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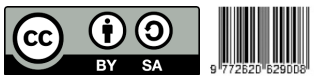

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Abstract

The problem of developing a special curriculum for vocational high schools has become a central issue in the implementation of curriculum diversification that is oriented towards the industrial world, so it is deemed necessary to examine its implementation in vocational education units (SMK). For this reason, this study aims to describe fisheries: planning, organizing, implementing; and Supervision / evaluation of industry-based curriculum development management in improving the competence of vocational students. This research uses a qualitative approach with descriptive methods. Data collection techniques through in-depth interviews, observation and documentation. Data were analyzed using interactive analysis techniques consisting of data collection, data reduction, data presentation, and conclusions. The results showed that: (1), Industry-based curriculum development management planning in improving the competence of students at the two SMKs in Bandung Regency through: Preparation stage: formulating objectives, and context analysis (SWOT); Validation stage through the determination of programs and strategic plans, as well as recommendations, the implementation stage and committee considerations; and the Verification Stage. (2) the organization is formed from: elements of the school, school committee, elements of the world of business / industry and elements of government); (3) Implementation is carried out through the management of: Implementative Curriculum; Student competency development; Implementation of teaching and learning activities and assessment of learning outcomes. (4) Monitoring / evaluation through: (a) Monitoring learning methods and student achievement (assessment of learning outcomes). (b) Academic Supervision; (c) The number and quality of the ability of graduates; and (d) internal audit. Other findings in this study are the impact of industry-based curriculum development management, constraints and efforts to overcome them.

Keywords: *Management, curriculum, industry, competence.*

INTRODUCTION

Along with the times, the Indonesian nation is entering the era of globalization in the 21st century which is marked by advances in science and technology, especially information technology and industry, which are increasingly developing rapidly. So reform in the field of educators becomes a

necessity that cannot be negotiable. In this case, the role of vocational education and vocational secondary education is an important issue in the context of the development of the Indonesian nation in the era of globalization.

Normatively reform in the education sector in Indonesia begins with the enactment of Law no. 20 of 2003 concerning the National Education System. The implementation of the national education system is stipulated in Government Regulation (PP) number 19 of 2005 concerning National Education Standards. Chapter II article 4 emphasizes that the National Education Standards aim to ensure the quality of national education in the context of educating the nation's life and shaping the character and civilization of a dignified nation.

Vocational education is education which contains a curriculum that is sensitive to the various needs of experts needed in a business world and the industrial world. Article 15 of the Law. No. 20 of 2003 concerning the National Education System states that vocational education is secondary education that prepares students especialy to work in certain fields (Depdiknas, 2003).

The phenomenon at the practical level, the rapid development of technology and industry triggers the acceleration of the development of the industrial sector. Along with the development of this situation, the Government of Indonesia issued a policy of Presidential Regulation of the Republic of Indonesia number 8 of 2012 concerning the Indonesian National Qualifications Framework (KKNI). With the existence of the KKN), which is associated with the curriculum, it requires a change in the formal education curriculum, especially vocational.

The reality is that the implementation of Kurtilas still raises several problems, one of which is regarding indications of a mismatch of qualifications in the competency standards of SMK graduates with the facts and reality of the qualifications of workforce competencies needed by the industrial world. In this case, the achievement of graduate competency standards, especially in vocational education units and their incompatibility with the qualification standards of the workforce in the related industrial world are important issues to be investigated.

With the change in the curriculum, and in accordance with the provisions of the SPN Law above, vocational schools as one type of education that prepares students to be ready to work and be accepted in the industrial world can develop curriculum and learning activities according to their own abilities and uniqueness. with the needs of the related industry. The curriculum which so far refers to socio-cultural, in vocational education units there must be development by referring to the needs of the industrial world by not leaving Indonesia's own culture. This is an important issue to be studied carefully.

The problem of developing a special curriculum for vocational high schools is a central issue in the implementation of industry-oriented curriculum diversification, so it is deemed necessary to examine its implementation in the vocational education path, especially Vocational High Schools or Vocational Schools.

From the results of preliminary studies conducted by researchers, at the Adi Banjaran Plus Pratama Vocational High School and Telkom Vocational High School in Bandung Regency, it is indicated that

there is an implementation of industry-based curriculum development management which is marked by the presence of several additional productive fields of study that are adjusted to the competency qualifications required. needed by the business world and related industries. However, the development management system and coherence with student competencies still need to be studied more deeply.

Based on the background of the problem above, the root of the problem that the researchers found in this research is the low quality of the vocational high school graduate process. Based on the identification of the problem, the formulation of the problem in this study can be stated, namely: "How is the implementation of Industry-based Curriculum Development Management in improving student competence at SMK Plus Pratama Adi Banjaran and SMK Telkom Bandung Regency?

Theoretical Framework

In accordance with the philosophical foundation of educational essentialism based on John Locke's view, the management of industrial-based curriculum development in vocational high schools in improving the competence of vocational students requires a theory that is used as the basis for this research. The theoretical basis which includes:

a. Management Theory
The theoretical basis for this research is classical management theory. This flow defines management according to its management functions. "Attention and management skills are required in the implementation of these functions" (Sarinah, 2017 : 13).

Fayol argues that 'in industrial companies the activities carried out by management can be divided into six task groups'. The six management activities are: (1) Technical (production techniques and product manufacturing), (2) Commercial (Commercial buying and selling), (3) Financial. (Finance, and capital), (4) Security (Security and safety at work), (5) Accounting (Accounting or recording and calculations), and 6. Managerial (managerial tasks / management) (Priyono, 2017 : 10).

