

The Role of The Business World Industry Through a Teaching Practice Program in Increasing the Competence of Vocational School Graduates

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ABSTRACT

The current increase in the number of unemployed is one of the impacts of the low qualifications of graduates so that they are not absorbed in the job market and this is a very serious problem and requires special handling and strategies to be overcome. SMK as an educational institution that produces a skilled workforce still leaves a number of problems related to skills that link and match with the world of work. It is hoped that the role of practitioners in the industrial world will be an alternative solution to this problem. This research is a type of research and development or Research and Development (R&D). The research is a qualitative research with data collection techniques in this study carried out through library survey activities, observation by observing the learning process, distributing questionnaires and documenting activities. Based on the results of the research, it was concluded that the role of world practitioners from the world of work is very effective and can be an alternative in solving competency problems for graduates from the Vocational High School level.

Keywords: Practitioners, Competence, Graduates

Introduction

PT X is the most comprehensive manufacturer of fertilizers in Indonesia, producing a variety of Human life today faces increasing challenges and threats around the world, including educational challenges, unemployment, and the complexity of the new normal of COVID-19. Moreover, with the era of Industrial Revolution 4.0, almost every area of life has changed. Based on the findings of the Central Bureau of Statistics (BPS), there were more than 182.99 million Indonesian workers as of August 2016, and data show that 7.24 million people are unemployed in Indonesia. increase. Although the vocational curriculum is job-oriented and job-creating in nature, its implementation is problematic and even vocational school graduates account for some of the highest unemployment rates in recent years. Until now, there are still many reports in Indonesia stating that the number of educated unemployed or vocational graduate qualifications is not sufficient for the needs of the Indonesian industrial world. The Ministry of Industry is aggressively promoting the development of professional training that is tailored to the needs of the current labor market. This effort is proof of the realization of an intellectual revolution as a national movement to improve the quality of Indonesia's human resources (HR), especially in the industrial era 4.0. So it's time to revitalize SMK through collaboration between industry, higher education stakeholders and schools to make arrangements for curriculum, teachers, institutions, adoption and management to become better institutions in accepting change. The technological leap must make vocational training institutions ready for all these changes. Schools today must improve quality, face an increasingly competitive environment and engage with society, which demands low costs but high standards [1]–[6].

The same thing happened in almost all vocational trainings in Indonesia. This condition continues to increase amid the Covid-19 virus outbreak that has paralyzed the global economy, including. Government efforts to recover the economy after the pandemic are not easy. Limited room to operate during the pandemic is a major factor alongside the quality of Indonesian manpower, which has yet to keep up with current technological growth, requiring adaptability. This situation shows that the biggest problem in the education world is that of unemployment, and the number continues to grow. Of course, there are many factors in this. One of the factors is the quality of workers who do not meet the necessary qualifications to enter the workforce, and there is a mismatch between educational attainment and employability. Labor force growth is out of balance with labor market growth and the ability of governments and workforce practitioners to create jobs [7]–[10].

The number of employees is increasing year by year. Meanwhile, available jobs have not increased to keep pace with the growing workforce. The growing labor force in general, and the middle-level workforce in particular, is a burden that all parties must overcome and find solutions for both governments, communities and the educational community. Today, world of work practitioners have a role to play in empowering SMK graduates to be an important part of the evolution of today's world of work [11]–[13].

Given the complexity of the problem of reducing unemployment, efforts to overcome it are not limited to educational measures alone. If human resources, along with limited employment opportunities, become one of the factors causing our country's high unemployment rate, we need to develop special programs to overcome them. Increased human resources and provision of employment opportunities are key indicators for efforts to overcome unemployment, improve prosperity and alleviate poverty in Indonesia. Indeed, the synergy of all parties is critical to solving this problem.

There are so many issues and challenges in ensuring the quality and quality of graduates from vocational school (SMK). Among the problems VET units often face is the gap in graduates' competence against the skills needed in the world of work today. The question of the adequacy of education in this age is still an unresolved homework. exist vocational education creates a new problem where the resulting graduate competencies often lack relevance to the needs of the job market [14]–[17].

