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THE IMPORTANCE OF PARTNERSHIP MANAGEMENT TO IMPROVE SCHOOL-TO-WORK TRANSITION READINESS AMONG VOCATIONAL HIGH SCHOOL GRADUATES

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Abstract. *Introduction.* The large number of unemployed vocational graduates at this time is a matter of consideration for vocational high school to manage the programme well. This is important because vocational high schools need the help of other institutions to collaborate in improving student competencies.

Aim. This research aimed to reveal the forms of partnership and partnership management framework that can be used between vocational high school and industry.

Methodology and research methods. This study uses a qualitative method with a multiple case study approach. This research was conducted in vocational high school and industrial enterprises. To determine the participants, the purposive sampling was used. The research was conducted in six stages applying the case study model design from K. R. Yin (plan, design, preparation, data collection, analysis, sharing research results). Data triangulation was employed to establish the validity of research results. Data analysis was carried out with the help of ATLAS.ti Software version 8.3.

Results and scientific novelty. The results of this research showed that the forms of partnership that can be used between vocational high school and industry are internship, industrial learning, work-based learning, and experiential learning. The partnership framework needed are planning, organising, actuating and monitoring, coordinating, and evaluating. The novelty from this research is a cooperation model for vocational high school to improving stu-

dent competence according to industry needs. The model is also one part of the relevant objectives of vocational high schools for industry.

Practical significance. The current research is useful for the Ministry of Education of Indonesia, vocational high schools, and industry, especially policy makers in decision making, principals, and Human Resources Development (HRD) in industry. A significant benefit is related to the importance of partnerships that need to be developed through joint programmes. This partnership is necessary to strengthen relationships between different roles (school and industry) to prepare vocational high school graduates in the transition from school-to-work in industry.

Keywords: partnership management, readiness, school-to-work, transition, vocational high school, industry.

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ВАЖНОСТЬ УПРАВЛЕНИЯ ПАРТНЕРСТВОМ ДЛЯ ПОВЫШЕНИЯ УРОВНЯ ГОТОВНОСТИ ВЫПУСКНИКОВ ПРОФЕССИОНАЛЬНЫХ УЧЕБНЫХ ЗАВЕДЕНИЙ К ПЕРЕХОДУ ОТ УЧЕБЫ К РАБОТЕ

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Аннотация. Введение. Большое количество безработных выпускников профессионально-технических учебных заведений в настоящее время являются предметом рассмотрения высших учебных заведений, чтобы хорошо управлять образовательной программой. Это важно, потому что средние профессиональные учебные заведения нуждаются в привлечении других учреждений к сотрудничеству для повышения квалификации учащихся.

Цель. Данное исследование было направлено на выявление форм партнерства и структуры управления партнерством, которые могут использоваться между профессиональным образованием и промышленностью.

Методология и методы исследования. В настоящей работе используется качественный метод с подходом, основанным на множественном тематическом исследовании. Работа проводилась в профессионально-технических учебных заведениях и на промышленных предприятиях. Для определения участников использовалась целенаправленная выборка. Исследование состояло из шести этапов, применялась модель тематического исследования К. Р. Инь (план, дизайн, подготовка, сбор данных, анализ, обмен результатами исследования). Триангуляция данных использовалась для установления достоверности результатов исследования. Анализ данных проводился с помощью программного обеспечения ATLAS.ti версии 8.3.

Результаты и научная новизна. Результаты исследования показали, что формы партнерства, которые могут использоваться между профессиональным образованием и промышленностью, включают стажировку, производственное обучение, обучение на рабочем месте и обучение на основе опыта. Необходимая структура партнерства включает планирование, организацию, приведение в действие и мониторинг, координацию и оценку. Новшеством данного исследования является модель сотрудничества профессионально-технического учебного заведения с целью повышения компетентности учащихся в соответствии с потребностями отрасли. Модель также является частью актуальных задач, стоящих перед профессионально-техническими учебными заведениями для промышленности.

Практическая значимость. Это исследование полезно для Министерства образования Индонезии, средних профессиональных учебных заведений и промышленности, в том числе для политиков, принимающих решения, директоров и специалистов по кадрам в промышленной отрасли. Существенное преимущество связано с важностью партнерских отношений, которые необходимо развивать посредством совместных программ. Это партнерство требуется для укрепления отношений между различными ролями, чтобы подготовить выпускников средних профессиональных учебных заведений при переходе от учебы к работе на производстве.

Ключевые слова: управление партнерством, готовность, школа, работа, переход, профессиональное образование, промышленность.

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Introduction

One of the indicators for the quality of vocational high school graduates is the level of graduates' absorption of the workforce. An indicator that strengthens is the availability of jobs for vocational high school graduates. Besides, it is also related to sufficient skills of vocational high school graduates so they can provide employment [1]. Graduate skills are relevant to the skills that teachers need to develop. However, there is a micro problem, i.e. the quality of vocational high school graduates could not meet the needs of the industry.

