



Study of The Needs of The World of Work Industry For Graduates of Health Vocational High Schools

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ABSTRACT

Objective: This study aims to describe the needs of the industry workforce for graduates of Health Vocational Schools. **Method:** This study employs a qualitative approach. Data collection is done through interviews, observations, and documentation studies. The object of this study is four industrial health facilities in the Surabaya area. The subjects of the study are health service business owners or personnel departments. Data analysis in qualitative research is carried out through four stages. **Results:** The challenging skill aspects required are the ability to operate a computer and good skills in each field of competence. Additional skills required are vital signs checks, monitoring child development, and basic childcare skills. The soft skills abilities required are teamwork, communication skills, leadership, networking, adaptability, friendliness, good work ethic, discipline, and empathy. **Novelty:** This study will examine the specific industrial needs of the workforce for graduates of Health Vocational High Schools, with a focus on the competency gap that still exists between the education curriculum and the demands of the healthcare industry. This study identifies the technical and non-technical skills most needed by companies in the health sector, thus providing new insights into improving the curriculum of Health Vocational High Schools.

INTRODUCTION

Vocational high schools play a significant role in developing high-quality human resources through secondary education. It further provides benefits for individuals, groups, surrounding communities, work industries, and national development (Yoto et al., 2022). According to Indonesia's National Education System Law No. 20 of 2003, schools aim to prepare individuals maturely so that they can easily integrate into the workforce, compete effectively, and even create new jobs. Acquiring education and pursuing learning at school has its privileges, one of which is that students develop soft skills in their respective fields, enabling them to work directly after graduating from school.

Unemployment is one of the problems that is currently developing. The readiness of graduates to work is one of the factors suspected to be a causal factor (Wismansyah et al., 2024). Based on data from the Central Statistics Agency (BPS) in 2020, when viewed from the level of education, from a total of 9.77 million open unemployment figures, the highest rate was obtained by vocational high school graduates with a value of 13.55%, followed by 9.86% high school graduates, then diploma graduates (8.08%), 7.35% college/university graduates, 6.46% junior high school graduates, and 3.61% elementary school graduates. For vocational high school graduates in the health sector, for example, nationally in 2020, ideally, 80.00% to 85.00% of vocational high school graduates should be able to be absorbed into the world of work, and the remaining 15.00% to 20.00% are expected to be able to continue their studies at university.

However, in reality, vocational high school graduates, especially those in nursing expertise programs who are able and ready to work in hospitals, are still far from expectations.

This phenomenon indicates that vocational schools, which are believed to be able to bridge the link and match programs, are still far from their target. The high and large number of unemployed graduates from health vocational schools confirms that the relevance or correlation between vocational education and the world of work or real life is relatively small. This suggests that vocational schools still need to enhance their capacity to prepare skilled workers (Suharno et al., 2020). This study is supported by research conducted by Hendro (2024), which states that schools need to integrate the skills required by the work industry into school programs. The implementation of a curriculum with developments that are tailored to the needs of the work industry can increase the absorption of vocational high school graduates, in addition to good input management and provision of facilities and infrastructure (Maghfiroh, 2024)

The quality of vocational school graduates and the quality of education are still complaints from the industrial world. Many industries still complain about the quality of vocational school graduates who are not ready to enter the workforce, one of which is a lack of work readiness, as not all vocational school graduates can meet the job market demands required by the world of work (Astuti et al., 2021). The causal factor is that some or even the majority of vocational school graduates in Indonesia are not only unable to adapt to the development of science and technology but have not been able to develop themselves and develop their careers in the workplace (Judijanto et al., 2024; Mukhlason et al., 2020; Suharno et al., 2020). Additionally, learning is less directed towards soft skills, particularly entrepreneurial skills. This argument aligns with the results of a central statistical agency survey, which indicates that the number of vocational school graduates who become new entrepreneurs is 27.10%, still lower than that of high school graduates at 34.40%.

Along with the rapid advancement of information technology, vocational schools, including Health Vocational Schools, are required not only to bridge the link and match graduates with the industrial world but also to establish a super link and match. The very dynamic needs of the industry require schools to adapt quickly and evaluate and adjust their curriculum. This is to ensure that vocational school graduates meet the industry's needs. Not only does the curriculum have to be adapted to the industrial world, but it also requires the involvement of practitioners to become teachers (Wahjusaputri et al., 2024). This also occurs in the health sector in Indonesia, especially East Java, which has experienced rapid and complex changes. These changes require a skilled workforce that is responsive to the latest technology and the dynamic needs of public services. According to the latest data, the health sector in East Java is experiencing rapid growth, with a 12.00% increase in health facilities over the last five years. Based on the description, this study aims to provide an overview of the industry's needs for Health Vocational school graduates.

