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Analysis of Competency Profile for Vocational Graduates

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Abstract

Learning activity at Vocational High Schools (VHS) is held to equip students with competencies according to the skill program they have chosen and to meet job competency expectations from industry. This study presents data on the process and expectations of graduate competence from the point of view of learning in VHS which was conducted through a survey of 406 respondents with the dominance of learning instructors in a number of VHS that spread across Indonesia. The survey was conducted online containing the learning process, competencies, job opportunities, also career paths. The results of this study indicate that learning at VHS has been carried out oriented towards work demands in accordance with the field of expertise, but the work competencies assessed by the school as having met the work demands have not been fully recognized by the workplace, so that a form of job training is needed to provide strengthening and recognition of competence by industry in the form of certification, work activities and culture, recruitment and monitoring of the implementation of training results to see the development of career paths. The large number of graduates who are looking for work and efforts to fulfill work competencies after they finish learning at school provide recommendations for job training to be carried out during the transition period after completing learning at VHS before the start of work activities in Industry.

Keywords: *VHS Learning, VHS Graduates, Job Competencies, Career Paths.*

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INTRODUCTION

Vocational school graduates, especially Vocational High Schools (VHS) are currently considered as productive human resources who have competency capital as certain professional services in accordance with the expertise program they chose at the time of study (Syamsuddin, 2018). This is in line with the philosophy of vocational education in schools which focuses more on the formation of skilled workers in the technical field of hands-on skills (Brooksbank, 1995; Moodie, 2002). The focus of vocational student activities in the learning process generally prioritizes creating and building activities from something that has been learned, to spur activities and the impact of increasing vocational intelligence (Taber, 2011; Wijanarka Sentot, 2012)**,** however, with the creations carried out by vocational education managers by collaborating with a number of parties, it is possible for the competence of learning outcomes obtained by students to be utilized in various real activities (Yunos et al., 2016). Learning in vocational schools then focuses on fulfilling the competencies needed in the workplace (Hanushek et al., 2021). The development of vocational learning is closely related to its need

to meet the supply of the workplace, even a hierarchical classification for learning shows that its implementation can be carried out gradually on work abilities ranging from responsibility for sales, technical responsibility to professional positions. The skill level starts from the procedural ability of routine work to the management of work that exceeds the assigned job desk, even based on the level of position starting from operator level to senior professional (Moodie, 2002).

Research on the vocational learning process that focuses on the formation of work competencies was carried out by J.Flanagan in 2000 which mentioned the need to integrate self-knowledge of workplace skills and formal knowledge with a structured approach to maximize learning opportunities and professional development (Flanagan, 2000), this thing has the effect of sectoral changes on individual competencies (Kamprath & Mietzner, 2015), so that in 2003 Albertus WM Hoogveld suggested a competency-based learning design (Hoogveld, 2003). Research on the concept of competency education was carried out by Weigel and Mulder in 2006 in the development of vocational education and training in England, France, Germany, and the Netherlands which stated that there was no coherent definition of the concept of competence in these countries which resulted in a lack of balance of knowledge in fulfilling competencies so that have an impact on the difficulty of designing the principles of competency-based education in the context of the curriculum, evaluation and learning guides, so that it seems that vocational education in schools focuses more on the application of hands on skills (Weigel et al., 2006). This makes research continue to innovate vocational learning processes that can produce hybrid learning from project-based which is widely applied in a number of countries in facilitating vocational education (Rouvrais et al., 2006), thus providing recommendations for vocational learning processes that can meet the competencies needed in the workplace (Weigel et al., 2006). This learning innovation then develops in the research of learning media innovations in the classroom that can use equipment that is in accordance with real conditions or use artificial media in the form of applications with the design and development of interactive online learning materials that allow virtual replication of learning both processes and technical laboratory content (Teng, 2008), so that in general this can increase the creativity of teachers in facilitating vocational learning (Kembuan et al., 2018; Middleton, 2011; West, 2011). Project-based learning is a strategy that is widely applied in learning in vocational schools because in addition to preparing skills for work competencies (E. Ambikairajah, 2009; Hoogveld, 2003), also encourages inquiry and collaboration activities of students in researching and making projects as a reflection of the knowledge gained to form 21st century competencies that are proficient in communication and advanced problem solving (Bell, 2010; Lou & Kim MacGregor, 2004).

Research on the development of this vocational learning guide over time and technological developments demands changes in shaping a generation that has the ability to become future leaders with integrity which indirectly involves other components in learning that are considered an integral part of the process (Nasir, 2012). Learning creations in expanding access to learning are carried out while maintaining vocational dignity so that the educational process is carried out oriented and competency-based as needed by industry (Kufaine & Chitera, 2013) so that, it puts forward the value of constructivism education that can include new scientific information from previously owned knowledge, including integration with soft skills values needed in its application. The integration between technical orientation and soft skills values in learning becomes the development of vocational education that has an impact on the acquisition of competence and welfare (Barrera-Osorio et al., 2021; Hawkins & Booth, 2005). Vocational constructivism learning which is the main reference in learning is widely realized in the application of project-based and work-based learning in accordance with their competencies that are oriented to the workplace (Newhouse &