The main problem of this research is the large number of unemployed among vocational high school graduates. The Central Bureau of Statistics states that vocational high school graduates dominate the number of unemployed people in Indonesia, which reaches 6.88 million people. Vocational high school graduates account for the highest level of open unemployment according to education.

OPEN UNEMPLOYMENT IN INDONESIA

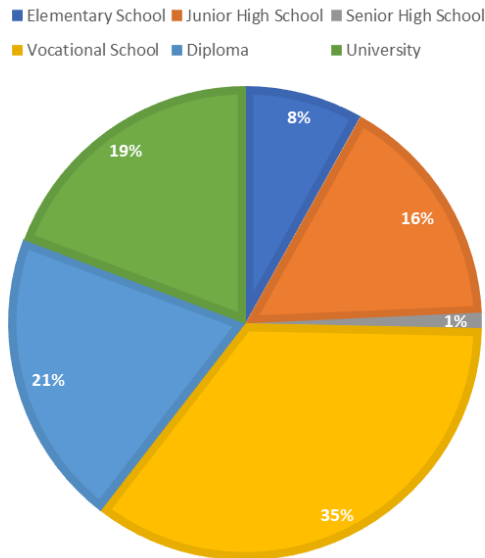


Fig. 1. Open Unemployment in Indonesia¹

Based on Figure 1, it can be understood that the majority of unemployment in Indonesia comes from vocational high school. This is a big problem where there is a gap between the graduates produced and the purpose of vocational high school. Various empirical evidences that have been mentioned above are the basis for the importance of this research to be studied in depth. It aims to realise education and achieve the goals that have been prepared. The same is true for vocational high school patterns that reflect graduates who are ready to work. Employment of graduates with industrial needs is something that must be equalised in terms of perceptions, roles, responsibilities, and also related to common goals. So that between vocational high school and industry there is a deep link between improving the quality of graduates for vocational high school and the availability of skilled

¹ Open Unemployment in Indonesia. Central Bureau of Statistics; 2022. Available from: <https://www.bps.go.id/>

workforce candidates in accordance with industry needs [2–3]. So, this research focus is based on improving the competence of high school students in efforts to develop schools in collaborating. The effort is shaped in an effective model for increasing readiness for school-to-work transitions among vocational graduates.

Literature Review

The fact that the design of the vocational high school curriculum is not in line with the industry is rapidly developing. The vocational high school curriculum needs to be developed according to industry needs [4–6]. The learning process in schools must be adapted to industry [7]. Support for the education system that has an important role in learning in vocational high school is the involvement of industry in the preparation of learning materials [8]. It is necessary to revitalise the curriculum [9], improve the efficiency of vocational high school with curriculum strategy based-on industry [10], develop curriculum as a strategy to prepare graduates' competencies to be independent in work [11]. The student learning environment in schools needs to be improved by understanding the needs of the industry [12]. Curriculum development with industry-based learning programmes can have an impact on improving the life character of graduates [13]. Learning management in the classroom is adapted to the work culture in the industry [14].

The second problem is the fact that the quality of vocational high school graduates has not met the standards for the industry. Learning patterns in schools need to be adjusted to work standards in industry [15–16]. The development of learning strategies aims to adapt learning patterns to industry [17–18]. Using technology in learning is the right strategy in utilising it [19]. The visible skills gap is IT students and industry [20]. Advances in high technology require teachers to have more capabilities [21] and to prepare a structured schedule for upskilling and reskilling according to industry needs [22]. Technological skills must be updated continuously [23]. Industrial practices experience is a strategy that can synchronise industry standards for vocational high school graduates [24].

The various problems above also include many unskilled graduates [25], worse there are many vocational high school graduates, who have never participated in an internship [26]. The third problem is the fact that there is a lack of skilful vocational high school teachers. Many teachers lack workforce-related knowledge [27]. The balance of teachers that needs to be developed is related to understanding of competence and being able to adapt in the use of technology [28]. The fourth problem is the fact that there are inadequate facilities for students' work practices. Industry standards in the learning process are the

completeness of the learning facilities used [29]. Such an explanation implies the importance of the partnership between vocational high school and industry. This aims to provide students with skills and to improve their skills so they are ready to enter the industry. This preparation shall serve as the foundation to design school-to-work transition materials. This is also the background of this research.

This research was conducted to review the partnership management between vocational high school and the latest industry, to be used to improve the readiness of each vocational high school about school-to-work transition. The present research aimed to produce a partnership management framework that can be used by both parties. This research was of importance because aimed to provide a framework in the form of steps to be implemented for partnership management between vocational high school and industry and reveal the forms of partnership to be undertaken by vocational high school and industry. The presence of good management can function as a foundation to achieve the desired outputs. The results of this research were to provide an opportunity for vocational high school and industry in terms of partnership creativity.

The designed programmes can be used as activities to improve the skills and readiness of students. This hopefully could reduce the number of unemployed and provide an opportunity for the industry to recruit vocational high school graduates as workers without selection. Low unemployment is a result of good design so graduates are ready to enter the industry [30]. Besides, labour recruitment is carried out since the needs of the industry are in line with the theories that teachers deliver at schools. Although the development of vocational high school students' skills has been proven at the world level, there are only a few studies that discuss partnership management between vocational high school and industry.

