Reconstruction of Environmental Education Policy for Vocational Schools in Indonesia

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Abstract—This article aims to re-construck of environmental education policies in vocational schools. Education policies have not been run in place without the support of educational institutions especially in West Sulawesi. This fact Happen due to the educational curriculum hasn’t yet integrated in the Vocational high school curriculum and programs. The roots problem is the number of learning process has not yet been integrated with environmental education due to expansion of government policies without concerning the local curriculum. Descriptive analysis was used in this research to reveal the factors that cause ineffectiveness of the implementation of environmental education policies in to Vocational Schools curriculum and to offer some solutions to ease problems. The findings indicate that the role of human resources (principals and teachers) contributes to the success of vocational education. The importance of optimizing the performance of school principals and teachers so that integrated environmental education policies in Vocational Schools can be implemented effectively.

Keywords—Education, Environment, Vocational.

I. INTRODUCTION

Environmental education as part of education system in general, is a planned of educational system that effort carried out by the government to realize one of the visions of 1945 Indonesia constitutions’, statedly “to educate the generation of nation's “. This is very necessary basic vision in efforts to shape the character of Indonesia society where the level of public education is the most important thing in building a civilization character. Through education, every Indonesian person has not only knowledge and understanding in the context of sustainable development but more than that, he will form attitudes and skills that are able to answer the needs and challenges in life, especially those related to the surrounding environment. Therefore, the government, through educational policies, especially environmental education, determines the ability of a student to be able to analyze and design, manage and control the environment in order to equip each graduate to be knowledgeable and have skills that are in accordance with the needs of the era he will pursue later.

The government's policy of integrating environmental education in order to improve the quality of learning at the Vocational High School and Senior High School levels in the next ten years is expected to be able to build the characteristics of students to become intellectual beings who are able to answer various environmental problems and challenges that are currently being faced by the government in the future. One of the problems is the increase in the environmental damage index and the decline in the community's economy. Vocational High Schools are the main target for preparing graduates who are skilled and ready to fill opportunities in the business and industrial world as well as being able to create jobs. In accordance with the specific objectives of Vocational High School education as stipulated in Law no. 20 of 2003 states that Vocational High Schools prepare their graduates to be independent and productive and equip them with skills according to the selected expertise competencies. Thus, Vocational High Schools are actually the people's dream schools, because their graduates are ready to enter the world of work and the industrial world.

Data from the Central Bureau of Statistics (BPS-2020) shows that Vocational High School graduates who are not yet working in 2021 reach 11.3%, at the highest level in the list of other graduate levels). Supposedly, Vocational High School education is a solution to overcome the unemployment problem currently facing the country. Not only that, the problem of mismatch of graduate skills with the demands of the business and industrial world has also become a public concern. There are various factors underlying this problem. The low seriousness of education providers in dealing with problems, especially those related to the environment, where the efficiency and effectiveness of learning in the context of reducing environmental damage and increasing the use of natural resources by way of exploitation and not focusing on improvement efforts has resulted in the goals of environmental education not being realized optimally.

As revealed by Greany & Earley [1] that the function of the school principal plays an important role in improving the quality of an educational institution by providing guidance on the resource components owned by the school including Human Resources and various teaching and learning programs, physical resources, and building relationships cooperation between schools and other stakeholders. Therefore, maximum effort is needed by the principal to be able to manage and control the various components above, and really be able to support the goals of educational institutions, especially the goals of SMK education.

Some findings show that there are teaching staff who come to school only during teaching time and even teachers who do not make learning tools [2]. This is certainly still very far from the expectations of the community, where teachers as teaching staff are able to integrate the learning process with the real needs in the world of work. This fact explains the weak function of controlling the implementation of the learning process by school principals [3]. The next problem is the low ability of teachers to take a role in increasing their knowledge insights and the development of science and technology, because currently, in general, the field of work related to digital technology and industrial automation has become very common everywhere. The use of industrial devices that are integrated between one component of integration with network data and online data and the internet of things (IOT) connected to the surrounding environment has become very common in industry, as well as service businesses [4]. This will certainly have an impact on the quality of the learning process that is integrated with the environment where this will lead to an increase in the quality of
alumni. Therefore, it is necessary to find and implement concrete steps both from the government that issues policies and from educational institutions as policy implementers so that problems can be resolved and the objectives of vocational education can be realized.

One of the government's concrete steps is the issuance of UUPT No. 12/2012, which describes vocational education. The vocational education policy was taken as a form of government response to the ongoing globalization changes. The era of globalization is characterized by accelerated advances in technology and information, thus affecting the pattern of people's lives from all lines, including education. efforts to be able to use the environment practically will certainly be able to increase the effectiveness of learning, which will then become part of the daily lives of both students and graduates.