Suryadarma, 2011). This vocational learning has been attempted to be directed at the job preparation process, unfortunately this learning process is dominated by strengthening hard skills through project-based learning and work competency-based activities using contextual facilities according to application in the real world or using certain learning media such as utilizing the development of information technology (Hasyim et al., 2013; Musa & Mat Rashid, 2020), moreover soft skills are also needed to strengthen character that can improve performance, economic competition and have a strong influence on career prospects (Abdullah-Al-Mamun, 2012). Apart from that, competency-oriented vocational learning requires an evaluation model and recognition of the competence of learning outcomes that can be done using a certification model that refers to work competency standards and other standards recognized by the workplace so that it can be a reinforcement of vocational learning (Ali & Yusuf, 2021). Therefore at secondary vocational education institutions (VHS) it is necessary to examine the extent to which educators facilitate learning that can meet work competencies and fill job needs in a number of available opportunities either through partnerships between schools and industry or graduates looking for work independently (Indana & Soenarto, 2019). However as far as we know the duration of time for learning at VHS has been spent on delivering skills material according to the expertise program, so time is needed outside of learning at VHS for the delivery of soft skills material and the career path needed to support the success of work activities.

This research is important thing to study because the information that is studied obtained from learning tutors at VHS will be very meaningful to identify learning in VHS and see the profile of VHS graduates. This study identifies data from the learning process and competency expectations of graduates from the perspective of learning in VHS. This research study proposes a form of strengthening work competencies for VHS graduates which is held in the form of job training that focuses on soft skill development complemented by recruitment patterns and career paths so that they can answer research questions:
RQ1: What is the vocational learning strategy in VHS?
RQ2: What is the competency profile of VHS graduates?
RQ3: What are the recommendations for competency improvement programs?

METHODOLOGY

Method

This research conducted with a survey design that aims to obtain data from the use of research instruments intestperceptions of learning management teachers at VHS related to learning process activities, knowing expectations about the competence of student's learning outcomes and the impact of learning related to job opportunities and career paths for VHS graduates in filling available job opportunities as an effort to fulfill work competencies and professional activities in the workplace/industry (Kizilaslan, 2006). The data provided are direct experiences and activities of respondents in the schools where they work, showing illustrations of real conditions experienced by teachers in the process of facilitating learning so as to ensure the validity of the data provided (Harzing et al., 2013; Kelley et al., 2003).

The survey design is deemed appropriate to be used in this research, because this research requires detailed and sufficient data easy to be processed related to learning issues so that they can be analyzed transparently and more objectively and studied as a reference material in follow-up activities. Apart from that, this study expects a more critical answer so that the results obtained can be used to influence education policy, especially with regard to the vocational world which is currently in the local scope to be in the spotlight to be able to produce quality and productive human resources (Dale, 2006).

Sample and Procedure of Data Collection

The data were collected through self-administered online survey using Google Form in May 2021. The questionnaire was distributed to the VHS teachers in Indonesia who joined an online seminar conducted by PT Rumah Publikasi Indonesia about Scientific Writing Papers Strategy for Indonesian VHS Teacher. Those who the participants of this questionnaire were 406 VHS teachers. The data collection process for the VHS learning process survey and its impact was carried out in a span of 2 days on 29-30 May 2021. 95.56% of respondents submitted data on 29 May 2021, while 4.43% of respondents gave answers to the survey given on May 30, 2021. 90.1% of respondents answered in the first 3 hours since the survey link was submitted. This indicates that the effectiveness of the online survey media can be seen from the speed with which answers are received some time after the survey link is informed to respondents spread across a number of regions. In providing answers to the survey conducted, respondents were given incentives in the form of sharing knowledge about scientific writing skills with a number of tips and tricks up to the publication stage delivered by competent sources. In the Skilled Writing activity for VHS teachers, a number of incentives in the form of door prizes were also given to increase the motivation of respondents in participating in this activity. Providing incentives as a form of appreciation for participation can have a positive impact on the activities carried out. The impacts that occur include increasing the motivation of the activities that are the background for providing these incentives (Sidin, 2021). The teachers who were respondents and participants in this activity had a positive and significant impact on gaining knowledge from sharing skills in writing and gaining insight from the survey instruments provided, which in turn could affect their performance improvement (Novarini & Imbayani, 2019).

Survey answers given by respondents are stored on the Google Drive page with a recap of answers including a timestamp that informs when the respondent submits the survey results conducted by the respondent (Laskowski, 2016; Škrinjarić, 2020). Follow-up procedures carried out as a form of analysis of the data obtained include: (1) downloading raw data for survey answers, many of several types of file formats that can be downloaded from google drive, downloading files in worksheet format is the right choice so that data can be processed more efficiently. further, (2) grouping the respondents based on the components of the analysis. Respondent data is grouped by age, gender, activity in work activities, respondent's area of origin, and data from the school where the respondent works, (3) makes a recapitulation of the answers given by respondents who are grouped based on survey instrument groups and calculates the percentage of answers to measure the tendency of the answers. respondents, and (4) compiling interpretations of answers through the grouping and trend of answers that have been given by the respondents, from this interpretation, survey recommendations are then drawn up which can be used as follow-up activities. However, the researcher purposed to classify the data of 406 sample into some fields such as domicile, occupation and employment status, experience of being a teacher, lessons taught, school status where assigned, school family, school accreditation status. The Distribution of samples were shown in the table 1.