Fayol's theory above is further strengthened by Terry (in his book entitled 'Principles of Management' defines. : “management is a distinctive process consisting of planning, organizing, actuating and controlling performed to determine and accomplish stated objectives by the use of human being and other resources” (Terry, 2010). (Management is a special process consisting of planning, organizing, implementing, and monitoring carried out to determine and achieve predetermined targets through the use of human resources and others) " (Hasibuan, 2017 : 2). In this case, management is a process or way of achieving predetermined goals through activities carried out by other people. "Furthermore, four management functions based on Terry's opinion (1987) are commonly used which can be abbreviated as POAC, namely planning, organizing, actuating and controlling" (Gunawan & Dujum Djum, 2018 : 34).

b. Educational Theory

The basis of educational theory in this study used educational theory is the theory of convergence. The pioneer of this school was William Stern (1871-1939), a German education expert who argued that a child born into this world was accompanied by both good and bad traits.

Stern argues that educational outcomes depend on nature and environment, as if two lines lead to a meeting point. Therefore, this theory is called the theory of convergence (convergent means converging to one point). So according to convergence theory:

- Education is possible.
- Education is defined as the assistance provided by the environment to students to develop good potential and prevent the development of less good potential.
- What limits educational outcomes are heredity and environment.

Convergent flow is generally widely accepted as the correct view in understanding human growth and development. However, there are variations as to which factors are most important in determining growth and development. As stated by Hamalik : The education process is related to the development process. Meanwhile, development is directed and aims to develop quality human resources (Hamalik, 2006 : 75).

c. Curriculum Theory

The foundation of curriculum theory in this study is the interactive curriculum theory developed by Caswel (1947). chair of the curriculum development division in several American states. "Caswel develops the concept of an interactive community-centered curriculum or work (society-centered)" (Sukmadinata, 2012: 29). In developing its curriculum, Caswel emphasizes the participation of teachers in determining the curriculum, determining the organizational structure of curriculum preparation, formulating the meaning of curriculum, formulating goals, selecting content, determining learning activities, curriculum design, assessing, results, and so on.

Furthermore, this study refers to Johnson's (1967) theory which distinguishes between curriculum and curriculum development processes. In his theory, Johnson (Sukmadinata, 2012 : 32) analyzes six elements of the curriculum, namely:

1. A curriculum is a strucktur series of intended learning outcomes.
2. Selection is an essential aspect of curriculum formulation.
3. Structure is an essential charactistic of curriculum.
4. Curriculum guide instruction
5. Curriculum evaluation involeves validations of Both selection and structure.
6. Curriculum is the criterion for instructional evaluation.

d. Vocational Education Theory

The foundation of vocational or vocasinal theory in this study is the vocational theory 'Prosser's sixteen theorems' proposed by Prosser (1871-1952) an American practitioner and academic who is often regarded as the father of vocational education. students to find jobs, keep them and move forward in their careers. Prosser "believes that vocational education at the high school level will be able to make students more independent, independent and ready to work".

METHOD

In this study used a qualitative research approach, with descriptive research methods or field research. The reason for choosing the qualitative approach taken is because this research is intended to interpret the phenomena that occur in a school, namely reviewing and analyzing the management of industrial-based curriculum development in improving student competencies, starting from the readiness of students to receive industrial-based subject matter (Input), the learning process students, the resources of teachers in providing subject matter to their students as well as the facilities owned by the school in supporting the subject matter (Processes), the results of the absorption of the material presented by the teacher by the students (output) and the application of learning materials understood by students to be implemented. in the industrial world (outcomes).

The object of the research is the implementation of curriculum development management at SMK Plus Pratama Adi on Jalan Adipati Ukur no 8 Pengkolan Banjaran and SMK Telkom, Cisirung, Bandung Regency. The research subjects used purpose sampling and snowball sampling with data sources (expert informants) consisting of: Principals. Vice Principals. Counseling Guidance Teacher. Head of the Department of Study Program. Teacher at Vocational High School. Students in Vocational High School. and the management of the relevant Industrial Company receiving graduates.

Data collection techniques are carried out through: (1) Observation; (2) interviews; (3) documentation study. To achieve a degree of data confidence (credibility), triangulation and member-check are carried out. Triangulation as checking the truth of the data by comparing it with data from other sources. Member-Check as a match for documentation data from the results of the interview was confirmed with the resource persons. The qualitative data analysis technique consists of three stages, namely (1) data reduction, (2) data display, and (3) verification or drawing conclusions.

The sources of data collected consist of primary data and secondary funds. Primary Data, namely data in verbal form or data spoken in oral form, movements made by reliable subjects directly from data subjects (source persons). Secondary data is data obtained from data collection techniques that support primary data.

RESULT AND DISCUSSION

Management of industrial-based curriculum development in vocational high schools in improving student competence in both private vocational schools in Bandung Regency includes planning, organizing, implementing, evaluating, impacting, constraints and solutions can be explained in the following discussion:

a. Industry-Based Curriculum Development Management Planning on curriculum development planning, planning for competency improvement programs for SMK students, and strategic plans

Management Planning for the development of industrial-based curriculum for SMK in Bandung Regency, is strengthened by: (1) philosophical foundations as outlined in the vision of each school in accordance with the characteristics and institutional goals; (2) The normative foundations are Law No. 20/2003 SPN, PP 19/2005 SNP, Permendikbud RI concerning eight national education standards, and provisions on curriculum.

Contextually, management planning for developing industry-based curriculum in improving student competence in vocational high schools is to: (1) Equalize perceptions; (2) References/guidelines for the implementation of learning; (3) Guidelines for implementing the 2013 curriculum. Its functions are as (1) organization of learning experiences for students; (2) means of achieving educational goals; (3) working guidelines for the preparation of learning; (4) learning outcomes evaluation guidelines.

The planning steps for the management of industrial-based curriculum development in the two SMKs in Bandung Regency are not different, only conceptually different, but in principle the same, namely: Preparation stage: Setting goals and context analysis; Validation and recommendation stage, implementation stage and committee consideration; Verification Stage. With a planning time of 2 months (60 days).