Several aspects that have been known from studies of partnership management are to synchronise curriculum and work practices in the industry [31–33] to plan work practice activities in the industry based on students' readiness by competency mapping [34], to plan placement-by-placement mapping in the industry [35], and to flexibly implement the programmes from the partnership [36]. In fact, in general, the findings of previous studies do not focus on the functions of management. Such scientific information is however sporadic and far from concluding how partnership management could improve school-to-work transition readiness.

This condition is not in line with the studies of partnership management between vocational high school and the latest industry, showing an increasingly important role of vocational high school through the industry. In developing students' skills, the industry serves as the centre for both physical and mental activities where prospective students interact with the latest technology in the

industry. Such organised interaction may help both vocational high school and industry focus on achieving graduates' quality and recruiting new employees. The industry as a place for talent development is a place for students to gain skills, attitudes, and knowledge to work hard to support their success in the future. Besides, the strong, open, and coherent organisational culture that is also concerned with the balance between the objectives of vocational high school and industry is considered to provide a successful environment for the development of students' potential and skills.

Research Questions

In this research, we used two questions as a reference in addressing the formulated research questions. The questions of this research are:

What are the forms of partnership which can be used between vocational high school and industry?

What kinds of partnership management framework which can be used between vocational high school and industry?

Methods

Research Design

The method used in this research was qualitative. Qualitative research is a form of systematic empirical inquiry into meaning [37]. The qualitative method was used because this method could explore data in-depth and could analyse partnership management comprehensively based on the comparison of cases encountered during this research. The research approach used is multiple case studies. Researchers conducted several case studies to understand the similarities and differences between the cases studied [38]. The purpose of multiple case studies is to replicate the findings in cases for later comparisons [39]. Multiple case study designs are used to predict similar outcomes or predict contrasting outcomes but with predictable reasons [39]. Multiple case study research design was applied to find similarities and differences regarding the importance of partnership management to improve school-to-work transition readiness among vocational graduates.

Participants

The sampling technique used was purposive sampling. The reason for choosing sampling to use it is because it determines which participants are the source of data information in this study. The data were obtained from vocational high school and for industries. The selection of these participants with the aim that this study explores the meaning and takes a picture of the

actual conditions associated with importance of partnership management to improve school-to-work transition readiness among vocational graduates. In general, the participants involved in this study have criteria as vocational high school students and have done industrial practices. The characteristics of the participants from the industry are people, who guide the field practice of vocational high school students.

Data Collection Guidelines and Research Procedure

The data were collected through interviews. Interviews are conversations with a specific purpose carried out by two parties, namely the interviewer who asks the question and the interviewee who provides the answer to the question [40]. Interviews were conducted using a structured model, namely by arranging several questions that will be sent to participants in advance. This is intended so that the conversation in the interview is more focused and focused on the intended purpose and avoids the discussion that is too broad. In addition, it is also used as a general benchmark and can be developed by researchers through questions that arise during the interview activity [41]. The interview instrument used can be seen in Table 1.

Table 1

| Interview guidelines | |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Components | Indicators |
| Plan | The involvement of the world of work in improving the development abilities of vocational students |
| | The world of work as a means of student self-development |
| | Builds a measure of professional expertise based on the amount of work experience |
| | There is a list of the industry |
| | Prepare materials for cooperation |
| | Agreement between the material and the content being studied (which parts are taught in school, and which parts are taught in the world of work) |
| Organise | Develop competency standards |
| | Develop standard education and training programmes |
| | Developing evaluation standards between schools and the industry |
| | Marketing vocational high school graduates |
| Act and monitoring | Determining the future of the nation through education in the industry |
| | Utilising the potential of human resources owned by schools and the industry |
| | Giving awards to the industry |
| | Adjustment of the material contained in the curriculum with the fields of work available in the industry |

Data Analysis

The data analysis used in this research is the case study model design from Yin [39], namely analysing case study evidence is a difficult thing because the strategies and techniques have not been adequately identified in the past.

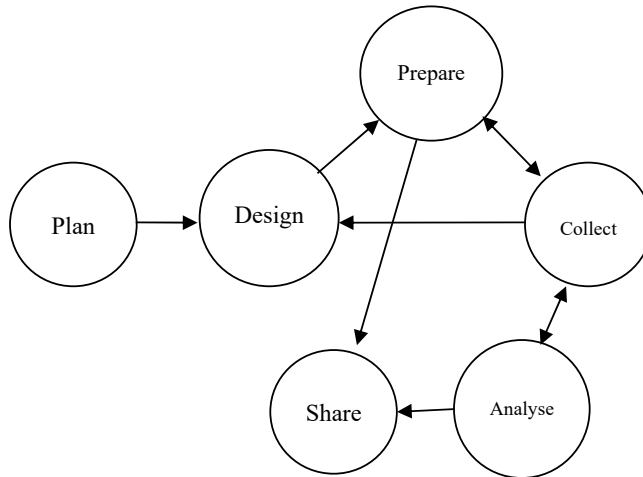


Fig. 2. Yin analysis model

This research was conducted in six stages using the Yin analysis approach, namely as follows:

1. Plan

At this stage of the plan, we conducted a preliminary survey by looking for objects and research subjects in vocational high school and the world of work. In this pre-research stage, we compiled a research design that included an outline related to school transition with the world of work related to the two institutions such as compiling data retrieval protocols using interviews and pre-research guidelines as operational pre-research field data retrieval.

