



Partnership as a Strategy to Improve the Quality of Vocational High School Students

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Abstract. Vocational education in Indonesia is implemented through vocational high school. Vocational high school is expected to be able to create ready-to-work graduates. But in fact, the absorption of graduates' vocational high school is still low. One way to overcome this is by building partnerships with industry. This research aims to identify a partnership pattern between vocational high schools and the world of work through the formulation of partnership models and partnership-based learning models. This research uses a qualitative approach with a case study method. This research concludes as follows: (1) Pattern Partnerships that have been carried out in all vocational schools are through guest teaching, industrial visits, and technology training. (2) Partnership learning patterns through industrial and practical learning approaches practice exam. (3) Obstacles to learning through partnerships, especially long distances and Industry schedules do not always coincide with school schedules. Implementation of a partnership model between vocational high schools and the industrial world demonstrates effectiveness in preparing students who have competence needed by the world of work. The learning model through partnerships that can be put into practice is the guest model. teaching, industrial practice orientation, industrial practice, student industrial visits, the latest technology training, and vocational practice exams.

Keywords: Partnership, Improve, Quality, Vocational, High School, Students

1 Introduction

Education is the foremost vital segment in national improvement, because only through education can the improvement of human quality as the subject of development be achieved. The role of education is important for the process of increasing the ability and competitiveness of a nation in the eyes of the world. Educational backwardness is often a serious obstacle in the process of community development. In several developed countries, education that is integrated with moral values will be able to form superior human resources while still having the dignity and worth as a

cultured human being. Through education, in addition to providing knowledge, skills and attitudes, various abilities needed by every member of society can be developed. The education that is most reasonable for facing the challenges of globalization is education that is situated towards the mechanical world with an accentuation on a learning approach and is upheld by an suitable educational modules. The facts show that the development of education is still faced with high unemployment due to the imbalance between education output and employment and the availability of formal employment [1]. Where the number of labor force from year to year proceeds to develop and isn't coordinated by the accessibility of occupations. One of the ways of school education which is utilized as an elective to overcome unemployment is professional instruction.

In this manner, the educating fabric of the learning framework in professional schools is more emphasized on hone (60%) whereas hypothesis (40%). Other than that, to maximize and ensure the quality and quality of graduates, professional schools have brought their understudies closer to the world of work and industry as early as conceivable through a few programs that have been planned within the learning framework for a certain period. Be that as it may, with respect to guaranteeing the quality of graduates, professional schools confront numerous deterrents and challenges. A few of the impediments that are regularly confronted by professional schools incorporate the event of competency holes between professional school graduates and the competencies that are required by the world of work [2]. Subsequently, it is prescribed that to attain the anticipated competence, collaboration with the industry is needed to enable all the potential and assets they have. Professional education in schools has made auxiliary issues that have brought about in a need of significance to business openings [3], [5]. On the other hand, the business world proceeds to alter (dynamically), indeed imaginative innovation enters the commerce world to begin with since it takes after advertise requests. Another problem is the imbalance between the number of job seekers and job seekers, especially job seekers with vocational school qualifications. The problem of the relevance of education is still unfinished homework.

Secondary education, especially vocational education, is not yet fully in line with the needs of the workforce. In conclusion, it states that associations between instructive teach and the business/industry world are the most key to the victory of Double Framework Education in Professional Schools, where the usage of education is outlined, executed, and assessed together, so that the pertinence of graduates' competencies to the requests of the labor advertise increments. Pointers of pertinence are related to the holding up period for getting a work, reasonableness between areas of mastery and sort of work and retention within the world of work. To attain this, of course, a association with the private division is required in accomplishing a common objective [6], [7]. The organization between professional instruction and the private segment ought to get back from the government, one of which is budgetary bolster as a strategy to accomplish victory in administration and revitalization in a country [8], [9]. It is accepted that the professional education participation organization (TVET) will make a distinction. Satisfactory professional education (TVET) guarantees the production of a gifted workforce that has the information and states of mind required

for a proficient career. Watching the introduction of these actualities and issues ought to be ceaseless a systematic, concrete, and quantifiable program is looked for from educational educate to create an satisfactory educational demonstrate to create graduates who genuinely meet the capabilities to enter the world of business and industry.