Management planning for industrial-based curriculum development is an activity to choose various alternative curriculum development actions with activity targets in accordance with predetermined educational goals. The planning includes the preparation of competency standards, development of curriculum and teaching materials in accordance with the demands of the development of advanced technology and competencies in accordance with the needs of the industrial world, preparation of testing and certification systems, and preparation of work programs.

The basic concept of the Industry-Based Curriculum Development Program is the development of the National Curriculum (K13) of Vocational High Schools with the adjustment of skill competencies (C3) through the addition of productive subjects that are adjusted to the expectations of the partnering Business/Industry World. The Normative Foundations of the Industry-Based Curriculum Development Program at Vocational Schools in Bandung Regency are: PP 13/2015 SNP Amendment to PP 19/2005 and PP 31/2013)., Regulation of the Minister of Industry Number 03/M-IND/PER/2017 concerning Guidance for Guidance and Development of Competency-Based Vocational High Schools that Link and Match with Industry;

Goals (Goals) Development of Industry-Based Curriculum at the two Vocational Schools in Bandung Regency, namely the implementation of competency-based vocational education that links and matches with Industry, namely to have and implement a curriculum that is in accordance with industry needs and produce graduates in each skill program with competencies that refer to the SKKNI Industry, international standards, and/or special standards required by the partnering company/industry. The targets (targets) are the realization of schools that can meet national education standards to go to schools that are categorized as Independent (National/International Standard Schools) accredited A, and Completion of the Education Unit Level Curriculum by taking into account eight educational standards through context analysis.

The Industry-based Curriculum development program in improving student competence at SMK in Bandung Regency is divided into three types of education and training programs, namely: normative programs, adaptive programs, and productive programs. Its implementation is regulated in the GBPP SMK with consideration of the time allocation and subject matter. (1) Practice in earning 70%, theory max 30%; (2) the level of completeness; (3) Internship Min. six months. The form of the Industry-based Curriculum Development Program in improving student competence at Vocational High Schools in Bandung Regency has two process models, namely: (1) Macro process: Determining the foundation, determining Construction, Implementation, Evaluation (comprehensive and systemic);

(2) Micro process: Designing objectives, formulating materials, determining methods, and designing evaluations, in the form of: (a) Curriculum Improvement (K-13 Plus); (b) Adding subjects (implementation curriculum); (c) Development of an Industry-Based Curriculum Implementation Manual.

Types of Industry-Based Curriculum Development Program Activities at the two Vocational Schools in Bandung Regency, including: First, Curriculum Planning which is designed based on needs analysis by using a model that refers to an effective curriculum design. Second, the organization of the curriculum which is arranged both structurally and functionally. (Developing link and Mach Curriculum; syllabus, up to date references); and SAP creation; Develop an implementable curriculum by adding "majoring" elective subjects; and Publishing educational manuals every year in addition to containing a short curriculum and syllabus, as well as an academic calendar and rules that students absolutely need to know.) Third, Curriculum Implementation, namely the implementation of the curriculum in the field (Implementing the Club Lesson Plan, Implementing the teaching and learning process in accordance with academic rules and social norms with various methods and strategies). Fourth, Curriculum Supervision, which includes curriculum evaluation (academic supervision, evaluation of learning outcomes, achievement of SKL, Industrial Work practices, and Expertise Competency Test).

Based on the description above, planning is the process of defining organizational goals, making strategies to achieve those goals, and developing plans for organizational work activities. As stated by Terry, (Gunawan, I. and Djum Djum NB, 2017:37) which states, “Planning is the selecting an relating of fact and the making and using of assumption regarding the future in the viasualization and formulation of proposed activities believed necessary to achieve desired results", Kauffman agrees that planning is the process of determining the goals or objectives to be achieved and determining the methods and resources needed to achieve those goals as efficiently and effectively as possible (Rohiat, 2018 : 85).

In the context of industry-based curriculum development management at the two private SMKs in Bandung Regency, the sequence of preparation of teaching materials is based on the learning hierarchy. As stated by Sukmadinata, "Teaching materials are composed of certain topics and sub-topics that are arranged in a certain sequence, and form a sequence of teaching materials. In another section, it is explained that the sequence is based on a learning hierarchy, namely how to arrange teaching materials based on a hierarchy that describes the sequence of behaviors that students must first master, successively until the last behavior (Sukmadinata, 2012 : 105).

Planning is the selection of relevant facts and the making and use of assumptions about the future in the visualization and formulation of proposed activities that are believed to be necessary to achieve the desired results. Thus, planning contains the formulation of actions that are considered necessary to achieve the desired results in accordance with the stated goals. is the most important process of all management functions because without planning, other functions cannot run.

As described earlier, the planning of industrial-based curriculum development carried out in improving student competence, of course, cannot be separated from the use of strategies. The strategy carried out is related to the absorption rate of graduates at DuDi with graduates who are ready to work and can be fully absorbed by the business/industry world. To achieve this, the strategic planning steps contained in the school's Strategic Plan Document have been prepared.

The Strategic Plan as a form of appreciation and response to the enactment of Permendikbud No. 60/2014 on the SMK/MAK Curriculum regarding content standards and the implementation of Permendikbud of the Republic of Indonesia No. 20 About Graduate Competency Standards. The Strategic Plan of the two Vocational Schools in Bandung Regency is a manifestation of the similarity of intentions and determination of all stakeholders to continue to improve and improve school performance and services to the community. The strategic plan document for SMK in Bandung Regency, in general, contains: 1) Introduction, 2) School profile, 3) Strategic environment, 4) Long-term and short-term operational plans, and 5) Closing.

This strategic plan was made based on the results of a study of the current situation and condition of the school by considering various aspects to achieve the school's goals. And used for a period of 4 (four) years, covering: a) strategy formulation, including VISION, MISSION and Values, b) Environmental Analysis using SWOT Analysis, c) Strategy implementation and d) Strategy evaluation and control.