Table 1 - Sample Distribution

Category	Group	Total
Island	Java	327
	Sumatra	39
	Nusa-Bali	14
	Sulawesi	14

Category	Group	Total
	Borneo	10
	Maluku-Papua	2
Occupation	VHS Teacher	365
	Non VHS Teacher	41
Teacher Experience	< 10 years	155
	> 10 years	251
Subject taught	Vocational	184
	Language	81
	others	141
School field	Engineering	275
	Non Engineering	131
School acreditation	A	311
	B	78
	C	10
	Unaccredited	7

The age distribution of respondents is fairly even in the age range of 20 years to 50 years, the largest participation is 38.91% followed by respondents aged 40-49 years, then 28.09% in the 30-29 year age range, the remaining 18, 72% in the age range of 20-29 years and 15.27% in the age range >50 years. This implies the expectation that the survey will be followed equally by teachers as respondents from the Baby Boomer generation, generation X, and Millennial generation. This is important to study because each generation has significant characteristics, especially with regard to the performance, and management of its activities (Mulyanti, 2021). The percentage of female respondents as many as 57.88% shows that this is more but not significant compared to male respondents, so the survey results are quite balanced in terms of personality, work environment, leadership, culture, socioeconomic and job satisfaction which are differentiating factors. characteristics in gender (Prihastuty et al., 2020) With this balance, the survey results are considered quite objective regarding the motives of the responses given. Most of the research respondents were VHS teachers (89.9%) while the rest were teachers other than VHS 10.1%. In terms of employment status, 61.08% of respondents are teachers who are permanent government employees with a dominant tenure of 11-20 years (46.8%). The teachers as respondents are active in facilitating learning in public schools managed by the government and private schools which are managed independently through the educational foundation that houses them. 72.66% of the agencies where respondents work are VHS with state status, most of which have been accredited A (76.60%). This indicates that the answers that have been given by the respondents can reflect the activities in educational institutions in accordance with the vocational education policies of the government. The VHS cluster, which is the focus of its vocational activities, consists of 67.73% belonging to the Technology family, while 32.37% are from the Non-Technology cluster. The learning characteristics taught by teachers from the technology family tend to focus more on aids in the learning process, while the characteristics of learning taught by teachers from Non-Technology are more focused on social problems in learning (Köpsén, 2014).

In carrying out activities to facilitate vocational learning, teachers specialize in the substance of the vocational learning materials they facilitate (Chun-Mei et al., 2020). 45.32% of the respondents are teachers who are in charge of vocational learning, while the remaining 19.95% are teachers who are in charge of delivering language material to equip communication

competencies and other soft skills, while 34.73% are in charge of other learning in learning at VHS. Overall, the respondents came from Indonesia, although they came from various provinces in Indonesia. Most of the respondents came from the island of Java with 36.7% of respondents from West Java while 16.5% came from other provinces on the island of Java, the remaining 20.2% of respondents came from provinces outside Java. The data from this province is in line with the number of VHS spread across Indonesia, the percentage of VHS in West Java Province is 20.42% or a total of 2954 of 14464 VHS in Indonesia (Pusdatin, 2021). With this condition, the data obtained from the survey carried out represent the conditions in each region in Indonesia and can be used as a reference for recommendations for follow-up nationally.

Self-Assessment Instrument

This survey was conducted online via online form at https://forms.gle/u2dPFvSiQwpd2tm37. The use of online survey media has several advantages, including the characteristics of speed and wide coverage as well as ease of data collection, cost efficiency, flexibility, and automation (Ball, 2019). Online surveys can be deployed and completed quickly by research respondents, especially when these instruments are disseminated through social media or other media. With internet usage solutions, significant benefits can be seen from the answers given by respondents who are in areas that are geographically difficult to reach (Sociological, 1997). In this case, there is cost efficiency for the distribution of questions, answers and cost efficiency in submitting survey data collection activities which are usually carried out face-to-face or paper-based. Flexibility allows respondents to submit answers in various situations and conditions. The instrument used Likert scale from 1-4 represented as strongly disagree (1), don't agree (2), agree (3) and strongly agree (4). Strongly disagree is defined when the respondent does not have agreement on the clump of learning activities, so they cannot carry out learning activities and do not have knowledge of the impact of the learning carried out. On the other hand, don't agree shows that the teacher has an understanding of learning activities, but is not willing to carry out learning activities and their impacts, agree states that teachers understand learning activities and can carry out but do not yet know the impact of their learning activities. Finally, strongly agree express understanding,

Completion of survey questionnaires online is often preferred by respondents who can answer comfortably and at their own pace and enjoy access to instruments with quite attractive designs, so this also has an impact on increasing research responses. The construction of a flexible online survey can involve various types of questions, which may be a bit complicated when applied through paper-based survey media, for example if the survey includes video or audio clips, but with this media there is a lack of social interaction between respondents and the survey organizer. With the use of digital technology in survey management, researchers have many opportunities to design, validate, sample and analyze data in managing surveys efficiently (Bakla et al., 2012). Data automation carried out by the online system will also reduce errors in data entry, making it easier to code and detail the survey results data recap which can be downloaded in various formats and imported into other applications for analytical purposes (Wilson, 2017).