RESEARCH METHOD

This study employs qualitative methods to gain an in-depth understanding of the topic under investigation. The focus of this study is on the skills required in the workplace for graduates of Health Vocational Schools. Data collection was conducted through interviews, observations, and documentation studies. The object of this study is the business world and the health industry in the Surabaya area. The subjects of the study

are the world of work industry owners, the world of work industry heads, and human resources development (personnel).

Table 1. Research subjects.

Competencies Required by The World of Work Industry	Research Subjects
K-24 Ploso (Pharmacy)	Director
Klinik Wisma Husada (Clinic)	Director
Filia Daycare	Owner
Klinik Utama Dharmahusada Premier (Clinic)	HR Manager

Data analysis in qualitative research is conducted through four stages: data collection, data reduction and categorization, data presentation, and conclusion. Researchers use triangulation techniques to test the validity and validity of the data. Data that has been tested valid, then analyzed using the Spradley Domain technique, namely: 1) Selecting a specific semantic relationship pattern based on the information available in the researcher's diary in the field; 2) Preparing domain analysis work; 3) Selecting data similarities from the researcher's diary in the field; 4) Finding parent concepts and symbolic categories from a particular domain that correspond to a semantic relationship pattern; 5) Compiling structural questions for each domain; and 6) Making a list of all domains from all existing data. This study focuses on the theme of the competencies needed for industrial work. The competency in question is viewed from two perspectives: soft skills and hard skills.

RESULTS AND DISCUSSION

Results

The results of this study show the needs of the work industry for graduates of Health Vocational Schools. These needs are grouped into three categories, namely soft skills, hard skills, and supporting skills. This study also found out how the work industry assesses graduates of Health Vocational Schools. All subjects of this study have employees who are graduates of Health Vocational Schools. The need for hard skills, as identified by the results of this study, includes the ability to operate a computer, skills in childcare, Vital sign checks, and the capacity to monitor child growth and development.

"... Vocational high school graduates of Health need to have good nursing competency skills; besides that, they also need to master computer operations. This is to make their work easier..."

"... In our opinion, as a childcare service provider, we need graduates of Health Vocational Schools who have the skills to care for children, check children's vital signs, and have the ability to monitor growth and development...."

The soft skills needed from the research results are teamwork, leadership, good work ethic, networking skills, communication, adaptability, friendliness, discipline, patience, compassion, empathy, sympathy, and creativity.

"... In addition to mastering nursing competency skills, graduates of Health Vocational High Schools must possess strong soft skills. This is crucial for delivering excellent patient care. ..."

"... We need a nursing assistant who is adaptable, has good communication skills, and also needs to have teamwork skills. Yes, we work together with other professions, so teamwork is essential to serve patients...."

The results of the study show that the supporting needs required by the work industry are a balance of both soft skills and hard skills, as well as a neat and clean appearance and an attractive one.

"... Besides soft skills and hard skills, we also appreciate employees who present themselves cleanly and neatly. Because this appearance is also important in supporting performance. Usually, patients prefer neat health workers..."

"...Vocational high school graduates in Health need to have a balance between soft skills and hard skills. Soft skills alone without adequate hard skills are also not good ..."

The findings of this study indicate that graduates of Health Vocational Schools have not fully met the needs of the work industry. Although the work industry generally accepts graduates of Health Vocational Schools, guidance and skill development are still needed.

"...These vocational high school graduates still lack communication skills; they are reluctant to interact with customers to offer other drugs if the drugs they are looking for are not available."

"...Graduates of vocational schools in the health sector generally still need guidance, yes... Because we are in the service sector, we have to ensure that patients get good service."

Discussion

The findings of this study align with a study conducted by Hidayati et al. (2021), which stated that graduates of Vocational School 1 Batang can work by their field of expertise. Another finding from Haryadi et al. (2024) is that industrial work still provides recommendations in the form of job training for these vocational school graduates before they begin work. This is not in line with the objectives of vocational education, which aim to produce graduates who are qualified and ready to enter the workforce. If additional training is still necessary, it is, of course, necessary to question the suitability of the curriculum or education program.

Vocational education is part of the education system that prepares individuals to be more capable of working in a specific field of work than in other fields. Thus, vocational and/or vocational education in the national education system is expected to be able to prepare and develop human resources (HR) who can work professionally in their fields, as well as being competitive in the world of work, especially in facing the demands of the Asian Economic Community (AEC). Vocational education tailored to the provision of employment is a fundamental and essential need in Indonesia's national development process.