2. Design

The research design used was multiple case studies. The main data collection uses the interview method, while the data for support uses documentation and passive participation observation.

3. Preparation

The preparations made by the were to compile a protocol for field data collection using interview guidelines.

4. Data collection

At this stage, the enters and understands the research background in the context of collecting field data, which is carried out at vocational high school and the industry.

5. Analysis

The fifth stage is field data analysis. At this stage, the carried out a series of qualitative data analysis processes with the help of qualitative data analysis software ATLAS.ti 8.3.17 to perform coding, categorise, create themes, and create concept maps. The reason researchers use the software is to facilitate the management of the data retrieval files. This becomes practical in compiling research coding and making concept maps of research results [42].

6. Sharing research results

The last step was disseminating the results of research by making articles and submitting them to journals and with transferability in other fields of vocational high school by using the vocational high school's collaboration management guidelines with the industry as a guide for managing collaborative activities effectively, efficiently and sustainably.

Results and Discussion

The purpose of writing this article is to find out the forms of partnership which can be used between vocational high school and industry; and the partnership management framework which can be used between vocational high school and training. The results were obtained from interviews at school and in the industry.

Results

(RQ 1) Forms of Partnership

The form of partnership between vocational high school and industry is one of the learning and business strategies that can benefit both parties. Forms of partnership in vocational high school and industry are formulated jointly by the school management team. The form of partnership is left to the vice-principal in the field of industrial relations and working groups. Furthermore, partnership programmes with industry can be developed according to the needs of schools and conditions in the industry. Schools make various preparations so that the programme is in line smoothly following the objectives. Topasu (P [Participant] 1: I [Interview]) provided an understanding carried out before the collaboration was:

“Yes, it’s about identifying the same competencies as those in the vocational high school of the industry. Which are included in each expertise programme? Then grouped according to expertise programmes. Furthermore, later recorded and collaborated. Now the ones who are cooperating are each of the management of the expertise programme, miss. We will also progress from each expertise programme”.

A similar sentiment was also conveyed by Laniri (P2: I) regarding what collaborative planning needs to be prepared:

“Planning for partnership so far has been limited to meetings for the translation of student street vendors and the determination of the world of work as a place of practice. Besides, there are other tools such as arranging schedules and mentoring for teachers as students’ tutors, Ma’am”.

Dipenge (P3: I) also gives an explanation related to a planning partnership:

“Planning for partnership in schools so far is only to prepare street vendors, Ma’am. There are preparations. But yes monotonous. And it hasn’t been standardised well because the partnership programme is only street vendors for students”.

A similar opinion was also conveyed by Rissari (P4: I) regarding the planning of partnership related to the creation of a partnership team:

“The main preparation when planning partnership is in terms of making a working team, Ma’am. With the distribution of tasks to teachers in schools to become mentors”.

This statement was reinforced by the minutes of the meeting at the school with the heads of the expertise programme and the working group (Astuba: P7: I). The principal realises that planning partnerships is important. As explained by Istias (P5: I):

“Together with the school principal and head of their respective expertise programme, the school formed a working group. Furthermore, all matters concerning the partnership with the world of work are managed by the working group”.

Pokja can search the world of work for collaboration following the areas of expertise competency in schools and are grouped according to their respective expertise. This was conveyed by Udidis (P6: I), namely:

“Mapping the world of work is the existence of data collection following the competence of the existing expertise programme. This is indeed one of the plans for a partnership that has been formed so far”.

Then the school maps the world of work that will be used for students working in the field. The same thing was also conveyed by Warrusi (P8: I):

“There are more preparations on data collection, yes, the world of work that is following our expertise programme, then it will continue to be used in the list, then where children practice fieldwork. Well, that’s all about mapping the world of work. Not to continue to be mapped by region, then the appropriate competence. No. As long as it can be used for student practice alone, this includes mapping the world of work”.

On the other hand, from the list of the world of work that is following the map of expertise or competence in the school, the school sends a letter of offer of partnership and the making of the MoU. This was stated by Lamuki (P9: I):

“After careful planning, Ma’am, later the school will make a letter of partnership offer to the world of work, after that it will make an MoU if it is approved by that party”.

The statements of the resource persons above are supported by documentation studies conducted by researchers that in planning a collaboration carried out at school is evidenced by supporting documents such as minutes of meetings, attendance lists, lists of partner institutions, in this case, the industry, cover letters offer of partnership, as well as several documents related to the MoU that have been established both between the school and the world of work.