In an effort to obtain good survey results related to learning at VHS along with the evaluation and impact of learning outcomes, specific issues related to this have been explored with a focus on various stages of the activities of supporting teachers including determining the research population, how to get access to data, development survey, data collection, analysis and publication of instruments and their results (Harzing et al., 2013). After reviewing various related literatures and getting illustrations from a number of learning applications in

several schools, then a number of instruments related to learning and the impact of learning outcomes in VHS were made to obtain data transparency and more critical answers so that it had an impact on the quality of the issues that were the goal of this survey activity, so it is hoped that the results can be used to provide a reference for policy decisions (Dale, 2006). The grouping of the questionnaires consists of: (1) learning strategies that are held related to their correlation with the application of contextual learning materials in the workplace, (2) Perceptions about recognizing student competence in learning outcomes that can be recognized by the workplace or other parties, (3) Perceptions of graduates VHS in the activity of filling the job field, (4) Facilitating career stages that must be possessed by students as a provision to carry out work activities, and (5) Reinforcement that needs to be given to VHS graduates including the substance of training materials in preparing themselves to fill professional work activities (Phillips et al., 2002). This questionnaire was developed from guidelines for implementing effective collaboration between vocational training institutions and industry developed by the Government of Indonesia through the Ministry of Education and Culture, Ministry of Industry, Ministry of Manpower and Deuthche Gesellschft for Internationale Zusammenarbelt (GIZ).(Kemdikbud, 2016). all the sections of the self-administered are enclosed to be 25 questions in the survey and slightly represented in the table 2. The instrument is presented with a 4-option linkert scale to indicate the observer's perception of the survey questions

Table 2 - Instruments survey components in VHS

Group	No	Instrument	Question
A. Learning Process	1	Learning for Student Work Readiness	I facilitate learning at VHS to form students who are ready to work
	2	Conformity of Learning Objectives with work demands	The learning objectives of students that I facilitate are directed at the formation of Hard skills and Soft skills according to demands
	3	Evaluation of learning with the scope of theory and practice according to the field of expertise	I facilitate learning at VHS with the scope of evaluation of learning outcomes consisting of theoretical (knowledge) and practical aspects according to the field of expertise
B. Graduate Competencies	4	Graduates do not have industry certification	In my opinion, most of the VHS graduates do not have a certificate of competence recognized by the Industry
	5	VHS graduates have met work competencies	In my opinion, VHS graduates have met the work competencies needed in the workplace
C. Graduate Job Opportunities	6	Perception of VHS graduates as the highest contributor to unemployment	I agree that VHS Graduates are the contributors to the Highest Unemployment Rate
	7	The job opportunities for VHS graduates are very wide	I think the job opportunities for VHS Graduates are very wide

Group	No	Instrument	Question
	8	VHS graduates must work according to their field of expertise	In my opinion, VHS graduates should work according to their field of expertise
D. Understanding Career Paths	9	VHS graduates have understood the stages of the career ladder	In my opinion, VHS graduates have understood the stages of a professional career ladder in the workplace
E. Strengthening Competence	10	VHS graduates need hard skills adaptation strengthening	In my opinion, VHS graduates need to strengthen Hard skill adaptation according to work demands
	11	VHS graduates need strengthening of Soft skill adaptation	In my opinion, VHS graduates need to strengthen soft skills adaptation according to work demands
F. Waiting Period for Graduates	12	Waiting period for VHS graduates > 6 months	In my opinion, many VHS graduates have a high waiting period (more than 6 months) before formal work activities/work in the workplace
	13	The waiting period is filled with applying for a job	In my opinion, there are VHS graduates who fill the waiting period for work by applying for jobs
	14	The waiting period is filled with on-the-job training and certification	In my opinion, VHS graduates must fill the waiting period of work with Job Training Activities and Competency Certification
G. Job Training for VHS Graduates	15	On-the-job training for 3 months	In my opinion, job training in the waiting period is carried out on average for 3 months
	16	VHS with Industry need to hold job training	I think VHS together with industrial partners need to conduct job training for new graduates to improve the quality of work of VHS graduates
	17	On-the-job training is conducted at VHS and in Industry	I think job training should be conducted at VHS locations and Industrial locations
	18	Work activities	In my opinion, job training should equip graduates with integration of work activities
	19	Work culture	In my opinion, job training should equip VHS graduates with Knowledge of Work Culture
	20	Stages of professional career ladder	In my opinion, job training should equip VHS graduates with the stages of a professional career ladder
	21	Adaptation to the workplace	In my opinion, job training should make VHS graduates more able to adapt to the activities of the workplace
	22	Competency certification	In my opinion, job training must be job training and must equip VHS graduates with several competency certificates that are recognized by the workplace

Group	No	Instrument	Question
	23	Internship required by VHS graduates	In my opinion, work internships are necessary before VHS graduates enter the workforce
	24	Job training oriented to job recruitment	In my opinion, job training should be oriented towards job recruitment
	25	The impact of job training is monitored by VHS and other stakeholders periodically for a period of 1 year	In my opinion, job training should have the impact of job training and should be monitored by VHS and other stakeholders periodically within a period of 1 year

From the table above, it can be explained that the instrument for the learning process group survey was carried out to obtain objective data, strategies, and evaluations related to/in accordance with the demands of the workplace (Leigh et al., 2007; Smith, 2007). Every VHS teacher has basically carried out the learning process, but the connection with activity-oriented learning in the workplace/industry needs to be confirmed in this survey. The competency recognition instrument is described in questions regarding ownership of competency certificates and fulfillment of work competencies (Cother & Cother, 2017; Garland, 1994). Learning that is oriented to the fulfillment of competencies, in general, has been planned in learning at VHS, but has this learning been measured so that the competency learning outcomes are in accordance with the demands of the industry/workplace? recognized by the workplace/industry. Furthermore, the instrument regarding job opportunities and opportunities is given by respondent's perceptions of VHS graduates as the largest contributor to the Highest Unemployment Rate (TPT) data in recent years and respondent's insight into the availability of job opportunities for VHS graduates (Flower et al., 2019). In facilitating learning, teachers must have insight into the workplace which will be filled by students after they become VHS graduates (Köpsén, 2014; Nasir, 2012) Teacher's perceptions of job opportunities for graduates will have an impact on the quality of learning facilitated at schools. Furthermore, instruments regarding career paths and competency strengthening were delivered to respondents so that VHS graduates have strengthened their hard skills and soft skills (Aley & Levine, 2020; Byrne et al., 2012). By understanding career levels and stages, students will have a strong motivation and passion in learning so that it has an impact on activities after graduates who are obsessed with applying their work competencies. Graduates who have an understanding of the stages and career paths will have success and are more organized in living their lives, at all times having a target for increasing their welfare index (Hawkins & Booth, 2005).