1) Strategy formulation

The strategic formulation of the two private vocational schools in Bandung Regency consists of the vision, mission, values, quality policy, and quality objectives. The vision of these two private vocational schools in Bandung Regency, although in different formulations, has the same indicators, namely quality schools, and excels in science and technology, IMTAQ and environmental perspectives. The mission has the same indication that is . Produce/Prepare graduates or graduates who have high faith and devotion to God Almighty, and have high awareness of environmental harmony, and have superior personalities and are able to develop themselves by organizing international standard training. The values in the strategy formulation are intended as positive norms of environmental culture which are expected to color all school community activities.

2) Organizational environmental analysis

The results of the SWOT analysis at the two Vocational Schools in Bandung Regency are each different, but because the territorial area is in one district, and the type of school is the same, of course in some aspects there are similarities, especially external conditions, namely opportunities and threats.

Thus, based on the description above and the facts of the research findings, it can be stated that the environmental analysis (SWOT) of each of the two private vocational schools in Bandung Regency is outlined in the Vocational School Environmental Analysis Model (SWOT) as a Strategy in the Implementation of Industry-based Curriculum Development Management in improve student competencies which include internal strengths and weaknesses as well as external opportunities and challenges.

3) Strategic implementation

There are four strategies, each of which differs according to the results of a different SWOT analysis. The determining factors in the two SMKs in Bandung Regency have similarities in their components which include components: Accreditation, Curriculum and Graduate Competencies, Learning Process, Assessment, Educators, Management, Facilities Infrastructure and Financing. However, each of these components has a different strategic implementation determinant

Based on the results of the analysis of research data, it can be stated that there are four implementations of industry-based curriculum development strategies, namely SO, WO, ST strategies and WT strategies. It can be stated that the implementation of the strategy in the implementation of industry-based curriculum development management in improving the quality of students, at the two private vocational schools in Bandung Regency, has several strategic steps in common or at least there is harmony between the two, both at SO, WO, and at ST and WT.

Thus it can be said that the strategic implementation of the two high schools in Bandung Regency is carried out through the Annual Operational Plan (Renop) which is prepared every academic year. In both SMKs in Bandung Regency there are similarities in their components which include eight components, namely: Accreditation Components, Curriculum and Graduate Competencies, Learning Processes, Assessments, Educators, Management, Infrastructure and Financing.

4) Strategic Control

In both SMKs in Bandung Regency, control is carried out through audits and quality assessments based on Quality Management Standards (QMS) in the form of compliance with standard operating procedures regarding School Supervision; Implementation Monitoring; School Programs; School Performance Evaluation; and Performance Evaluation of teachers and education personnel over a period of four years. Technical Control of Strategic at Vocational Schools in Bandung Regency is basically the same as internal audit within the organization of the education unit itself and external audit. However, in the implementation procedure of each educational unit there are differences according to their respective internal policies.

The strategic plan as an element of management planning for the development of industry-based curriculum in the two SMKs in Bandung Regency is very appropriate, because the strategic plan or management implementation arrangement is very important to control the direction of organizational policies in achieving goals. This is in line with Ralph Taylor's opinion in Webster's World University Dictionary which states "strategic mean of great or vital importance within an integrated whole." However, the word strategic is then used by almost all organizations to make choices in winning certain "wars" in order to achieve goals. In line with that, Mulyasa states that strategy is a big plan that is increasing, efficient, and productive in order to effectively achieve goals (Mulyasana, 2011: 226).

Strategy is reduced to more operational tactics with clear and measurable goals and objectives. The success of an organization in achieving its goals cannot be separated from the accuracy of the preparation of a plan, both strategic planning and operational planning. Associated with the increasingly complex and diverse competition, the concept and strategy of the organization's business is also growing. Then, in the context of management science, there is the term strategic management.

Furthermore, the term strategic management is used in the management of education in order to improve the quality of graduates. The definition of strategic management is also put forward by Wheelen T and David H. (2001) strategic plan is a series of managerial decisions and actions that determine the company's performance in the long term.

Thus, planning in industry-based curriculum development management in improving student competence at private vocational schools in Bandung Regency contains clear, comprehensive

objectives (foundations, and stages) by considering potential sources available through context analysis (SWOT), as well as appropriate systematics as planning for a realistic, future-oriented industry-based curriculum development program. This is as stated by Hamalik a good plan consists of 5 special elements. (1) Objectives are clearly formulated; (2) Comprehensive, yet clear to staff and members of the organization. (3) Hierarchical plans focused on the most important areas; (4) Economical, considering the available sources; (5) Eligible, allow change (Hamalik, 2010 : 136).

b. Organizing Industry-Based Curriculum Development Management

The organization is formed in a Curriculum Development TEAM appointed by the principal, consisting of: the principal and his representatives (school management), school committees, heads of study programs, and representatives of teachers of normative, adaptive, and productive subjects. Added from elements of the Business / Industry and elements of the Government (Regency Education Supervisors).

The principal as the person in charge of the education unit in developing an industry-based curriculum, every policy, ability, vision, response, and creativity in dealing with curriculum changes also plays a major role in curriculum development. The vice principals are elements that carry out the principal's duties and have a very important role in the management of Industry-based curriculum development. Teachers are at the forefront of implementing industry-based curriculum development, because teachers act as communicators, learning motivators, learning media development, experimenters, organizational builders, learning system managers, and student mentors in schools. The involvement of the school committee in education in schools is a realization of the responsibilities, beliefs and expectations of the community. DUdi representatives are involved in industry-based curriculum development management organizations, although as resource persons. Likewise, the government, government representatives, in this case the supervisor of the education unit supervisor, is an element that bridges the legal basis of the industry-based curriculum as an implementable curriculum that is enforced in the education unit.