In vocational education, the competency aspects of skills (skills) and introduction to work environment conditions dominate over other aspects. So that in the learning activities, the utilization of environmental media. As part of the effort to introduce a complete work environment, it needs to be introduced to students early and dominate the further education and training process so as to maximize students' work skills competencies [5]. Furthermore, [6] states that vocational education prepares students to be able to work directly in industry and business so it is very important to be equipped with skills, skills, and work behavior in appreciating the work needs that exist in the work environment.

From the description above, it can be concluded that SMK educational institutions must continue to improve themselves by conducting a comprehensive evaluation continuously to adjust to environmental needs and adapt to the work environment by using all existing resource components in order to improve the competence of students and graduates. SMK as a school that implements vocational education can adapt subject matter to the expertise needed by the business and industrial world, and introduce from the start the adjustment of students to the work environment that they will face in the future. so that the graduates produced are able to compete in the world of work competition.

II. MATERIAL AND METHODS

literature study. Qualitative techniques were chosen based on the fact that they provide comprehensive, original and fundamental information about the subject of study [7]. Literature study is an activity of examining various sources of information from books, journals, scientific notes, and some previous research findings which then the problems being studied are collected and then analyzed so that various conclusions are found, synthesized as initial answers to existing problems. The basis of the analysis in the study is then expressed as an effort that can be taken as part of a policy for the government and or an educational institution at various levels so that vocational education effectively improves the quality of vocational graduates

The purpose of writing this article is to provide ideas/opinions/ideas on efforts to reconstruct the integrative policy of environmental education in the learning process through the use of learning models that are integrated with vocational education and maximize the role of all stakeholders, especially school principals in improving student competence and strengthening school cooperation with industrial so that links and matches occur so that vocational education can be carried out effectively.

III. RESULTS AND DISCUSSION

Integrative Education Concept

The concept of education by Ki Hajar Dewantara emphasized that the education one takes must make humans independent and responsible so that they have a self-existence. [8] Revealed that the concept of education is oriented towards human nature, namely making humans independent. An independent human is a creative human being who can be realized in his habits and he is able to reconstruct the habits/culture that exist in him [9]. Creative humans are productive and adaptive humans in responding to change. [10] Revealed that the concept of independent human beings contains the quality of human resources which is the ultimate goal of education itself.

The purpose of SMK education is to prepare its graduates to be active, productive and adaptive so that they have a self-existence in the community. Thus, the concept of education expressed by Ki Hajar Dewantara is in accordance with the goals of vocational schools. Therefore, strategic steps are needed by vocational education institutions as policy implementers to determine models that are appropriate to school conditions and implement learning strategies that move their students to be active, productive and adaptive.

Environmental Education Policy on Vocational Education in West Sulawesi

Policy can be interpreted as a set of rules while education (education) is a designated field. So, education policy means a set of rules set by the government in the field of education. Education policy is the key to excellence and is a major concern in welcoming the era of globalization [11]. In this case, education policy is an important focus for realizing a superior, competent and skilled society according to the needs of the times

Education policy in the province of West Sulawesi, especially at the secondary education level, especially at the Vocational High School level, is still based on the old paradigm where the policies implemented are still contextual in nature where learning is still carried out without integrating environmental education as part of the learning system at that level. Even though conceptual environmental education can be carried out in the learning process at that level of school by linking the concept of education carried out in the work environment, industrial environment and industrial service environment. This effort is expected to improve students' abilities, as well as alumni's competency in adapting to the work environment they will likely face in the future. The use of technology that is integrated with optimal resource utilization certainly requires adaptive abilities of students who are also expected to have knowledge and attitudes in reducing the level of environmental damage. The ability to be able to design a product that is environmentally friendly, the ability to be able to increase resource efficiency is a key prerequisite in which environmental education must be integrated into vocational education whose aim is to prepare workers at the middle level who have superior competence.
From the description above, it can be concluded that education policies both nationally and at the high school level, especially in the province of West Sulawesi, are part of government regulations that formulate strategies for implementing education to respond to the challenges of the times as an effort to realize educational goals. The concrete steps that can be taken by the local government, in this case the provincial government of West Sulawesi and educational institutions that are part of the structure of the education system as implementers of education policy, are to develop a strategy for implementing the educational process that refers to improving the quality of education. Quality learning is learning that is based on the four pillars of education that lead students to be able to know (learning to know), be able to do (learning to do), be able to become something (learning to be), and be able to live together (learning to live together).