After undergoing learning and then becoming a VHS graduate, an understanding of the waiting period after school to get work activities was conveyed to respondents about the duration of the waiting period, as well as activities in filling this waiting period which can be filled by applying for jobs or other more productive activities in the form of job training and training. certification so as to improve the quality of these VHS graduates (Hanushek et al., 2021; Renn et al., 2014). Teachers can manage the learning load, so that student learning activities get results that are in accordance with the demands of the workplace, the impact is that after learning is done, students are ready to enter the workplace with the appropriate competencies. Regarding job training and certification activities in this instrument, respondents were also asked about the perception of the training that needs to be carried out, including the urgency of the activity and the organizers of effective job training as well as training materials that must be followed by VHS graduates in preparing themselves to enter the

workplace/industry (Flower et al., 2019; Saar & Räis, 2017). Synchronization of schools as educational institutions and industry as users of graduates must be adjusted and have the same target, so that the compatibility between demand and supply of labor is carried out properly. The contextual material for work readiness included in this survey instrument includes work activities, work culture, stages and career paths, adaptation to the workplace, certification, internship activities, and job recruitment processes (Joubert, 2021). This data needs to be obtained as a form of synchronization between training patterns and real work activities, even since the training process, adaptation and work activities have been carried out. The next survey question relates to the urgency of reflection and follow-up on training including work activities that become routine for job training participants to be monitored and evaluated for some time to measure impact and evaluate for the implementation of further training (Georgellis & Lange, 2007).

FINDINGS AND DISCUSSION

Findings

This study aims to determine the impact of the learning process at VHS and to see recommendations for competency improvement programs for VHS graduates in accordance with the demands of the workplace/industry by using descriptive statistics to measure the average variable results. As a result of the previous analysis, the researcher concludes the results as further information to answer the three research questions. Through statistics, the researcher describes the first problem regarding the learning process at VHS, then describes the competency profile of VHS graduates and finally provides recommendations for competency improvement programs for VHS graduates that can meet the work demands of the industry. Overall, the data analysis process as a result includes descriptive statistical processes to interpret (1) vocational learning strategies in VHS, (2) competency profiles for VHS graduates, (3) recommendations for competency improvement programs for VHS graduates.

Learning Strategies at VHS

Survey which conducted on 406 respondents has produced a number of data according to the instruments that have been prepared and can be used as study material on perceptions of learning in VHS, VHS graduates and competency strengthening models for VHS graduates to be better prepared to fill opportunities/ job opportunities. A survey on learning at VHS was conducted in relation to strategies in facilitating learning to form students who are ready to work. The answer to this point indicates that the respondent strongly agrees that learning is carried out to form students who are ready to work. The answer given to the first instrument is in line with the answer given to the question learning objectives that are made to be in accordance with work demands, respondents agree that the learning objectives held are directed at the formation of hard skills and soft skills according to work demands which can be measured through evaluation in the form of theory and practice according to the chosen field of expertise in accordance with the answers from the instrument on learning evaluation. The answers to survey result from learning process instrument shown in the graph of this following Fig. 1.

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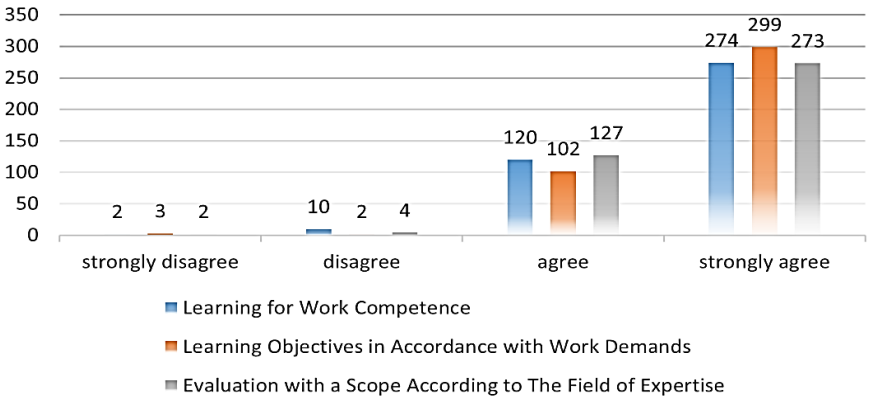

Fig. 1 - Learning Strategy Survey Results

In this contextual learning process, the teachers also think that they have introduced the stages of a professional career ladder in the workplace for students, respondent's answers from surveys that have been carried out are shown in the graph from Fig. 2 below shows the teacher's belief that student learning outcomes will result in an understanding of future career levels. The dominance of respondents (48%) stated agree that graduates have understood the career path, supported by 27.09% of respondents who stated Strongly agree that graduates have understood the stages or career paths.