The vocational education curriculum is specifically designed to facilitate students to master a field of expertise in both soft skills and hard skills. The influence of soft skills and hard skills between the world of work/industry and learning can be seen from the

ratio of soft skills and hard skills needs in the world of work/industry and the ratio of soft skills learning provided in the education system (Darwis et al., 2024; Palupi et al., 2024; Rahayu et al., 2024). The ratio of soft skills and hard skills needs in industrial work is inversely proportional to its development in the education system. However, the world of the industry does not only prioritize the quality of soft skills and hard skills, but a mature attitude and self-confidence are equally important factors (mental readiness) (Cahyadiana, 2020; Irfan et al., 2022). This aims to create human resources who are ready to enter the world of work and engage in community life, possess good attitudes, and conform to the prevailing societal norms. However, many educational institutions still fail to equip their students with the importance of maintaining a harmonious blend of hard and soft skills to meet the requirements of the work industry (Marsha, 2024; Maulana et al., 2024; Sandra et al., 2023).

This study found two aspects of The industrial work needs for graduates of Health Vocational Schools, namely:

1. The need for challenging skill aspects of graduates of Health Vocational Schools

Hard skills have a vital role in supporting the employability of SMK Kesehatan graduates. Hard skills are closely related to a person's ability to acquire and apply knowledge. In reality, not all graduates of Vocational Health schools possess the same level of complex skills. This is what causes companies to set higher standards than the competencies possessed by graduates (Hidayati et al., 2021)

Based on the findings of this study, involving four different research subjects, it was discovered that the challenging skill aspects required of graduates of Health Vocational Schools include the ability to operate computers and possess skills relevant to their field of competence. In addition, Health Vocational School graduates who work in daycare require additional competencies, including vital sign examination skills, monitoring child growth and development, and basic childcare skills.

The findings of this study are based on a study conducted by Hidayati (2021), which suggests that the hard skills expected in industrial work are the ability to operate a computer. Hard skills are a dominant aspect because they have a close and significant influence, as students possess technical knowledge and skills acquired through industrial work. This is reinforced by research conducted by Ratih (2023) on the influence of Soft Skills and Hard Skills on Work Performance at PT Putra Sebakas Abadi. The results of the study indicate that Hard Skills have the most significant influence on determining the work performance of PT Putra Sebakas Abadi employees (Ratih et al., 2023). Similar results were also reported by Cahyono (2022), who stated that, based on his research, it was found that hard skills have a significant impact on employee productivity and company satisfaction.

In the world of work in the Industrial Revolution 4.0, workers must have four types of hard skills competencies, including: 1) having strong competencies in digital technology; 2) being proficient in using the latest technology; 3) having an entrepreneurial spirit; 4) being able to balance the soft skills and hard skills competencies they have (Hidayati et al., 2021). In the healthcare industry, patient satisfaction is a measure of service quality. The study's findings indicate that graduates of Health Vocational Schools must possess strong skills in each required field of competence. This finding is reinforced by a study conducted by Rensi (2019) on satisfaction with healthcare services. The study demonstrates that the competence of medical personnel has a significant impact on efforts to enhance

patient satisfaction. Quality healthcare services are those that can satisfy every user to the average level of satisfaction of the population, and their implementation is guided by the code of ethics and service standards that have been established.

2. The need for soft skills aspects of graduates of Health Vocational Schools

Vocational high school graduates can become skilled and qualified workers if they truly master both hard skills and soft skills. The competencies required by the world of work emphasize the quality of soft skills over high specific scientific knowledge. Based on the subjects in this study, it was found that all informants from The industrial work agreed with this theory. The soft skill abilities found in this study were 1) teamwork, 2) communication skills, 3) leadership, 4) networking, 5) easy to adapt, 6) friendly, 7) good work ethic, 8) discipline, and 9) empathy.

The findings of this study align with the soft skill criteria required by the Karanganyar Manpower Office. The existence of soft skills in vocational graduates plays a crucial role (Munir, 2021). The types of soft skills needed include at least communication, problem-solving, leadership, adaptability, work ethics, decision-making, and time management. Soft skills and hard skills simultaneously influence graduates' work readiness. Soft skills and hard skills should be integrated into every course in the curriculum to design them effectively. The curriculum should be designed to meet industry needs, ensuring that the skills graduates possess align with industry requirements.

a. Teamwork

Teamwork is a form of group work that utilizes complementary skills and a commitment to achieving agreed-upon targets to effectively and efficiently achieve common goals. Teamwork is one type of soft skill needed in industrial work. The study's results demonstrate that teamwork and leadership have a significant impact on employee performance. A different study conducted by Rachmawati (2021) showed that teamwork significantly becomes an intervening variable that influences employee performance.