The current development of competition is also stagnant and does not keep up with the needs of the labor market, this is because educational instruments are formed legally and formally, thus limiting the space for movement and creativity in the mindset of educators and this gives the impression that education is barren and reluctant to make changes even avoid changes. While we can see together that the development of the business world continues to change very quickly, so does the latest technology that enters the business world first because it follows the demands of the job market. Another problem that has resulted in an increase in the number of unemployed today is the imbalance between the number of job seekers and job providers. Secondary education, especially vocational education, has not been fully able to fulfill and adjust the output of education units according to the needs of the world of work [16].

During the current Government, one of the work plans is to focus and prioritize the growth of superior Human Resources through strengthening vocational education. Thomson (1974) states that "vocational education is economic education as it is geared to the needs of the job market and thus contributed to the national economic growth" (p.93). Vocational education is basically education to grow or drive economic activity, because vocational education is designed to meet the needs of the labor market [1]. Vocational High School (SMK) is a sub-system of national education that plays a very important role in preparing middle-level Human Resources who have the character of being visionary workers, oriented to market needs and can develop innovations to influence changing market needs so as to provide job seeker satisfaction. Hartanto et al., (2019). The ability of students to meet the demands and needs of the labor market certainly indirectly improves the quality of educational units. The synergy of all parties in improving human resources will certainly accelerate the achievement of the country's education goals. Education practitioners are among the parties that also play a role in improving human resources through their direct and indirect role in the delivery of education. Practitioners in the world of work play a key role in the existence, continuity and progress of education to improve the quality of service and the quality of education [18], [19].

Participation of practitioners from the world of work to the world of education must be consciously done as a continuously planned and executed process of activity. Practitioners' participation and presence in the world of work in the world of education provide financial support to the provision of education, both in the form of grants and permanent donations, and through direct involvement in the learning process in the classroom. Assistance can take the form of pretending to be a teacher or inviting a guest lecturer to give their opinion. Suggestions that are constructive in the implementation and application of the curriculum, discussed in development plans, and improve the quality of student learning progress, etc. To support the delivery of quality and competitive education, both in the form of service and personal involvement in the learning process, through the engagement of practitioners in the world of work and their participation in decision-making. The contributions of practitioners' ideas, ensure realization and accelerate educational goals [20]–[23].

Research Methods

This section will guide you through the process of conducting the Teaching Practitioner Program in VET, specifically SMK Negeri Kundur Utara. The next phase of research will be carried out as a reference for the implementation of practitioner programs in education. It consists of three stages.

A. The three stages of the program are:

1. Planning stage. At this stage, the design of the implementation of activities up to problem identification, strategy definition and evaluation of the established programme.
2. Implementation phase; this phase is the implementation phase of the planned programme, which trains practitioners in the world of education as a team to mentor practitioners in the world of work, with the aim of becoming future graduates of SMK Negeri Kundur Utara. Engage as a support team.
3. Evaluation Phase. During this phase, practitioners evaluate their activities by distributing activity evaluation questionnaires to collect feedback and input from participants. The evaluation phase is conducted to obtain an overview of the results of implementation of the educational practitioner program so that it can be followed up effectively .

B. Data type

Data collected directly from researchers are called primary sources, and second-hand data are called secondary sources. The types of data that authors need for later data analysis are the following types of data:

- a. Primary data, ie basic data obtained from respondents through the distribution of observation sheets, interviews and questionnaire instruments on the role of practitioners in the world of work that improve the competence of graduates.
- b. Secondary data, supplementary data from books or literature, documents and various other documents related to the role of practitioners in the world of work to enhance the competencies of SMK graduates.

Data collection was conducted through field observations, interviews with subjects during the study, and distribution of questionnaire-style instruments using the Lincart scale. Effectiveness is measured according to the standards in the table below according to the Research and Development Materials (1991) of the Ministry of Internal Affairs and Communications.