Center of Excellence Vocational School Program carries the spirit of Freedom of Learning focused on strengthening human resources also well bringing then world of education close to the professional [10]. This program is expected to bel driving force for vocational schools in Indonesia, so that improve the quality of student learning outcomes in accordance with business and world standards. Industry or world of work [11], [12]. The presence of fortifies this achievement organization with the trade world and the mechanical world and the world of work. Connect bundle and coordinate is the association of the world of work in all angles of instruction organization professional, which incorporates: together, genuine project-based learning from the world of work, expanding the number of the part of instructors and educates in internship or work commonsense alt industry/world of work, competency certification in understanding with measures and the world of work needs graduates and instructors, instructors frequently get innovation upgrades and preparing from the world of work, connected investigate underpins the instructing production line and commitment to take-up by the world of work, as well as different conceivable outcomes, other collaboration that can be carried out with world of work, counting grants and/or tile benefit, gifts within the shape of gear research facility or in other shapes, and so on [13].

2 Method

The approach utilized in this investigate is al subjective approach. Bogdan and Taylor characterize subjective methodology's investigate procedural expressive information within the shape of composed or talked words from individuals and perceptible behavior. The sort of strategy used in this inquire about could be a case think about. It looks for to clarify and tries to portray and think about collaboration as a procedure to progress the quality of professional tall school understudies [15]. Defining a case study is empirical research that investigates phenomena in contextual life, when limits between phenomenal and context is not clearly visible, and multi-source used. Additionally, Cresswell explains case studies occur when researchers conduct exploration of an entity or phenomenon single (the case), which is limited by time, activities and gathering detailed information using various procedures data collection during that time [15]. Places is the beginning point of purposive test choice, so it is additionally known as criteria-based determination. The set up criteria reflected investigate objectives and guided distinguishing proof of cases with abundant data. The application of test choice criteria could be a case determination strategy that's ideal. Based on the execution of learning including the world of work, the chosen professional tall schools had the largest extend of industry partners in terms of work disciplines, topographical conveyance, and existing learning through organizations. The school's openness was assessed based on the researcher's capacity to lock in within the investigate environment. The objective of the think about was the professional tall school

students' securing of studying and mapping information, whose application specifically included the studying and mapping working environment. The targets of this investigate incorporate (1) association designs that exist within the learning handle, and (2) application of learning models that include the world of work.

The inquire about subjects were understudies who had conducted or were conducting mechanical hones. Instructors who served as advisors for mechanical hones or as analysts for the professional hone examination amid the past two scholarly a long time comprised the inquire about subjects. Professionals of the looking over and mapping calling who served as mechanical hone counsels or outside inspectors for the vocational practice examination were the subjects of the think about. The field investigate conducted in professional tall schools and the studying and mapping industry utilized subjective technique.

The research information were collected as field notes, meet and perception notes, meet records, learning action photographs, report examination notes, and survey comes about. The information investigation is the observing and organization of the investigate information that permits the analyst to continue to the inquire about discoveries. The strategies for information examination included information diminishment, information introduction, and verification. The investigation started with the collection of information, and the information diminishment was arranged previously by orchestrating categorization to expect the volume of collected information. In this ponder, categorization was fulfilled basically coding. In this consider, classification was decided by the research objects. The categorization served as a reference not as it were for information decrease, but too for data show and confirmation. Information investigation comprised of organizing the information and looking for designs, and information translation comprised of describing and creating considering outlines related to hypothesis, activity, the importance of the investigate discoveries, and making them effortlessly justifiable [15]. Within the dialog of the investigate comes about, the information translation was displayed by growing on the research findings and relating them to existing.