Organizing is a function where the synchronization and combination of human resources, physical resources and capital or financial resources are combined into one, to achieve the goals of the organization. Organizing helps in the achievement of organizational goals. According to Samuel (Sarinah and Mardalena, 2017:44) The process of establishing ordrly uses for all organizational's resources. (organizing is the process of systematically organizing all activities in managing resources). In other words, organizing is an activity of utilizing organizational resources to achieve strategic goals. The organizational resources in question are human resources and other physical resources owned by the organization to carry out the plans that have been set in order to achieve the goals that have been determined.

Thus, in the organizational structure of Industry-based curriculum development Management, in addition to the school as the person in charge, the deputy head of the curriculum department as the chief executive, also added three vice principals for student affairs, infrastructure, public relations and industrial relations, as well as the head of the expertise competency program. , and by involving representatives from the DUDI and as evaluators, namely the government representatives in this case the supervisors of the education unit supervisors, and the school committee as elements of the community. .

This is in line with the organizing concept put forward by Hamalik (2017:136-137) that an organization is needed to carry out the management process, namely: (1) Curriculum planning organization carried out by a curriculum development institution or a curriculum developer; (2) Organizations in the context of implementing the curriculum both at the regional level and the level of schools or educational institutions that implement the curriculum; (3) Organizations in curriculum evaluation that involve various parties in the curriculum evaluation process.

c. Implementation of Industry-Based Curriculum Development Management

Implementation of Management of SMK industry-based curriculum development in Bandung Regency through SBM, Quality Management System (SOP, SPN) with principles based on: broad based curriculum; competency-based curriculum; mastery learning; dual-based programs; and strengthening the self-development ability of graduates; and considerations: Scope; continuity; balance; time location.

Furthermore, it can be stated that the Program for implementing Industry-based Curriculum Development Management at Vocational Schools in Bandung Regency has several programs in common but the achievements are different according to the conditions of each education unit. The similarities of these programs include the management of: KTSP Doc; & Revision & review (Implementative Curriculum); Management of the Club Lesson Plan (Syllabus Development, RPP Mandiri); Learning Preparation (Evaluation of lesson plan execution); Implementation of KBM (introduction, core includes explorative, elaborative, confirmative. Closing); Principles of applying CTL; PAIKEM, CTL; Carrying out Assessment of Learning Outcomes (Odd PAS UTS, UAS, US & UN, Expertise Competency Test, Implementation of the UN); and Supervision of learning: (Monitoring, Academic Supervision, Evaluation and follow-up. The difference is that at SMK Plus Pratama Adi there are programs: teacher training; SKL UN surgery; additional hours for class XII; and Dudin's Manpower Recruitment.

The implementation of industrial-based curriculum development management is also carried out through the implementation of improving the competence of SMK students including: (1) Implementation of the Expertise Program in the industrial-based productive implementative curriculum; (2) Application of Competence for Specialized Industrial World; and (3) implementation of industrial-based learning process in productive fields.

Based on the results of the analysis and study of the implementation of Industry-Based Curriculum Development management in improving the competence of SMK students, the skill programs in both SMKs in Bandung Regency have the same areas of expertise, namely: Expertise 3. ICT with Expertise Program 3.1 Computer and Informatics Engineering, covering expertise competence : 3.1.2 Network and Computer Engineering (TKJ); The difference: At SMK Telkom is added with expertise competence 3.1.3 Multimedia; and Skills Program 3.2 Telecommunication Engineering with Skill Competency 3.2.2 Telecommunication Access Network Engineering (TJA). Meanwhile, at SMK Plus Pratama Adi, there is an area of expertise 7. Business and Management with expertise program 7.3 Accounting and Finance covering competency expertise 7.3.1 Accounting and Institutional Finance (Ak).

The implementation of the Productive Subject Development Program held by the two Vocational High Schools in Bandung Regency mostly have similarities including: 1) Coordination meetings for productive subject teachers; 2) Procurement of departmental inventory facilities and infrastructure;

3) survey with DU/DI and streamlining the role of DU/DI 4) Industrial visits 5) Industrial Job Training (PKL/Prakerin); 6) Expertise Competency Test (UKK/Prakerin); 7) Monitoring and evaluation of work programs that have been implemented. Implementation of the Development Program in the fields of productive subjects of the two SMKs in Bandung Regency, there are differences that are not too significant, namely at SMK Plus Pratama Adi the following activities are also carried out: 1) Student training related to sharia banking accounting; 2) Educational Visits and, 3) Competency Competition. Meanwhile, at SMK Telkom Bandung, weekly activities of Integrity Education and Patriot Discipline Orientation are held).

Competencies of students needed at the two vocational schools in Bandung Regency include: (1) English Communication Competence; (2) Computer Network Competence; (3) Management Accounting Competence; (4) Religious Competence (Akhlaq); (5) Competence of character and personality; and (5) Competence in mastering software applications (Sisco, Virusess Security System, Microtic, Installing Applications System)., (6) Competency in Multimedia expertise (Printing Graphic Design, Interactive Media Design, and 2D and 3D Animation); (7) TKJ expertise competence (Wide-Based Network Technology / WAN; and Network Service Technology); (8) Competency of TJA expertise (Wide-Based Network Technology / WAN; and Network Service Technology). Coupled with local content, namely English Plus and Intensive English.

The implementation of the learning process as one of the important elements in education in SMK has a major role in mediating and accommodating efforts to increase the thinking skills and skills of training participants towards positive behavior change.