b. Communication skill

In today's highly competitive world, practical communication skills are among the most sought-after skills by employers. Communication is a complex activity that involves words, body language, tone, and volume of voice, as well as the topic being discussed and the prejudices people bring to the conversation. Communication is not just about exchanging information. It is also about understanding the information given. Effective communication is achieved when it is two-way, focusing not only on conveying information but also on listening and interpreting the information conveyed by others. Communication is an essential life skill that benefits students in all aspects of their lives, from their professional endeavors to social interactions, business meetings, and interactions with clients and colleagues. Yani (2022), in her study of 75 employees, found that communication skills have a significant influence on the ability to share information and employee performance. This is also in line with research on undergraduate students in West Sumatra conducted by Anggraini. The study revealed that the communication skills of undergraduate graduates fell into the moderate category (69.30%), and their work readiness was also classified as moderate (75.00%). Practical communication skills play a crucial role in work readiness. The results of this study also found that, among the four aspects of communication skills, the speaking aspect and the nonverbal communication

aspect play the most significant role compared to the other aspects (Angraini, 2021).

c. Leadership

Leadership is the ability to guide, direct, and influence others to achieve a specific goal. Leadership plays an important role in determining the success of an organization or company. Strong leadership is crucial for an organization's competitiveness, as it drives change and innovation. An effective leader possesses the following characteristics: self-confidence, strong communication and management skills, creative and innovative thinking, perseverance, a willingness to take calculated risks, an open mind, a level head, and a proactive approach in times of crisis. Leadership and competence have a positive and significant impact on employee performance, whereas motivation has a negative and significant impact on employee performance. Simultaneously, leadership, motivation, and competence have a positive and significant effect on employee performance (Syafuruddin et al., 2021).

d. Adaptive

Career adaptability is defined as a characteristic that demonstrates flexibility or a desire to fulfill career tasks and navigate career transitions, including readiness to face career challenges with the proper steps. Career adaptability is an attitude and competency that individuals use to adjust to jobs that suit them. In other words, career adaptability refers to an individual's resources, including attitudes, beliefs, and competencies, that enable them to respond effectively to potential work-related stress and challenges. Syam et al. (2023) in their study stated that self-efficacy and adaptability have a positive effect on employee performance.

The implementation of employability skills is a breakthrough in enhancing the competitiveness of human resources, particularly among workers. Employability skills are fundamental skills that every worker must possess to adapt effectively in the workplace. Furthermore, the influence of soft skills on work performance. Research indicates that soft skills have a direct impact on work performance (Bedir et al., 2023; Marin-Zapata et al., 2022; Poláková et al., 2023). In more detail, it is stated that increasing communication skills will also improve work performance. Additionally, the ability to manage emotions and work effectively in a team plays a significant role in employee performance (Ngek & Nchang, 2023).

The suitability of the competencies of Health Vocational School graduates with the needs of the industrial world-work world is one of the factors that play a role in the absorption of graduates. Vocational schools of Health must be able to establish good and deep relationships with the industrial world. The gap between the education system and industry needs will make it difficult for graduates to secure employment (Ali et al., 2020). Moreover, Ali (2019), through his literature study, showed that nine factors need to be adjusted between the Education system and industry, namely 1) Policies and Strategy; 2) Curriculum; 3) Learning and Teaching; 4) Partnership; 5) Accreditation; 6) Funding and Quality Management; 7) Teachers and Staff Development; 8) Culture and Atmosphere Academics; and Facilities and infrastructure (Ali et al., 2020).

One of the innovations that need to be implemented is industrial work-based learning. Vocational education needs to develop practical skills, knowledge, and specific skills that are tailored to the needs of industrial work (Wahjusaputri &

Bunyamin, 2022). This learning process is jointly designed, developed, and managed by vocational education institutions and the world of work. This enables collaboration between Health Vocational Schools and industrial work in the Education program, starting from the planning stage Through the Education process, evaluation, and follow-up (Wahyuni et al., 2021).

CONCLUSION

Fundamental Finding: This study concludes that the needs of the business and industrial worlds for graduates of health vocational schools can be divided into two aspects: soft skills and hard skills. The complex skill aspects needed are the ability to operate a computer and good skills in each field of competence. Additional skills required by daycare centers (childcare centers) include checking vital signs, monitoring child growth and development, and basic childcare skills. The soft skills needed by industrial work are 1) teamwork, 2) communication skills, 3) leadership, 4) networking, 5) easy to adapt, 6) friendly, 7) good work ethic, 8) discipline, and 9) empathy. The suitability of the education program to the needs of industrial work will impact the absorption of graduates, ensuring that graduates of Health Vocational Schools are well-prepared for the workforce. **Implication:** The results of this study suggest that it can serve as a basis for compiling the curriculum of Health Vocational Schools, enabling the business and industrial sectors to accept graduates. This will enhance the absorption capacity of graduates from the Health Vocational School. **Limitation:** The weakness of this research is that not all business industries in the health sector are represented as research respondents, such as nursing homes, government hospitals, various types of hospitals, beauty clinics, and dental clinics. **Future Research:** For further research, the scope can be expanded to encompass a broader range of research objects, thereby accommodating the needs of the majority of the industrial workforce.

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