3 Result Discussion

3.1 Partnership of Vocational High School with The Business and Industrial World

Industrial hone, vocational hone examination, students' industry visit, visitor instructing, and introduction for industrial hones comprised the existing looking over and mapping world of work instruction within the inquired about teach. There were exceptionally few private enterprises included in industrial practice. The industrial hones within the considered teach were useful to both the work-force and the understudies. When the work volume surpassed the industry's human asset capacity, the labor advertise procured extra specialists. The understudies gotten related work encounter to the subjects they considered in school. The students' energy for learning increments when they recognize the pertinence of the subjects they have examined. Understudies benefitted more from the industrial hones in private companies than in

government educate. The understudies gotten more comprehensive competencies and money related back from the companies. The money related help included transportation, lodging, and individual cash.

The opportunity to be enrolled a unused worker after graduation was another advantage. Understudies who completed their industrial practicums in companies had the opportunity to sharpen their studying and mapping aptitudes within the genuine world and to function cutting-edge innovations. Companies too given money related assistance to the researchers. In companies, transportation and lodging costs were totally secured, and understudies gotten stash cash and the opportunity to work in genuine studying and mapping areas. The investigate discoveries of understudies partaking in mechanical practicum in private companies uncovered that the companies depended the understudies with their mapping and studying ventures. The understudies were prepared for three to six days, after which they were depended with the utilize of already unlearned and inaccessible gear. This contracted with al ponder conducted by Sudanal [16], which concluded that understudies performed as it were dreary and repetitive assignments, which did not improve their aptitudes.

The comes about of the consider give discoveries that the Cendekia Paseh Professional School have done their best in arranging a school association program with industry to advance their understudies in each of their individual majors, in this case the school plays a full part in advancing its understudies and as a result the school is able to contribute to the industry who have collaborated in giving preparing to students as a put for understudies to hone and as an internship put for understudies to prepare understudies when they enter the mechanical world. Shapes of participation made by schools and industry incorporate educational programs synchronization, apprenticeship/field work hone programs, collaborative preparing programs and collaborative graduate conveyance programs. School run participation is the most thing and is the school's primary program within the field of public relations which is exclusively pointed at channelling understudies into the industrial world according to their area of ability. This is often moreover upheld by the comes about of research conducted which states that associations between instructive educate and the business/industry world are the most key to the victory of Double Framework Instruction in Professional Schools, where instruction is planned, executed, and assessed together. So that the pertinence of graduate competencies to the requests of the work advertise increments. Pointers of pertinence related to the organization between schools and industry are compatibility between ranges of ability and sorts of work and retention within the world of work [17].

Understudies picked up information of looking over and mapping scopes and advances through industry visits [10], [14]. They picked up a modern point of view and understanding of the world of looking over and mapping that they had not however learned in school, such as the working strategies within the looking over and mapping businesses and the much more progressed hardware than those utilized in schools. This information might increment students' inspiration and crave to think about studying and mapping. In Cendekia Paseh professional tall school, the learning worldview of guest-teaching by industry experts was actualized. The work encounters displayed by the visitor instructor gave the understudies the information and the see of the stud-

ying and mapping works. Understudies learned:(1) the administration of looking over and mapping works; (2) the administration of time, workforce, and gear; (3) the methods to work within the different common and social conditions; (4) the strategies to mingle with the communities within the work areas; and (5) the strategies to communicate with the concerned parties.

This think about concurs with the conclusion that most businesses were willing to endure understudy visits and mechanical hones. A few companies conceded understudies for mechanical practicums, and the understudies were given with more assets than in government institutions[13]. Private companies' mechanical hones were more beneficial than those of government teach. Be that as it may, private companies tended to as it were enlist students who were work-ready, so preparing necessities were negligible. In expansion, the business areas were habitually as well removed from the schools, constraining the teachers' capacity to screen and administer. Subsequently, schools were required to get ready their beat understudies for internships with private companies. In differentiate to government educate, where it was less complex to foresee their work plans, it was more troublesome for private companies to facilitate their mechanical hones with their work plans. Private studying and mapping firms are benefit suppliers; subsequently, the request for their administrations decides whether they have work [18].