In the planning of learning productive subjects at the two SMKs, there are almost the same and there are no significant differences, namely: (1) Coordination and consultation with school principals, (2) Preparing work programs for the next one year; (3) Identification of the advantages of the implementa- tive curriculum in the area of expertise and competency skills (plus), (4) Analysis of Core Competencies and Competency Standards of expertise (plus) through IHT (In House Training). (5) Procurement of teaching materials, preparation of independent syllabus and lesson plans), development of instruments for each field of study through workshops. (6) Establishing Learning Requirements (Amount per group is 34 children; Ratio of students to textbooks 3:1; and (8) Management of productive classes according to skill competency

In the implementation of productive subjects at Vocational High Schools in Bandung Regency, the following are carried out: 1) Coordination meetings for productive subject teachers; (2) Procurement of facilities and infrastructure 3) Training of students related to competency skills: (4) Carrying out surveys with DU/DI for Kurin (industrial visits) and for Prakerin (industrial work practices); (5) Carrying out industrial visits, educational visits to universities, and Industrial Field Work Practices (Prakerin); 6) Teaching and Learning Activities (KBM); carried out both face-to-face, and online (in the network); Learning includes introduction, core activities (explorative, elaborative, and conformative:) and closing (resume, reinforcement, assignment assessment). Learning to apply CTL, Mastery learning, PAIKEM/ PAKEM, Application of learning outside the classroom; and ICT based.

Technical Assessment of learning outcomes for productive subjects is carried out in stages: developing assessment instruments with varied models (PG, Esei, practice) through PTS, PAS, UKK, UJikom, US and UN); (2) Processing/analysis of assessment results; (3) Utilization/follow-up of assessment results.

In supporting the learning process both normative, adaptive, and productive, then at SMK in Bandung Regency, academic rules are made which include: Learning System, time allocation, Face-to-face and online learning processes, work practices, and programs supporting the learning process that must be followed by students (Read the Qur'an and Asma'ul Husna, pray Dzhuhur in congregation, and lecture (cult) at school).

The implementation of school programs in improving the quality of graduates at the two SMKs in Bandung Regency has more in common, including the following: a) Improving and strengthening religious values;, (b) Improving KKM standards;, c) Implementing the development of learning methods with strategies student centered, reflective learning, active learning, enjoyble and joyful learning, cooperative learning, quantum learning, learning revolution and contextual learning., (d) Implementing ICT-based teaching and learning (wifi), f) Improving academic and non-academic achievements by involving students in various academic competitions.

In improving student competence, the two Vocational Schools in Bandung Regency in addition to various self-development and extracurricular activities, also hold excellent programs. Thus, the two Private Vocational Schools in Bandung Regency have followed the provisions as described in Permendikbud Number 34 of 2018, that the preparation of Competency Areas for SMK/MAK graduates is based on national education goals by considering: (1) Indonesian character and culture who have faith and piety to God Almighty and the values of Pancasila; (2) 21 (twenty-first) century learning and skills, such as critical thinking and being able to solve problems, be creative, be able to work together, and communicate; (3) increasing the competence of graduates through language literacy, mathematics, science, technology, social, culture, and other basic skills needed in facing future challenges; (4) preparation of human resources in order to have the knowledge, skills, and attitudes as middle-level skilled workers; and (5) the provisions of the Indonesian national qualification framework (KKNI) and applicable national and international work standards

Implementation of the curriculum and learning is the embodiment of the curriculum which is still a written document into actual in a series of learning activities. As stated by Syafaruddin, "To implement the policy, the policy recommendations that have been formulated need to be included in curriculum programs or learning activities (Syafarudin & Amirudin, 2017 : 74-75). This is in accordance with Dubrin's opinion that the implementation function is a function of managerial activities that influence other parties in an effort to achieve goals, which will involve various interpersonal processes, for example how to motivate and provide illustrations to learning objectives and optimally shape personal competencies (Syafarudin & Amirudin, 2017 : 196)

Thus, the focus of the implementation of SMK industry-based curriculum development management in Bandung Regency is on the structure of subjects, learning load, addition of fields of study of interest to DuDin, Preparation of learning tools, implementation of learning, Academic Supervision, Assessment of Learning Outcomes (PTS, PAS, UKK, and Ujikom and UNBK), and financing of education/training as well as the procurement of educational infrastructure. In the implementation of Management, the development of industrial-based curriculum for SMK in Bandung Regency is carried out at the school level managing: academic calendars, schedules, setting educator duties, Implementation of class level managing: KBM, extracurricular; self-development. As the theory put forward by Hamalik (2017:173) At the school level, the principal is responsible for implementing the curriculum in the school environment he leads.

This picture is evidenced by the implementation of industrial-based curriculum development management in both SMKs in Bandung Regency which is carried out through the implementation of improving the competence of SMK students including: (1) Implementation of the Expertise Program in the industrial-based productive implementative curriculum; (2) Application of Competence for Specialized Industrial World; and (3) implementation of industrial-based learning process in productive fields.

This is in line with the theory which states that "Implementation of the curriculum is the application or implementation of a curriculum program that has been developed in the previous stage, then tested with implementation and management that is adapted to the situation and field conditions and the characteristics of students in intellectual, emotional, and physical development" (Wahyudin, 2019 : 94).

d. Industry-Based Curriculum Development Management Evaluation

Evaluation or control in curriculum development management is related to curriculum monitoring, namely supervision, inspection, monitoring and evaluation. Management evaluation of the second industry-based curriculum development of private vocational schools in Bandung Regency is carried out through lesson plan execution, implementation of academic monitoring/supervision, analysis of student learning evaluation results, and monitoring of curriculum implementation within a certain period of time by expert observers. The evaluation targets are excellent service to the expectations of the community (parents of students), getting added value; and so that the curriculum does not deviate from the established path.