Based on the explanation of the participants, it can be concluded that the form of partnership in vocational high school must be prepared in more detail so that it has standard related to the sub-component of partnership that needs to be prepared. This is very different from the planning done because it is only limited to the completion of responsibilities in the implementation of student street vendors.

The rapid development of education that affects the quality of vocational high school graduates about the industry requires the right strategy to maintain vocational high school and the competencies of graduates. The dynamics of development provide opportunities for every institution, both educational institutions, and the industry, to have partnerships. It is not easy to maintain the partnership between these institutions. Due to different cultures and norm settings, readiness, and mutual understanding between the two institutions are required. Developing professional school partnerships and hiring teachers who have lots of workforce-related knowledge can be a useful step to practice the skills of students and teachers at school. Some of the benefits are the opportunity to benchmark and exchange of knowledge and techniques in internalising core skills in the classroom as well as broader insights on various teaching methods used in various industries, thus increasing trust and promoting teaching skills at schools.

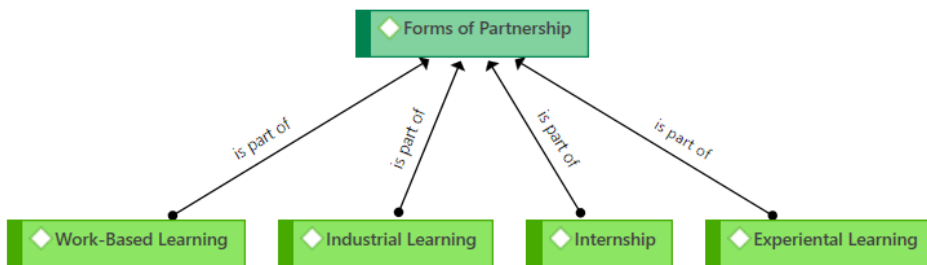


Fig. 3. Results of qualitative analysis assisted by ATLAS.ti Software

(RQ 2) Partnership Management Framework between Vocational High School and Industry

The second management function is organising. The management function greatly influences the function in the management of partnership that has been formed in vocational high school with industry, although it has not been neatly structured, including tasks both parties must do that together.

The results from the field through the head of the expertise programme and the working group that the researchers found no archives related to the organisational structure of both parties namely the school and the industry. The structure referred to by the researcher is related to a clear description of the goals, sources, and components in the collaboration that is recorded. No structure shows the division of tasks of partnership and functions that are integrated through coordination. The statements of the interviewees the researchers interviewed at school supported this.

Topasu (P1: I) states that the organising activities in partnership in vocational high school are:

“While there is not yet, Ma’am. Just flow. Following the reality faced. What should be prepared at school for students yes teachers provide the best for students. When students are in the world of work, yes the world of work leads. Already, that’s all. There is no uniform and written division of work units”.

Laniri (P2: I) also emphasised related to the organisation of partnership which includes the division of work units with detailed work that must be done at each institution, that:

“Ma’am, there isn’t any yet. There is no division of tasks. Each has understood it by itself. The school understands what needs to be prepared. The world of work also understands what must be done to develop students who are practicing there. Anyway, Ma’am, you understand it all by yourself. Because partnership is still within the limits of student street vendors, it is understood that way. At school students are taught, given direction, given guidance, given provision. Whereas in institutions where practice (the world of work) is required in practice”.

Indeed, the goals set together with the world of work will be achieved, but it is less efficient because of the unclear division of tasks. Dipenge (P3: I) states:

“Like this, Ma’am. While the partnership in this school is student practice and on the job training for teacher practice. At school, the school is preparing it. Preparing teachers as well as students. What provisions need to be given to them. Well, if it fits in the working world, it’s automatically handled from the world of work. Ma’am, is that automatic? Without arrangements in writing. Sometimes it is just right for the implementation of the practice so sometimes and even often how come it’s not clear like this huh. What must be done by the world of work should know. But what can I do?”.

Rissari also conveyed the same statement (P4: I) that the existing organising in the management of partnership has not detailed the tasks that must be performed at each institution:

“There is no grouping of tasks. The school will take full responsibility for students in the school and work world. even though in the world of work there is already someone to take care of it. But after all that school students yes. And there are no task details. Because for us in the world of work already understand by itself. Which students must do. Which is not. Then what is permissible and what isn’t permissible”.

“So far, in schools only carry out what the school wants to achieve the goal of the partnership, in this case, is the practice of students” (Istias: P5: I). “The division of work between vocational high school and the industry following each institution has never been discussed together” (Udidis: P6: I). “For us, it will run without a detailed division of tasks” (Astuba: P7: I).

Based on the statements of some of the participants, it can be concluded that there has not been an optimal organisation that has been carried out jointly between the school and the industry, which includes the division of work units according to the needs (school and world of work), a grouping of work units that describe the division of work, and details of work that must be carried out.

