 Adiwerna Tegal Regency for the 2021/2022 Academic Year Based on the results of research data, in preparing SMK as a model the school has developed a learning model with a Teaching Factory. The activity has collaborated with seven competencies of expertise in learning. In addition to develop teaching factory, the school has also carried out a partnership with the company with the competencies of expertise it has, namely the competence of DPIB expertise, Welding Engineering, Machining Engineering, Electrical Power Installation Engineering, Audio Video Engineering, Automotive Light Vehicle Engineering, Network Computer Engineering, which is marked by (Mou) in writing.

The school already has Professional certification institution established by the school through the Steering Board Decree NO.800/0439/2016 dated April 13, 2016 and declared licensed on May 31, 2017, with the id BNSP-LSP-747-ID, which functions as a BNSP supporting institution responsible for carrying out professional competency certification as well as a forum to synergize with schools in student certification.

Quality assurance of Vocational High Schools is the Center of Excellence at SMKN 1 Adiwerna Tegal Regency for the 2021/2022 Academic Year. The implementation of quality assurance of SMK CoE has been carried out verification of Quality Assurance of SMK Center of Excellence by verification officers of the Directorate of SMK and supervisors of SMK Tegal Regency on November 20, 2020. From the results of quality assurance verification, the results of; Input: 75.24 (Good), Process: 88.57 (Excellent), Output: 80 (Good), Outcome: 55.20 (Enough), Impact: 54.00 (Sufficient), so that if on average the overall quality assurance obtained by SMKN 1 Adiwerna is 79.27 and the category is good.

Principal's Strategy in Improving the Quality of Education Towards a Center of Excellence at SMK N 1 Adiwerna, Tegal Regency, Academic Year 2021/2022. The strategic steps taken by the principal in improving the quality of education towards the Center of Excellence at SMKN 1 Adiwerna are broadly speaking, making policies, including; 1) Training of teachers according to their competencies, 2) Developing innovations in learning, 3) Development of BMW student career centres (Work, Continue, Entrepreneurship), 4) Improve and expand cooperation with company, 5) Renewal of facilities and infrastructure.

4. Conclusion

Based on the results of the research above, the conclusions of the study "Improving the Quality of Education Towards SMK Center of Excellence (CoE) at State Vocational High School 1 Adiwerna Tegal Regency academic year 2021/2022" are as follows: Improving the quality of education towards the SMK Center of Excellence at SMK Negeri 1 Adiwerna,

various things are done including; 1) reviltalization program with the face of the main office as a means of supporting public activities and services, 2) revitalization of human resources starting with the training of the principal in the field of improving the managerial capability of the head of an industry-based Vocational School internship teachers in industry, and industrial class activities in each expertise competency, 3) seven expertise competencies have collaborated Mou (link and match) with company, 4) the curriculum used in the seven expertise competencies has been aligned with company, 5) teaching factory-based learning activities have been carried out with a block schedule in seven skill competencies, both services, or products, 6) students based on schemes and klsters in each expertise competency have been carried out professional certification tests with LSP-P1 SMKN 1 Adiwerna, 7) facilities and infrastructure, in each expertise competency has been arranged and approached with company standards, 8) the school has implemented a Mou with the kaliwadas village government with SMK mbangun desa, with various activities, 9) the school has implemented a program of caring and cultured schools for the environment and green schools, 10) academic and academic achievements have been achieved by many students in several events of activities

In preparing the Vocational High School Concept as a model at SMKN 1 Adiwerna Tegal Regency Academic Year 2021/2022 the school developed a learning model with a Teaching Factory (Tefa) and collaborated with seven competencies of expertise in learning, carrying out company partnerships with the competencies of the expertise it has, namely dpib expertise competencies, welding techniques, machining techniques, electrical power installation engineering, audio video engineering, automotive light vehicle engineering, network computer engineering, which is marked by (Mou) in writing, then the school has an LSP-P1 (Professional certification body) which functions as a supporting institution for BNSP which is responsible for carrying out professional competency certification as well as a forum to synergize with schools in student certification

The principal has an important role in the strategies applied to improve the quality of education towards the SMK Center of Excellence in schools through the preparation of superior school programs that implement the quality of education in schools. Of course, the strategy of each principal and other principals to improve quality in schools is different both because of experience factors and the ability of insight into school management. It may be that what is applied at SMK Negeri 1 Adiwerna Tegal Regency will be different from other schools, so that the study of the principal's strategy in improving the quality of education of the SMK Center of Excellnce in schools through school superior programs needs to be studied in depth because the uniqueness of each school which of course between one school and another school is different.

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