In understanding with the plans of mechanical hones, hence, companies seem favor or dismiss understudies based on the availability of work. The private companies truly needed the understudies in their mechanical hones to do the looking over and mapping ventures, since the companies had prepared the understudies on their to begin with entries until they were prepared to work. In any case, there was once in a while an impediment, as buyers can be baffled in the event that their ventures were completed by understudies. In this manner, companies ought to be cautious when deciding which activities understudies can take an interest within. The ventures that seem include understudies were those with a comparatively adaptable timeline and clients who had been steadfast clients for a long time, in this manner they had total confidence within the companies [19].

This consider concurs with conclusion that efficiency limitations constrained the learning quality in businesses. The opportunity for understudies doing their mechanical hones to total looking over and mapping ventures had to be restricted to those with moderately adaptable plans and clients who had a tall level of believe within the company, so they would not be disappointed with the comes about. The private companies craved the time span from the mechanical hone to the understudy graduation being not as well long, so it would make simpler to enlist the selected students to work in their companies. As well much time seem lead to a decay within the abilities as of now aced by understudies. The industry professionals proposed preparing understudies with current innovation preparing earlier to graduation as a arrangement to this issue [21]. The visit to the industry might extend the students' information of the looking over and mapping industry.

3.2 Learning Models Between Vocational High School and Industry

By enhancing the quantity or quality of learning through school-industry partnerships, the learning model was created. There were two options for developing the learning model: conducting the uncondacted learning and enhancing the quality of the learning that had been conducted. The learning model that had not been implemented in Cendekia Paseh vocational high school and had the potential to be implemented was the modern technology training with instructors and instruments from the workplace. The practitioners at the institution where the students completed their industrial practicums and whose staff served as guest instructors suggested implementing this model of instruction. Technology will continue to advance as a result of advances in electronics, computer, and satellite technologies. Using a total station to assess is currently the most important training that must be conducted. Whether explicitly stated or not, the vacancies for surveying and mapping operator jobs require applicants to be able to operate a total station, and institutions typically lack such equipment. There are two schemes developed in the learning model at Cendekia Paseh Vocational School, namely guest teaching, and industrial visits.

Soon-to-be-graduated students were proposed for training so that they could practice in the actual world. This was founded on the feedback received from industry practitioners during the students' industrial practicums. At Cendekia Paseh Vocational High School, the learning model of guest teaching could be developed. The students hoped to gain a more comprehensive understanding of the surveying and mapping professions from the practitioners themselves. The development of the current learning model was largely the result of private surveying and mapping firms' industrial practice. Currently, the students of Cendekia Paseh Vocational High School are gaining less than optimal surveying and mapping skills through their industrial practicums in government institutions.

The schools' criteria for selecting industry partners were proximity to the schools and relevance to the study program [11]. Implementation of the learning models led to the conclusion that the developed models were implementable. Practitioners in the industry, instructors, and students all believed that such learning models should be maintained for the following years. The students' work experience was enriched by their participation in industrial practicums at private surveying and mapping firms. The students also obtained benefits not available in government institutions, such as: (1) the accommodation and transportation were provided by the companies; (2) they actually worked as surveying and mapping operators; (3) they acquired skills such as Customer Need Identification that are difficult to attain in government institutions; (4) they interacted directly with various profession levels, namely: operator, technician, and expert; and (5) they were exposed to a variety of profession levels.