Table 1. Reference standards for effectiveness
 Source: Ministry of Home Affairs Research and Development, 1991

Effectiveness Ratio	Achievement Level
Under 40	Very ineffective
40 – 59.99	Ineffective
60 – 79.99	Effective enough
Over 80	Very effective

Results and Discussion

Vocational education has developed very rapidly in the last decade, as evidenced by the increase in the number of new students in the vocational field by 158% from 2001 to 2010 (ADB, 2010). This is because the government focuses on the growth of this component of the education sector as a key strategy. for economic growth. Meanwhile, on the other hand, the industry is moving at a very fast pace. Recently, there has been a trend among us that the industrial revolution has reached a new phase known as the 4.0 era. Fundamentally, the relationship between the VET world and today's working world cannot be ignored. Both have a mutually influential and mutually beneficial relationship to accelerate the achievement of organizational goals. The role of a practitioner in the world of VET can be exercised through the Teacher Practitioner Program. A practitioner is an implementer who plays a direct role in an activity. It is hoped that the program will provide potential graduates with a true transfer of knowledge, experience, and work culture to prepare them to enter the world of work. The Teaching Practitioner Program enhances the professional graduate's competencies and industry/ It aims to bridge the gap between the worker's skills and his needs. Working in the classroom, co-education certainly accelerates the acquisition and improvement of competencies that are relevant and consistent with current job market needs [24], [25].

Competence refers to an individual's ability and ability to achieve expected results. Low absorptive capacity is an impact of SMK Negeri Kundur Utara graduate capacity and is a critical issue that requires special attention to resolve. This discussion will explore the role of practitioners in the world of work in improving the capacity of SMK Negeri Kundur Utara graduates in solving the problem of unemployment, which continues to rise each year. As a result of the equipment data, we have obtained the data that we can carry out the entire series or phases of the process of this program very effectively. This data is based on the validity level of the means results. Based on the distribution table, the r-table value is 5% significant, and from ~50 respondents, the r-table is determined to be 0.235. Accurate calculations are required to measure plausibility testing. To draw a conclusion from the validity test: If r tables are smaller than r arithmetic, then the questionnaire statements contain valid information. All propositional indicators have verifiable validity from the results of the evaluated validity tests. Results and discussion include at least (1) What elements/how are the results or findings of the study? 2). The reasoning element of the argument part consists of the connection between the results obtained and the underlying concepts and/or hypotheses supported by actual and definite facts. 3). What other factors are there, and are there any agreements or contradictions with previous research?.

The Teaching Practitioner Program is a groundbreaking program designed by school leaders to meet the needs of the job market and provide qualified graduates. Engaging with industry through an educational internship program is seen as the right step to improve skills relevant to the demands of today's society. For

the effectiveness of the program, it is necessary to design stages that will serve as guidelines for its implementation [26].

The following presents the results of each stage of the teaching practitioner implementation program

1. Planning stage

Table 2. Program design

No	No Planning aspect	Planning
1	Execution time span	3 months
2	Places of Execution	Welding Workshop at North Kundur Vocational High School
3	Minimum competency of participants	3F – 3G Plate welder
4	Competency Achievement Target	5F-5G Plate Welder
5	Evaluation	Continued / Stopped

In this professional training program, industry participation enables the provision of a qualified workforce according to the needs of each industry in the current competitive season. The existence of a competitive national industry requires the support of Indonesian children who are skilled and capable to strengthen our economy and improve people's welfare. A program's success is inseparable from the commitment to implement it. The synergy between the education sector and practitioners in the world of work is highly effective in training and improving skills relevant to the demands of today's world of work. This is evidenced by the competency performance results achieved by our graduates, as shown in the table below.

Table 3. Program achievement results

No	Planning aspect	Planning	
		Before	After
1	Execution time span	3 months	2 months
2	Minimum competency of participants	3F – 3G Plate welder	5F-5G – 6F-6G
4	Competency Achievement Target	5F-5G Plate Welder	6G-gG Pipe Welder

2. Implementation phase

Seeing practitioners battle in the world of work is the most important stage at this stage to enhance the competence of SMK graduates. The implementation of the program will be specified in the schedule of activities to be conducted. The schedule of activities is shown in Table 3 below.