Fig. 2 – Percentace of Understanding the Career Path of VHS Graduates

VHS Graduate Profile and Competencies

The competence of VHS graduates is directly proportional to the reality in the field of work which shows that VHS graduates have predominantly got work activities in industry, but there are still VHS graduates who are still less fortunate in terms of getting direct job opportunities, this is actually in line with BPS data which states VHS as a contributor to the Open Unemployment Rate (TPT). But even so the teachers do not agree with this perception, even most of them respondents stated Disagree that VHS graduates became TPT contributors as shown in the graph from Fig. 3 below.

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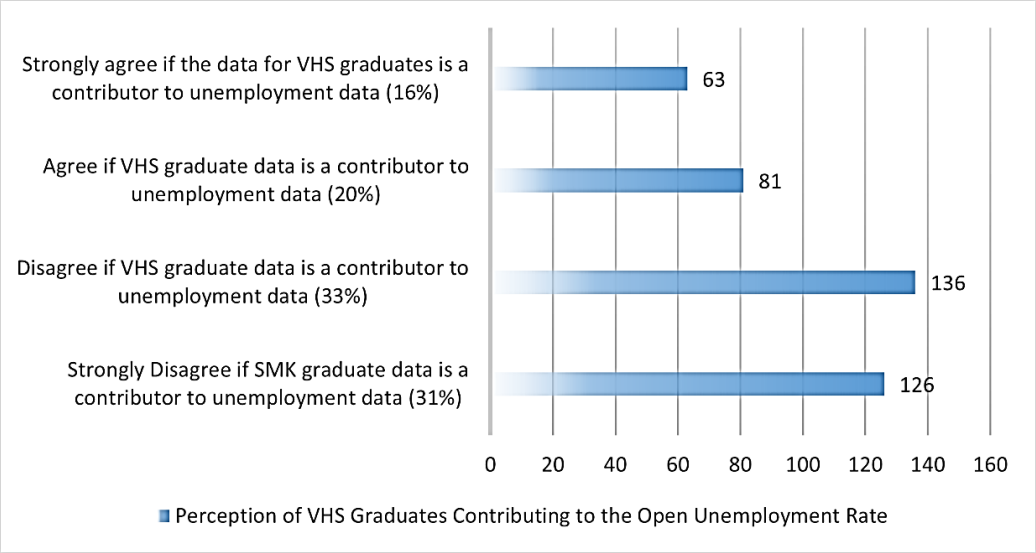

Fig. 3 - Perception of VHS Graduates Contributing to the Open Unemployment Rate

For respondents who stated that they did not agree with the VHS survey as the largest contributor to Open Unemplyment Rate, one of the reason is that most of the respondents in this survey stated that VHS graduates already have and fulfill the work competencies needed in the workplace, so VHS should not be the highest contributor to unemployment. The work competence possessed by VHS graduates can actually be proven by having a Competency Certificate that can be recognized by the industry/workplace. Another reason that can be a reinforcement for the fulfillment of the work participation of VHS graduates is shown in Fig. 4 which is compared to the opportunities and availability of job opportunities for VHS graduates.

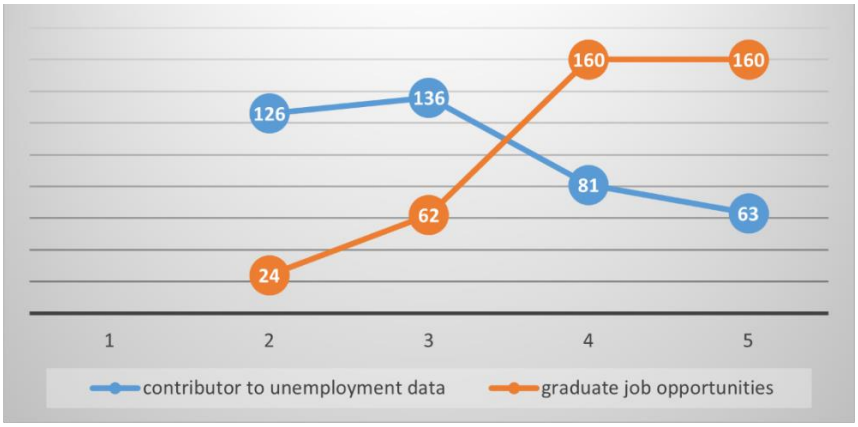

Fig. 4 - Perception of VHS Graduates Contributing TPT vs VHS Graduate Job Opportunities

The survey results show that the ownership of competency certificates by VHS graduates who have fulfilled these work competencies is in fact still lower than the perception of fulfillment of work competencies by VHS graduates. A case of data is shown through the graph in Fig. 5 which states that the data on respondents' perceptions of graduates who having a competency certificate is still below the perception of graduates who have fulfilled work competencies.

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Fig. 5 - Comparison of The Fulfillment Work Competencies vs Ownership of Competency Certificates by VHS Graduates

Perception of respondents' answers states that VHS graduates must be able to fill jobs by professional in accordance with the chosen field of expertise in learning at school. The graph in Fig. 6 shows the perception of VHS graduates being able to work in accordance with their field of expertise, the rest is a positive perception for graduates to fill work activities in other fields or do activities not as employees but as entrepreneurship or continuing education at a higher level (Joubert, 2021).