Management Evaluation of SMK industry-based curriculum development in Bandung Regency using curriculum management evaluation tools, namely: Lesson plan execution documents; Format of academic supervision & follow-up; PTS, UAS, UKK, US and UN/UNBK; PPL/Prakerin; and Skill Competency Test (UKK/Ujikom). Technical implementation of curriculum evaluation is carried out as follows: 1) Evaluation of lesson plan execution. the document is evaluated by the curriculum development team. 2) Academic supervision and monitoring educators on the implementation of responsibilities, personality abilities, community abilities, professional abilities, and loyalty to their superiors. 3) how to use media, media procurement, media maintenance and care. 4) identification of learning methods, learning motivation, activeness, creativity, student achievement (assessment of learning outcomes), obstacles, and difficulties faced by students, 5) Analysis of learning achievement assessment instruments, students (PTS, PAS, US, UKK and UN/UNBK, results of PPL/Prakerin and UKK/Ujikom); and reporting of assessment results. 6) Number of graduates and quality of graduates' abilities.

Thus, evaluation of the management of industrial-based curriculum development in Bandung Regency is carried out through lesson plan execution, implementation of academic monitoring/supervision, analysis of student learning evaluation results, and monitoring of curriculum implementation within a certain period of time by expert observers. This is in line with the opinion of Syafarudiin (2017: 31) "Control Function, which seeks to supervise, assess, monitor, improve on weaknesses in the management system".

The picture shows that the implementation of the evaluation of industry-based curriculum development management in the two private vocational schools in Bandung Regency is proven by

the following technical implementations: 1) Evaluation of the lesson plan execution, the document is evaluated by the curriculum development team. 2) Academic Supervision and monitor educators on the implementation of responsibilities, personality abilities, social skills, professional abilities, and loyalty to their superiors. 3) how to use media, media procurement, media maintenance and care. 4) identification of learning methods, learning motivation, activeness, creativity, student achievement (assessment of learning outcomes), obstacles, and difficulties faced by students, 5) Analysis of learning achievement assessment instruments, students and reporting of assessment results. 6) Number of graduates and quality of graduates.

This is as the theory put forward by Wahyudin , namely::

1) Curriculum supervision is a series of activities to help teachers develop their abilities in managing the learning process for the achievement of learning objectives.

2) Curriculum supervision is a monitoring activity to see people who are implementing the curriculum in the field for further coaching at the same time;

3) Curriculum evaluation is a process to collect various information in order to make a decision about the educational program, whether it needs to be added, reduced, or maybe replaced. And

4) Monitoring or monitoring is an activity process to find out to what extent the curriculum has been implemented. The Curriculum Development Mechanism is implemented in schools, and what problems are felt in implementing the curriculum (Wahyudin, 2019 : 138).

e. The Impact of Industry-Based Curriculum Development Management on the Competence of Vocational High School Students

The Management of Industry-Based Curriculum Development and the strategic plan and implementation carried out by the Vocational Schools in Bandung Regency have an impact on the quality of graduates and student competencies, thus impacting the readiness of students to work in the business world and the industrial world. This is evidenced by documents of academic and non-academic achievements, national exam scores and absorption of graduates.

1) The impact on the academic achievement of students on the site, especially the increase in productive subjects with the results of the National Examination with an average score of 77.57 and the results of the Expertise Competency Test (UKK/Ujikom) with an average score of 86.7.

2) The impact on non-academic achievement in both Vocational Schools in Bandung Regency has good performance and greatly supports increasing student competence, even though each site has different non-academic achievements. The championships that can be followed by the two Private Vocational Schools in Bandung Regency are between 12 to 71 championships.

3) Impact on the level of uptake of graduates who are encouraging and able to meet community expectations. The level of absorption in other Dudin with different competencies and Continuation of study to universities. It can be stated that the level of job absorption for graduates at both Vocational High Schools in Bandung Regency is on average 56.65% or more than half of the graduates work according to their competencies, and as many as 41.5% or almost half of graduates who continue to college.

The success of the absorption of graduates in the Industrial World in accordance with their competencies as much as 56.65% or more than half of the graduates work according to their competencies, in both private vocational schools in Bandung Regency, showing the impact of industry-based curriculum development management which is able to improve student competencies as required by the company. As stated by Sashkin and Kisser (Sukmadinata, 2004 : 105).

"If a graduate enters the workforce, the expected competence is competence that is able to improve company performance, in this case the company's performance in the era of globalization refers to productivity to be able to win the competition".

The same thing was also stated by Kesuma "the world of work requires input in the form of people who have technical professional abilities so that they can still maintain the sustainability of their production wheels in the midst of free competition" (Kesuma, 2011).

Thus, the competence of students in both private vocational schools in Bandung Regency is indicated by the academic achievement of students experiencing completeness above the KKM. In particular, the competence of vocational high school graduates in terms of academic achievement is marked by the achievement of the National Examination and Testim scores showing an increase. The non-academic achievements each obtained between 12 championships and 71 championships. The absorption rate of graduates of both vocational schools in Bandung Regency is encouraging and able to meet community expectations, especially in the absorption of graduates in the world of work reaching more than half (56.65%) working according competence, and almost half (41.5%) continue their education to tertiary institutions.

The general description of the competence of vocational students is vocational competence with regard to the development of skills and practical skills in a field of work. This competency can be in the form of mastery of skills and crafts (pre-vocational), vocational, and vocational stages. As outlined by Government Regulation Number 13 of 2015 concerning National Education Standards, as a change from PP Number 32/2013 concerning the replacement of PP 19/2005, Article 1 paragraph (4) Competence is a set of attitudes, knowledge, and skills that must be possessed, internalized, and mastered by students after studying a learning content, completing a program, or completing a particular educational unit. In this case, the competence of SMK graduates is a skill competency, as stated by Sukmadinata (2004: 29) In a general sense "competence has almost the same meaning as life skills or "life skills" namely skills, skills to declare, maintain, maintain and self development"

f. Constraints Faced by Industry-Based Curriculum Development Management

From the results of data analysis of research findings, it can be stated several obstacles in the implementation of industry-based curriculum development programs in increasing student competence in both private vocational schools in Bandung Regency, including:

a. Internal constraints include: (1) Constraints on the institutional aspect, namely the addition of practicum facilities has not been adequate according to the one in DuDi. On the other hand, the lack of role of the organizing foundation as an agent of change related to the implementation of the curriculum. (2) Constraints on the aspect of teaching staff, including: lack of understanding of the new curriculum; Low motivation to innovate; And there is limited information, both or indirectly

related to education. (3) Constraints from the aspects of students, namely: Different level of intelligence intake of students; And the level of interest of students who are different.