Table 3: Activity Schedule

Day	Activity	The place
Saturday		
09.00 sd 10.00	Briefing (work culture)	Engineering
11.00 sd 12.00	Explain K3, function and danger of each tool to be used	Workshop
13.00 sd 17.00	Implementation of the plan (Action to plan)	Welding
Sunday		
08.00 sd 17.00	Implementation of the plan	Engineering Workshop Welding

A shared commitment to improving the competence of graduates was jointly drafted such that the implementation of this program is expected to produce graduates who are competent in their respective fields and in line with the previously prepared program design. evidenced by the completion of several agreements made. The following represents an agreement between the school and the practitioner, as shown in Table 4 below.

Table 4. Implementation agreement

No	School	Practitioner
1	Provide a place for implementation by taking into account the elements of occupational safety and health	Provide instructors who are experienced in their fields
2	Prepare supporting infrastructure	Each instructor provides assistance and guidance to a maximum of 3 participants.
3	Provide practice materials that will be used during the training.	<p>PROVIDE LEARNING PROGRAMS IN THE FORM OF:</p> <ol style="list-style-type: none"> 1. Theory 2. Practice 3. Occupational safety and health 4. Overview of the world of work <p>ALL ARE GIVEN BASED ON THE WORK EXPERIENCE OF THE INSTRUCTOR</p>
4	The training participants are Class XII students and alumni/graduates from SMK Negeri Kundur Utara.	Recommendations for Competency Achievements are given through the opportunity to take part in the Welding School program at the company.
5	<p>Coordinate, and negotiate with:</p> <ol style="list-style-type: none"> 1. Implementation schedule 2. Program of activities 3. Target Competency Achievement of participants 4. Participant rules/rules 5. Accommodation, Transportation And Consumption Instructur 	<ol style="list-style-type: none"> 3. Tour execution schedule will be coordinated with instructor vacation time. 4. Expenses incurred are the sole responsibility of the school and activity participants. 5. 3 There is no right to recruit participants.

Below, the documentation of educational practice activities carried out is presented as a form of synergy between practitioners in the school and the world of work.



Figure 1. Basic learning by industrial practitioners

Figure 1 is the initial activity carried out by industrial practitioners to equip students with basic competencies before carrying out practical learning activities. This activity is carried out to equip basic things that must be obeyed and carried out before carrying out practical learning activities.

The Anthusiasm of the students to participate in the activities of educational practitioners can be seen in the picture above. The presence of practitioners in the VET world of work is a breath of fresh air in advancing and improving student learning outcomes and competencies. There are high hopes that the school will prepare talented and competitive students for employment and even create jobs through entrepreneurial activity.



Figure 2. activities of teaching practitioners

Figure 2 describes practical learning activities that are directly guided by practitioners from industry, each practitioner guides two to three students so that learning activities are more focused and achieve maximum learning targets. This activity is carried out every Saturday and Sunday from eight in the morning to five in the afternoon and is directly under the guidance of industry practitioners

3. Evaluation stage

At this stage, the implemented program is evaluated to see if it effectively improves the quality and competence of graduates. During this phase, schools, along with practitioners, distributed activity evaluation questionnaires to collect feedback and information from participants. The evaluation phase is run to get an overview of the training results so that you can follow up effectively.

The results of the implemented evaluation data are as follows.

1. Observation data

This activity was carried out with the aim of obtaining data on the feasibility of responding to the program as a strategy for solving the problem encountered. On this observational activity, 15 aspects will be observed by observers consisting of school leaders, graduate students, Graduate of and mentors, industry recruiting Graduate of and researchers themselves. The following aspects of observation are performed:

- 1) Implemented tutorial
- 2) Learning infrastructure
- 3) Learning materials
- 4) Location of learning
- 5) Practitioner Service in Learning
- 6) Learning support service
- 7) Competence of learning practitioners
- 8) Learner activities
- 9) Learn how to present
- 10) Study time
- 11) Learning procedure
- 12) Achievement of Participant Competency Qualifications
- 13) Participant Satisfaction
- 14) Coach satisfaction
- 15) Satisfaction with educational credits

Results were measured on the Likert scale to obtain a summary of observer observations. The following are data from observations on teaching practice programs.