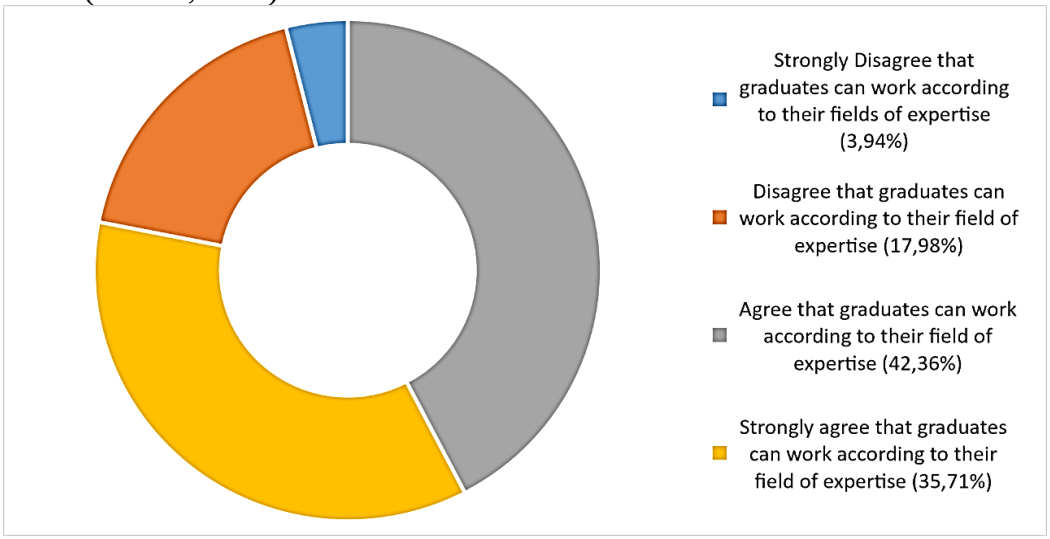

Fig. 6 - Opinion that graduates can work according to their field of expertise

Recommendations for Competency Improvement Programs for VHS Graduates

Even though they have tried to organize good learning and are oriented to the demands of the industry/workplace, graduates still need to get strengthening their competencies. The reinforcement that must be obtained includes adaptation of hard skills which are strengthened by 98.52%, and adaptation of soft skills which are strengthened by the answers of respondents by 99.26% according to the data shown in the graph from Fig. 7.

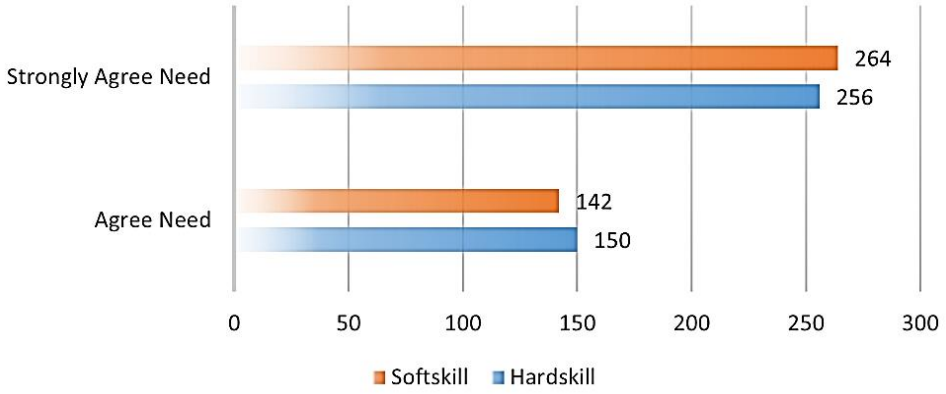

Fig. 7 Need for Strengthening the Competence of VHS Graduates

After going through the school graduation stage, a number of VHS graduates have received work activity opportunities, but there are also those who have to experience a waiting period until they get job opportunities for certain activities. Graduates who do not directly get work activities after the graduation process require a waiting period of approximately 6 months to get job opportunities, this is corroborated by the perception of the answers given by respondents regarding VHS graduates who still have a long waiting period with a duration of more than 6 months before formal work activities/work in the workplace.

The waiting period for VHS graduates must be effectively filled with useful activities, so that they can contribute and strengthen their work readiness. Several activities can be carried out in filling this waiting period, including in line with the dominance of respondents' answers to the survey questions given, which consist of: (1) seeking job opportunities and applying for jobs in accordance with survey answers from 90.15% of respondents, and (2) training accompanied by competency certification according to survey answers from 93.35% of respondents. Of the 2 activities that are activity options during this waiting period, training accompanied by certification is a more productive activity and strengthens the perception of work readiness for VHS graduates, because this duration can increase competence and work readiness (Brooksbank, 1995). Based on the answers to 92.12% of respondents who stated their approval for the job training process carried out by VHS graduates for 3 months so that it could complete the lack of job readiness prerequisites that should be obtained from learning at VHS. This can also be an adaptation process that strengthens their work competence. The perception of this training was dominantly given by 99.01% of respondents who stated that the training should be held jointly by VHS with Industrial Partners to improve the quality of work of VHS graduates, this includes the selection of training venues conducted jointly at VHS locations and Industrial locations according to survey answers from 97.29% of respondents as shown in the graph of Fig. 8 below.