b. External constraints include: (1) bureaucratic aspects (regulations, normative provisions, and bureaucratic policies) namely the existence of normative regulations and provisions regarding the educational process, educational institutions that are always changing; and the role of education supervisors is not yet optimal; (2) Dudi's aspects, namely: Dudi's involvement is only limited to information on competency needs, the productive curriculum applied is not in accordance with the competencies expected by Dudi; There are still Dudi accepting relatively few students to carry out industrial field work practices; And varied terms of work; (3) Aspects of society (parents, environment), namely: The economic level of the community with low abilities, and the community / school committee is less concerned about students' learning motivation.

Thus, the constraints in the management of industrial-based curriculum development in improving student competence in both private vocational schools in Bandung Regency are almost the same, namely internal constraints regarding institutions with lack of fulfillment of facilities; Educators who are inexperienced and less motivated to innovate; and Learners who are diverse in their abilities and interests; External constraints regarding the bureaucracy that does not play a role in coaching and changing rules; Dudi whose role is still limited; and People who are economically low and do not care. This supports the research results of Wahzudik, N. et.al. (2018), namely "Various problems in the development of the school curriculum, namely the lack of stakeholder involvement, the quality of human resources and curriculum assistance is still limited".

g. Efforts Made in Overcoming Industry-Based Curriculum Development Management Problems

Efforts to overcome internal problems in the management of industrial-based curriculum development developed in vocational education units in Bandung Regency have various efforts that are differential according to the constraints, priorities, conditions and capabilities of the education unit. However, in general, these efforts can be classified into handling internal problems, and problems that come from external parties.

a. Efforts to overcome internal problems according to the constraints that exist in the two private vocational schools in Bandung Regency, including: (1) In terms of institutions, namely by implementing School reform and classroom reform; Carry out action research; Revision of the industry-based implementative curriculum by referring to the latest normative provisions, and the competence needs of Dudin, Adding local content subjects that are unique to differentiating other SMKs; Fulfillment of facilities and infrastructure for the practice of skill competency. (2) In the aspect of educators, namely: Routine coaching through IHT/WorkShop; training, seminars, and MGMP/MGP; Periodic internal supervision; Improving teacher competence by providing facilities for further studies (S2). (3) In the field of student affairs, efforts are made to: Improve student organizations that are oriented towards science and technology and imtak; Adding the fields of self-development and extracurricular activities; Additional hours of additional lessons, and Club Lesson plans for all levels.

b. Efforts are being made to overcome external problems in the implementation of industry-based curriculum development management in education units at both Vocational Schools in Bandung Regency, namely holding and renewing the MOU of cooperative relations with; educational

institutions, business/work and related institutions: (a) Adding a new partner to Dudi through a "Mutualistic Symbiosis" partnership. (b) Implementation of guest teachers from Dudi's side, and productive teacher internships at Dudi. (c) Regular and periodic meetings with the school committee; (d) Provision of scholarships, namely scholarships for the general champion foundation for each batch, and scholarships for achievement students of 1 per class; and Exemption of fees for orphaned-poor students.

Thus, the solution implemented to overcome internal problems through institutional improvement through the fulfillment of practicum facilities, improving the quality of educators. Development of extra-curricular organizations. The solution to overcome external problems is through the addition of DUDI partners through an MOU which is "mutalism symbiosis". This is in line with the opinion of Djojonegoro (Indriaturrahmi, 2016: 165), the orientation of vocational education has the consequence that vocational education must always be close to the world of work. Proximity is meant in the sense that the planning and implementation of vocational education must be in accordance with the needs of the world of work, starting from the curriculum, to the distribution of graduates. Thus, cooperation with DUDI can improve the efficiency and effectiveness of the implementation of Vocational High Schools.

CONCLUSION

In general, industry-based curriculum management in improving student competence at the two private vocational schools in Bandung Regency is a management in developing the national curriculum of vocational education units into a micro curriculum that is adapted to the competencies needed by DUDI through the stages of management aspects, namely planning, organizing, implementing. , and evaluation of industry-based curriculum development referring to national education standards and relevant industry expertise standards, having an impact on increasing student competence. Industry-based curriculum development management at the two private vocational schools in Bandung Regency is a form of curriculum management that is interrelated between two institutions in carrying out education and training, namely between vocational high schools (SMK) and the industrial world (matches) with the needs of the workforce. in the industry through management aspects can improve student competencies, this is evidenced by the level of absorption of graduates according to their expertise competencies.

It is recommended that the management of industry-based curriculum development can be carried out consistently by developing the concept of an implementable curriculum by further developing productive fields and local content while continuing to develop aspects of systemic-integrative industry-based curriculum development planning, organizing curriculum development structurally by involving Dudin, so that can produce graduates who are superior and competitive locally, nationally and internationally.

It is recommended that the management of industry-based curriculum development, in addition to involving Dudin, must also involve all potential elements and link between elements that support the development of the curriculum including the active role of supervisors for building education units, and the need for policies that support the bureaucracy in this case the Education Office. Districts.

Through the Ministry of Education and Culture, a recommendation is proposed to develop a management model for industry-based curriculum development in vocational schools through its implementing regulations and policies.

The Ministry of Industry needs to be more intensive in providing understanding to the management of vocational education units, and intrusion of the participation of the Business / Industry World, so that the development of an industry-based curriculum can be carried out according to the acceleration of the industry.

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