The results of the analysis using the ATLAS.ti Software regarding the management framework in partnership between vocational high school and industries can be seen as follows:

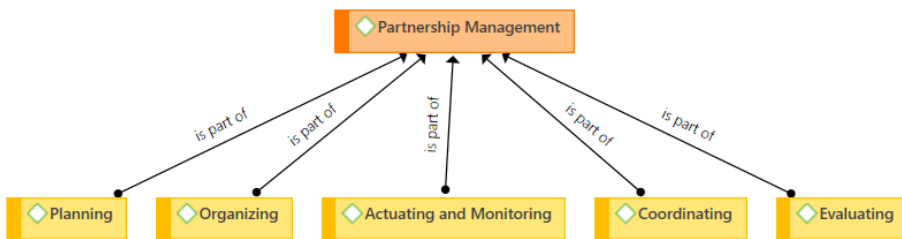


Fig. 4. Results of qualitative analysis assisted by ATLAS.ti Software

Discussion

Forms of Partnership

The findings from the discussion on forms of cooperation in the field consist of four things, namely: (1) Internship; (2) Industrial Learning; (3) Work Based Learning; and (4) Experiential Learning. The partnership model consists

of key stakeholders, the underlying principle of partnership, and orientation/common goal [43]. The results of the research by Smith R. & Betts M. related to partnerships show that the importance of knowledge-based economies require planned management of knowledge [44]. The emphasise training as part of a cooperative forms. Reform of the initial substance through training is one of the indicators of the cooperation forms [45]. Leadership, work climate, facilities/infrastructure, motivation, and attitude of students, government policy is a model of cooperation that must be considered by vocational high school and industry [46]. The forms of vocational high school and training (VET) cooperation in Europe are to develop skills [47]. Meanwhile, UNESCO, which has developed a form of partnership, focuses more on communication-based [48]. Likewise, the OECD provides important insights related to (a) labour market transition outcomes, (b) concerns of status and equity, and (c) financing issues, particularly costs and benefits of VET systems [49]. Forms of partnership di Republic of Macedonia (Southern Europe) is concerned with shaping the structure, organisation, content of education, and training of new skills in the labour market [50].

Based on the findings of the various studies that have been carried out above, the findings of this study are important to complete part of the partnership form so as to form a whole in the vocational high school development process that collaborates with industry. The process will certainly involve various parties and also the most important thing is to take various forms to realise mutual sustainability even though they have different roles. Specific findings on the four points in the forms of partnership are more inclined to programmes that can be implemented between two parties. Each form of cooperation that became the findings of the research will be discussed below.

Internship

The internship is a programme designed by the industry for vocational high school graduates, who do not have work experiences. Workers with internship status are called interns. This programme involves internship participants in various projects and jobs that need an additional workforce. However, the scope of work for these internship participants is limited. The industry gains benefits by hiring vocational high school graduates while the internship participants gain work experiences, useful knowledge, self-development training, and the opportunity to improve their skills. The internship programme depends on the industry. An objective of the internship programme for vocational high school graduates is to provide skills to enter the industry. Internship programmes have been around for over a century at some colleges, the importance of the academic internship has increased significantly in the past few years [51].

Internship offer students a chance to get work experience and gain a competitive advantage in the job market [52]. Internship plays a very crucial role to increase the experience of vocational high school graduates, who will later become a new workforce. The internship offers students several important opportunities [53]. The internship also helps students perceive connections between their academic training and the industry, requires students to put into practice the lessons of their academic learning and motivates students to perceive the industry as a learning domain in which they practice what they have learned from schools.

Industrial Learning

Industrial learning is a learning approach for vocational high school students from an industrial perspective where traditional subjects are taught in the context of knowledge application for product design, development, and operations. Industrial learning is also sometimes called work-integrated learning. Industrial learning shows a programme that aims to provide the best practical training within a certain period. The best training is provided directly by the industry. Industrial learning offers students with great practical skills and knowledge and promotes self-confidence. The main objective of industrial learning is to turn theoretical knowledge into practical experiences, particularly work experience in real life through internships to decide career options. If students only learn theories in a classroom, they will not know about practical terms. In other words, students are taught to focus on practical values of work through industrial learning.

Work-Based Learning

Work-based learning (WBL) is a programme in which the learning is carried out not only at schools but also at industry simultaneously. This programme aims to provide both theoretical and real (practical) understanding to students by applying any learning materials they have learned from schools. WBL includes knowledge and qualifications that will not only develop the aptitude and career of employees but will benefit industry and generate income for the school at the same [54]. Several definitions mention that work-based learning is any form of learning through the workplace, be it work experience or work shadowing during a certain time. Another definition states that WBL is any learning that takes place as a result of activities in the workplace [55]. WBL as a learning approach plays a role in promoting professional development and learning.

Experiential Learning

Experiential learning is a learning model that combines experience and transforms the experiences gained. This learning takes place by involving

students' experience in educational processes. Student involvement during learning interactions in a classroom contributes to student's construction of knowledge about the theory and or experience gained and applied in educational processes that take place. The presence of experiential learning will provide both practice/experience and theory so that students more easily gain understanding compared to only theory or experience.