It has been demonstrated that industrial practices in private companies provide students with more comprehensive work experiences than those in government institutions. Students were exposed to the actual artefacts. According to a study by Flynn [7], the primary factors influencing industry participation in student learning were the costs and the benefits realized. The company provided industrial practicum students with facilities proportional to their contributions. By the visit, the students learned

about: (1) the professional performance that surveying and mapping workers must possess, such as being: honest, precise, tidy, disciplined, tough, enthusiastic, responsible, and highly committed; (2) the scope of the surveying and mapping works; (3) the ability to adapt to technological progress and various measurement field conditions; (4) the enrichment of the students' knowledge and perspective of the surveying and mapping; and (5) the importance of the surveying and mapping industry.

It has been demonstrated that the industry visit enhanced the students' understanding of the surveying and mapping profession. The students obtained the knowledge of surveying and mapping technological progress. The visit could enhance understanding of the profession in the surveying and mapping fields by providing a broader perspective of the various surveying and mapping fields. Through the guest lecturing of professionals in the surveying and mapping industry, the students gained an understanding of: (1) the career opportunities in the surveying and mapping industry, (2) the technological advancements in modern surveying and mapping, and (3) the duties of a surveying and mapping surveyor.

The efficacy of guest instruction was comparable to that of industry visits. Through the guest-teaching activity, students gained insight into the surveying and mapping professions from working professionals. As with the industry visit, the students believed they required a follow-up activity consisting of current technology training. As a continuation of the guest teaching, similar activities were planned for the following years. The training included the ability to use modern surveying and mapping instruments, as well as the ability to process measured data. Students who participated in the training learned how to operate total station measurement apparatus. To operate a total station, one must be able to set up, alter, and measure traverses and situational details. In addition to analyzing the measured data and depicting the measurement results, processing measured data requires the ability to analyze the measured data. The training could also help students develop the attitudes required to work in the surveying and cartography industries. Discipline, honesty, hard work, enthusiasm, tenacity, patience, professionalism, and functioning as it should be where the developed attitudes [22], [23].

The schools required the industries for the education of their students, and the industries required the schools for the recruitment of qualified employees for their operations. The company's willingness to provide facilities to students demonstrated its need for student labour. Through school-industry partnerships, a learning paradigm for vocational high schools' Surveying and Mapping program was developed based on research findings. The learning model is intended for students to have the knowledge, skills, and attitudes necessary for employment as a surveying and mapping operator. The partnerships required the school and business leaders to negotiate agreements between the two parties. Participation of the students, industry practitioners, and instructors in their respective roles could implement the learning. In the learning model, the learning objectives, learning materials, learning methods, learning media, learning activities, and learning evaluation were described.

4 Conclusion

The conclusion of the study is as follows. Existing learning through partnerships with the surveying and mapping world of work in vocational high schools consisted of industrial practise, vocational practise examination, guest instruction, and orientation to industrial practise. The industrial practises in the private companies benefited more to the students than that in the government institutions because the students could obtain more comprehensive competencies and financial supports by the companies. The implementation of learning through partnerships with the world of work was hindered by the distance between the world of work and the schools, as well as the fact that the world of work's schedules did not always coincide with those of the schools. Students could only participate in industrial practises in private companies if the schedules were relatively flexible and the clients had complete faith in the companies. Alternatives to advancing the learning could include enhancing the quality of the extant learning and incorporating learning models. Vocational high schools that have not implemented industrial practises in private surveying and mapping companies could endeavour to improve learning. Vocational high schools that have not conducted industry visits, guest teaching, and up-to-date technology training could endeavour to incorporate the learning. Implementation of the devised model demonstrates the model's viability and effectiveness in preparing students for the workplace-required competencies. Students acquired the knowledge, skills, and attitudes necessary to be a surveying and mapping operator, as demanded by the labour market. In the Surveying and Mapping programme of vocational high schools, the following models of learning through partnerships with the workplace could be implemented: guest teaching, industrial practise orientation, industrial practise, industry visit, up-to-date technology training, and vocational practise examination.

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