The characteristics of the education policies that have been and will be implemented at the vocational secondary level in the province of West Sulawesi at least meet several main characteristics in order to create efforts to increase the competence of qualified students and alumni. This competence can only be fulfilled if it can meet several criteria for the characteristics of educational policies, including:

1) Have a vision and goals, meaning that the education policy has a direction and has a positive impact on advancing education,
2) There is a legal aspect, meaning that the policy fulfills the requirements, the preparation of regional regulations on education, especially regional regulations on vocational education, is the main requirement in ensuring a good vocational education system occurs,
3) Has an operational concept, which is prepared with detailed general guidelines and supporting guidelines in order to provide guarantees for the quality of vocational education graduates as well as clear concepts in carrying out the education and learning process both at the conceptual level and at the school operational level and
4) There is systematics (can manage all aspects and not conflict with others/integrate with local government development policies, in this case the West Sulawesi regional government [12].

The Concept of Vocational Education in West Sulawesi Province

Pavlova [13] explains that vocational education is education with the main objective of preparing to work using a competency-based approach. It is concluded that vocational education is applied education that is more competency-oriented towards students so that they have skills in accordance with relevant scientific and technological developments, to the needs of the business and industrial world.

Tsang and Psacharopoulos [14][15] reveals the philosophy of vocational education as education for work based on the philosophy of essentialism, existentialism, and pragmatism/matching. The essentialism philosophy shows the role of educators in the learning process by training students to develop skills/skills, and positive habits to influence their personality. The purpose of this essentialism is to educate useful and meaningful human beings, as well as competent. Existentialism philosophy emphasizes the concrete/real existence of individuals. The pragmatism/matching philosophy shows that skills or competencies obtained through vocational education must be aligned with job requirements.

From the description above, it can be concluded that vocational education focuses on the skills/competencies/expertise of students through educating, training and retraining programs, so that the existence of students is real in the midst of society because the skills/skills they have are in accordance with the needs of society, be it the business world or industry.

Vocational Education Integrated Environmental Learning Model.

Schools as educational institutions are implementers of educational policies that have been set by the government. However, the effectiveness of vocational education is greatly influenced by how schools organize the learning process with an approach that is appropriate to the needs of the world of work so that the quality of the process and results can be achieved. Several learning process approaches that can be used and are relevant to vocational education are work-based learning models and learning models that relate subject matter to the real lives of students (contextual teaching and learning).

In a study showed a correlation between student performance and graduate outcomes and the learning structure offered by schools where industry is then involved in designing and being part of the curriculum development;

1) In several superior SMK schools in West Sulawesi Province it was found that the potential carried out by local industry in supporting the abilities of students who can then become independent entrepreneurs and then succeed in building UMKM is the result of strong support and the ability to analyze the environment owned by students both in the school environment and the environment where they interact with the community. The social environment then supports the ability for students to adapt to create jobs which can then be used as part of supporting the lives of the surrounding community.

2) In other schools, it also shows the ability of local, small and medium industries in the province of West Sulawesi trying to encourage and support student competencies to create innovations in agriculture and plantations which then enable alumni to be able to create new jobs as part of increasing efficiency and effectiveness of small and medium scale industries. The aspect of recruitment that is carried out directly at school in carrying out assignments then becomes a key aspect for students in determining the type of business and business potential that can then be developed in the future.

If the three aspects of the learning process above are carried out optimally, which are then supported by the quality of educators, it will have a positive impact on improving educational outcomes themselves. According to Toner [5], the forms of WBL that can be developed are: 1) company model/apprenticeship (labor education in companies), 2) school based/ education in schools (all related systems are implemented in schools and are the responsibility of the government), 3) Cooperative model (company model and schoolbased combination) and 4) school based enterprise/ production unit (the school environment is the place for business development).
Students will get learning experience in two places, namely school (non-technical) and workplace (technical), so that it is said to be a dual system learning. Where there are many benefits that can be generated, especially for more than 15 Superior Vocational Schools that have been fostered by the Ministry of Education through the Office of Education and Culture of West Sulawesi Province, where there is an increase in students’ skills, both technical skills and skills that are human relations. The experience of learning in the workplace through the industrial practice program provides comprehensive knowledge based on the work environment which then gives value to effectiveness, especially insight in carrying out work in the agricultural industry and similar service industries that are integrated with the agricultural industry

The Contextual Teaching Learning (CTL) learning model is an alternative approach to the learning process that can be carried out in vocational schools. This model emphasizes the teacher's creativity in connecting learning material with the student learning environment, so that students more easily interpret the material. The teacher accumulates basic knowledge and student experience and then creates a learning design that connects the social environment and the physical environment in the learning process

In learning activities, the principle of differentiation gives freedom to students to explore interests and talents that influence the way they learn, 3) self-regulation, where students are able to organize, maintain, continue what they are aware of. This principle challenges students to reach their full potential. He is responsible for his own decisions and behavior, evaluates alternatives, makes decisions, plans, analyzes information, creates solutions, and evaluates evidence critically.