Experiential learning is a process of learning and acquiring skills and expertise including internships, undergraduate research, and fieldwork using experience to increase knowledge as a teaching pedagogy [56–57]. Experience learning-based is also continuous learning through a combination of practice and theory. Experiential learning means learning by doing, learning through experience, learning through action, and learning through discovery and exploration [58]. Also, experiential learning activities allow students to apply theoretical knowledge as well as observation the newly learned skills within real-world situations [59].

There are four phases related to the experiences learning-based cycle according to Kolb, namely: (a) concrete experience; (b) reflective observation; (c) abstract conceptualisation; (d) active experimentation [60]. Concrete experience step, in general, teachers complete practical activities and students act as active participants. The model emphasises a holistic learning model in teaching and learning processes. Experience plays a major role in learning. This theory implies that learning is a process by which knowledge is created through the transformation of experiences. This way, the knowledge gained by students in a classroom is the result of a combination of understanding and transforming experiences, thus improving the effectiveness of learning outcomes.

Partnership Management Framework

Partnership with the industry is necessary, to synchronise the practice tools that schools have with any equipment that industry has, to adjust the implementation of teaching and learning activities at schools to the development of the industry, ensure the achievement of competencies that students have to master and determine the industry targeted for partnerships. Besides, students can have trouble of business, what stakeholders complain about, and the importance of excellent services. The partnership between vocational high school and the industry can improve the quality of teaching and learning activities, especially in terms of the effects of the industry's culture. Before productive learning, the culture of presence and the importance of service to consumers or colleagues are introduced, this will then be applied when undertaking fieldwork practices.

The determination of competency required by the industry, i.e. it requires a diagnostic process which must cover: (1) the availability of access and analysis of resource conditions; (2) determining the objectives of the existing human resources; (3) selecting several actions and formulating alternatives to achieve the objectives; and (4) evaluating the results [61]. Access to resource conditions includes both the internal and external conditions of the two institutions that are in partnerships, i.e. school and the industry, the conditions of human resources, i.e. students and graduates. To determine the objectives of the resources, efficiency, and balance of the designed partnership programmes are important to consider. Choosing and applying human resource activities can be carried out through managerial activities of human resource management, starting from planning to the termination. The most important thing is evaluation, whether the programmes that have been carried out by the two parties meet the principles of efficiency and balance.

A working definition of a partnership is “a collaborative relationship between entities to work toward shared objectives through a mutually agreed division of labour” [62]. In the authors’ opinion, the partnership is an inherently complex vehicle for channelling practical solutions in the field, in this case, the industry, and at a strategic level for the quality of vocational high school graduates. Several studies of how partnership works show that practitioners manage complexity by adopting a long-term, flexible, and organic approach following the field and the conditions needed. Why organic? During the partnership, both schools and the industry may evolve because both parties can learn more about effective management, can build capacity, and can gain valuable experiences from the partnerships. In this sense, partnership acts as a learning mechanism that teaches to get better in fieldwork practice and other partnership programmes and allows them to achieve common goals.

The relationship between schools and the industry is information given to the public, persuasion directed at the public, to modify attitude and active effort to integrated attitudes and activities of the institution with its public and of the public with the institution [63]. The statement explains that the relationship between schools and the industry is to provide clear and complete information to the industry about the supply of labourers trained and shaped by educational institutions. Besides, the relationship is also about persuading the industry in terms of changing attitudes and actions that schools have to undertake, and an effort to unite the attitudes and actions taken by the schools and the industry reciprocally.

The findings of good partnership management will certainly result in good practices and policies for both parties. One indicator of good management is the presence of a good relationship between the two parties to improve the: (1) to

improve the quality of children's learning and growing; (2) to raise community goals and improve the quality of community living; (3) to develop understanding, enthusiasm, and support for community programme of public educations [64]. Good partnership management will certainly result in good practices and policies for both parties. One indicator of good management is the presence of a good relationship between the two parties to improve the quality of learning, the quality of student learning, the quality of growth and development of students, and the quality of the industry. Management of partnership with the industry is how to create a good partnership as needed.

Partnership management shall also provide comprehensive, accurate, and up to date information that covers all aspects/factors or substances that schools and industry need to receive and know of. With this information, partnership management can be performed constructively. Besides, the management shall also be adjusted to the conditions in the work environment, especially adjustments to activities, habits, culture, and information materials that exist and are applicable in the industry.

Based on the results of the data analysis above can be concluded into three things, namely the need for school-to-work transition management by implementing five approaches, namely planning, organising, actuation and monitoring, coordinating, and evaluating. The results of field data in this study found two management functions, namely coordinating and evaluating. This is the result of exploring meaning through field participants. The novelty of this research is that there are programmes that need to be arranged in vocational high schools to improve the competence of students. This can be seen from several important points of student placement, curriculum development, procurement facilities, school promotion, and mapping of graduates. Field findings that need to be prepared to collaborate between vocational high schools and industry are the need for guidelines for implementing, education and training standards, student guidance system, standards for testing skills, assessment of work competency standards, graduate tracking and marketing systems, and evaluate the implementation. The novelty of the research findings can be seen in Figure 5.