Table 5. Observation results

Respondent	Alternative answer			
	Very good	Good Less	good	Not good
Principal	11	4	0	0
Researcher	14	1	0	0
Graduate candidate	25	5	0	0
Practitioner	22	8	0	0
Amount	72	18	0	0
Percentage	80%	20%	0%	0%

Based on the observed data in Table 5 above, we found a very good number of alternative responses. In other words, 72 responses chose an alternative response. 18 responses, poor alternative response options 0 responses, poor alternate response options 0 responses, based on the effectiveness reference criteria, this program is highly effective in It can be considered viable if implemented. For graduate students. Below is a graphical representation of the observed data.

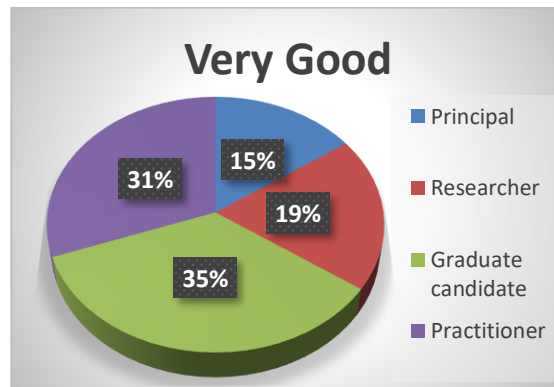


Figure 3. Observation data

1. Popularization of recommendation tools

This section continues with the distribution of the survey vehicle. This is part of gathering and understanding feedback that will form the basis for making recommendations on whether to properly implement or discontinue this program, depending on the outcome of the distribution. Data for the device shown in the following figure:

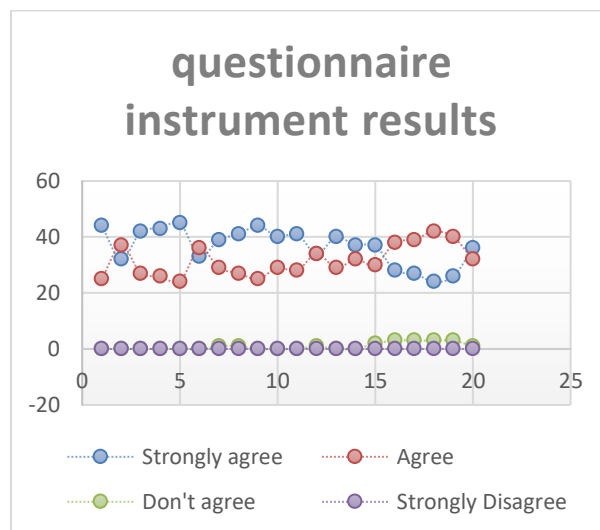


Figure 4. Graph of the results of the questionnaire instrument

Gain student enhancement as participants in programs that teach practitioners, practitioners, and school leaders. A total of 69 people, consisting of 20 statements using the Linquart scale rating and alternative responses of strongly agree (4), agree (3), disagree (2), disagree (1) of respondents. Based on these data, it can be concluded that implementation of this Teaching Practitioner Program in VET units is highly recommended to accelerate skill uptake in potential graduates.

Conclusion

Through SMK Negeri Kundur Utara's Teaching Practitioner Program, the relationship between the business, industry, and the world of work and the school's existence solves the biggest problem in preparing competent and competitive graduates. It's a breakthrough and a very good idea. This program is an attempt by the education sector to equip graduates with the competence to enter the world of work relevant to their knowledge while participating in apprenticeships and fulfilling the qualifications required in the world of work. The importance of this relationship is relevant in anticipating changes that will occur, especially technological changes that will of course change the job specifications and skill formations required in the current job market. The commitment built to work together on programs that advance the capabilities of our graduates is key to the link-and-match process that has been reflected by VET to date. Synergy programs between practitioners in the world of work and school are classified as service marketing programs because the products produced are the skills or know-how of the graduates.

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