**The Role of Educators in Environmental-Vocational Education**

In general, educators are people who have the responsibility to provide knowledge and skills to their students so that they are able to adapt to the times. In language, educators are people who have educational activities (Ministry of National Education, 2005). According to Parinduri [16], educators are adults who provide assistance to their students to grow and develop according to their age, both physically and spiritually, so that they are able to independently carry out their duties as creatures of Allah SWT. In RI Law No. 12 of 2005, educators (teachers) are people who carry out their duties in a professional manner to educate, guide, train, direct and carry out evaluations of their students. It can be concluded, educators are someone who has duties and responsibilities in educating, guiding and training their students to become adult and independent human beings and responsible for themselves and their environment.

The role of the teacher in carrying out the learning process in vocational/vocational education is not the same as secondary education in general. This is because the skill factor dominates in each learning activity. In order for the vocational education program to run effectively, a learning strategy is needed with the UNESCO learning how to learn concept. The concept of learning how to learn skills prevents the presence of a generation that is not adaptive, stuttering towards changes/technological advances. Besides that, with the integration between the physical environment, the social environment which is part of the approach used will then change students to be more motivated in building aspects of entrepreneurship and to encourage students to be independent in doing business, so as to create new jobs.

Environmental Education as part of the social environment, which is formed in the learning environment mechanism - Vocational shows various changes in insight, students, student attitudes and student behavior at work, The ability to be able to analyze, make changes to a work behavior effectively has been shown by several schools The superiority of SMK in West Sulawesi province, this can be seen starting from changes in the curriculum which has been based on local industry, the ability of teachers to create a more interesting work environment by using local materials in creating small and medium scale products, the ability of students and teachers to prioritize competence to innovate and produce waste-based products Reduce, Re-use and Recycle.

Some of the environment-based learning activities (Env-Voc) that can be created by teachers in concepts based on the local environment or often called local education by learning how to learn are:

1. Provide interactive learning based on the surrounding environment so that the learning process occurs with two-way communication between the school environment and students,
2. Environmental holistic learning based on Env-voc which in the process links one information with other information in building knowledge construction, especially related to using the surrounding natural resources and making the use of these resources effective in the learning process,
3. Integrative Env-Voc where in the learning process a teacher can combine environmental knowledge, knowledge of teaching materials and materials, knowledge of learning media obtained by linking to facts and various environmental information around them or skills possessed by both teachers and students,
4. Scientific Env-Voc where in preparing the design of the learning process by constructing concepts through the stages of the scientific method which is then supported by various knowledge and knowledge systems, which support the character values possessed by students
5. Contextual (called CTL, where students find answers to problems faced by understanding the context of the surrounding environment,
6. Thematic, namely efforts to combine/integrate a material with other material in one theme, especially those related to environmental themes,
7. Effective in creating quality learning,
8. Collaborative related to the process of students as students working together in studying subject matter, and analyzing together and finding solutions together.
9. Centralized where the learning process will be centered on students where the teacher is only a facilitator and guides students so that the learning process involves more students which then integrates with the student learning environment.
The influence of the readiness of the institution and the elements within it has an impact on the effectiveness of the educational policies that have been set. The principal as a leader has a major influence on the quality of graduates which then also has an impact on the quality of the institution he leads. In this case, optimal efforts are needed from school principals to build effective collaboration with the business world and industry through the WBL (Work Based Learning) model. Collaboration that focuses on student achievement targets and not just as a complement to administration. In addition, the development of the skills of vocational teachers in the field of IT is also needed so that they can adapt to technological advances, especially those related to the development of knowledge in the vocational field. Therefore, vocational teacher training needs to be continuously upgraded and updated in order to improve the quality of learning [17].

IV. CONCLUSION

Education policy is a set of rules set by the government in the field of education that is able to accommodate educational problems. In an effort to achieve educational goals, a strategy is needed that refers to improving the quality of learning. Vocational/vocational education is education that prepares its graduates to be independent and ready to work. The aim of vocational education is to increase the relevance of vocational education to the needs of the world of work so as to create a prosperous and competitive society. The philosophy in vocational education is essentialism, existentialism, and matching. The role of the teacher in carrying out learning activities that support students' skill abilities so that they are relevant to the needs of the industrial world is to present learning with the concept of learning how to learn. Learning activities in the concept of learning how to learn guide students to be more active, communicative, independent and adaptive. Learning activities that include learning how to learn, are learning activities that are interactive, holistic, thematic, contextual, collaborative, scientific, effective and integrative and student-centered.

REFERENCES