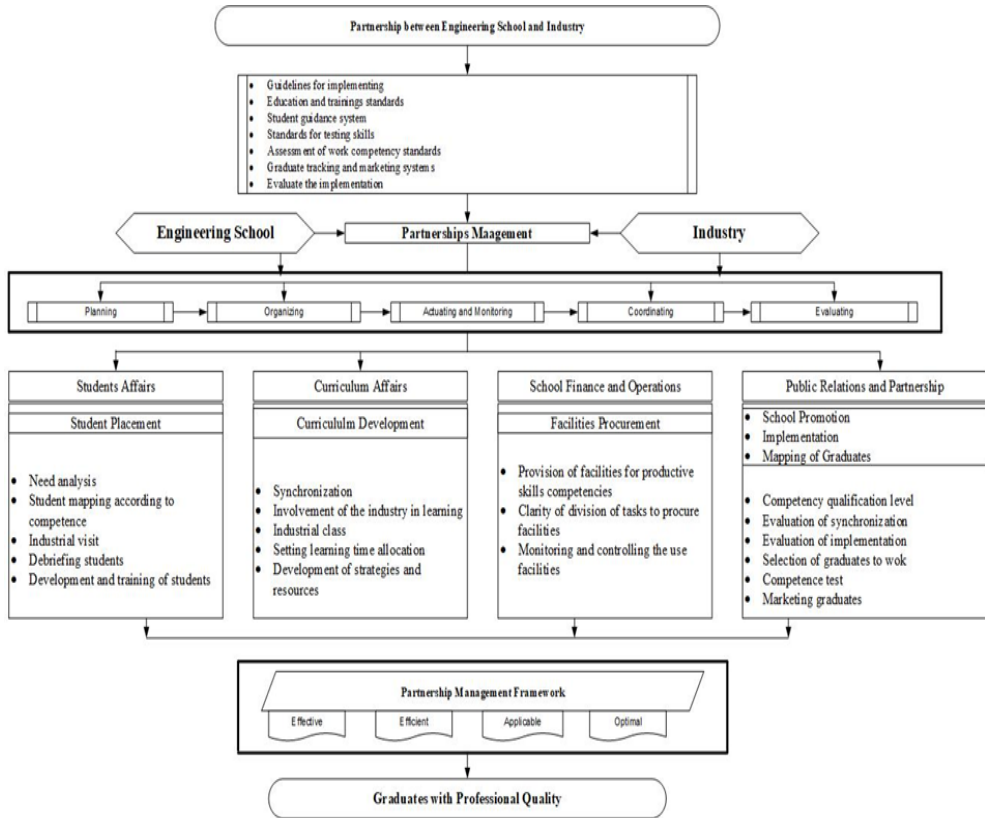


Fig. 5. Partnership Management Framework between vocational high school and industry

Conclusions

The partnership is a system of work performed jointly between two or more people or institutions in the hope of achieving common goals. The partnership between schools and the industry is a necessity in realising quality education for schools and the success of work performance for the industry. The partnership between the two parties will serve as a driving force that has energy and synergy for schools and the industry, as well as for anyone who takes part in the partnership activities. The interest of schools is to develop and maintain the sustainability of schools, improve the quality of education, accommodate learning processes, obtain support and assistance from the industry needed for the development and implementation of programmes at schools.

The authors conclude that partnership management must be carried out in an integrated manner, meaning that anything explained, delivered, and

presented to the industry must have integrated information, including information of academic activities (learning) at schools and activities in the industry. Partnership management shall also be carried out continuously, instead of being carried out incidentally, for example, only once a year or only to fulfill schools' obligation without good management. Schools that are not capable of performing good management will slowly but surely not survive and left by the industry because these schools are considered neither healthy nor relevant to the needs of the industry. This way, the key to partnership management is to establish good communication so that the interests of both school and industry can be congruent and create a school order that truly reflects the quality of education.

Limitation

The results of this study have limited implications for the partnership situation established by vocational high school with industry in Indonesia. The limitations of the research results are due to the relatively in-depth study of a number of cases observed and carried out by exploring the activities of participants in partnerships. So that the findings of this study describe in detail the phenomena that are bound up in the partnership between vocational high school and industry in the local context in Indonesia. The results of this study cannot be generalised in different settings. Therefore, it requires further research through replication in different populations so that data are obtained from random and adequate samples.

Recommendations

Important findings from this research become an important part of the partnership model which of course can be developed through research and development of the partnership model through various tests such as reliability, validity, narrow-scale test, broad-scale test, and model test. This is to get the quality of the models that have been found. On the other hand, it is also necessary to carry out further research related to competency models, training models, models of using technology in the learning process, and industrial alignment models with a role in the education process.

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