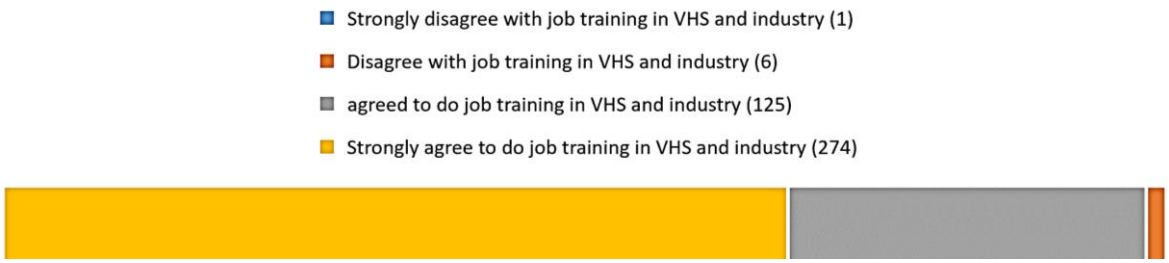

Fig. 8 - Recommendations for The Implementation of Job Training

From this data, schools and industries can adjust activities to their respective roles according to the characteristics of the training they are holding. This job training was jointly prepared by VHS as a joint training operator with industries that are users of VHS graduates, so that the implementation of training and evaluation can be followed up (Sjoerd, 2014). The determination of top 5 job training materials is the question and instrument of this survey which is carried out with the aim of getting answers that the training materials consist of competencies required in work activities, with dominance in the soft skills aspect consisting of: (1) Competency certification organized by a Professional Certification Agency or other institutions authorized to issue certificates for recognition of work competencies after going through the training process or directly testing a person's competence in a particular competency cluster or unit (Leigh et al., 2007) in line with the answers Strongly Agree from 99.01% of respondents. (2) Adaptation of the workplace to bring the understanding of VHS graduates closer to work needs whose perception of approval was given by 100% of respondents giving answers Strongly Agree, (3) Career Paths which can be a guide in the development of graduate activities in the workplace which are also dominantly given through survey answers Strongly Agree from 99.01% of respondents, (4) Work Culture to recognize unique activities in the workplace given from Strongly Agree answers from 99.75% of respondents, and (5) Professional Activities in the Workplace through Strongly Agree answers 100% of respondents, so this indicates that overall job training is needed in a contextual form. Respondent's perceptions of the survey related to this training material are shown in the graph in Fig. 9 below.

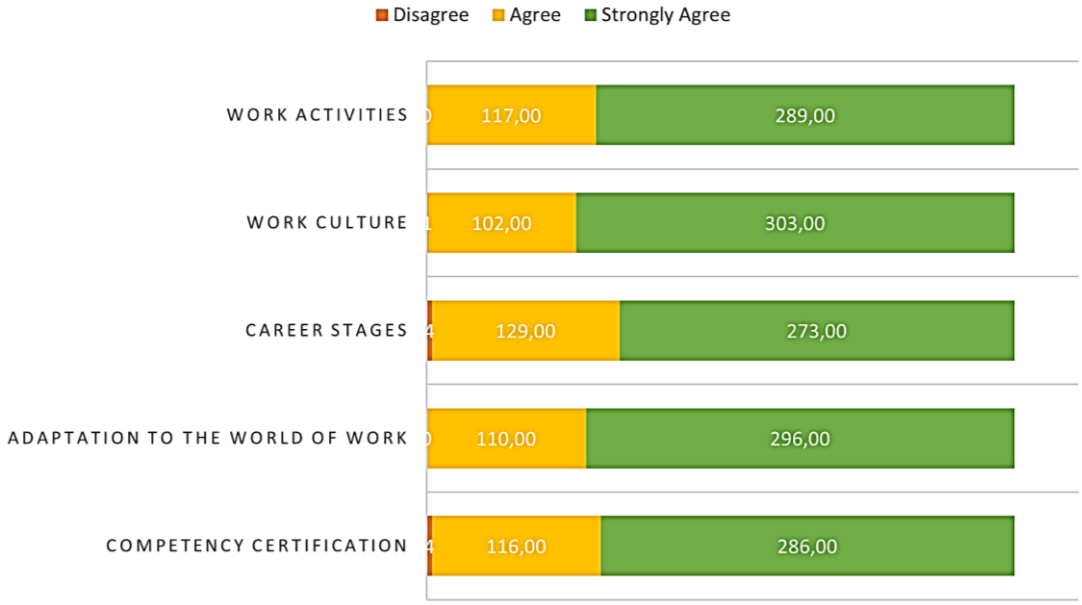

Fig. 9 Respondent's Perception of Job Training Materials

After a number of training materials described above were given to VHS graduates who were participants in this job training, so that the training was complemented by professional work activities in certain industries in the form of internships in accordance with the opinion of 99.01% of respondents who stated that Internship activities were still needed by VHS graduates before they enter the workforce. This internship activity, in addition to containing the realization of the results of the training, will also be a means of better adaptation to work activities, so that it becomes an easy way for VHS graduates to enter the workplace.

Job training organized must have an orientation on job recruitment patterns, starting from the selection of training materials and evaluations listed in the training curriculum,

instructors and all personnel involved in the training, training locations and special activities aimed at involving trainees in job recruitment activities by companies that will become the object of graduate professional work. This was conveyed by 97.7% of respondents in their agreement with the recruitment-oriented component of the training survey. This job training activity must produce a good impact, the training process must be able to develop in the next training process, as well as the training material must be applicable so that it is beneficial for the various parties involved. Survey respondents provide data for this, which is indicated by 98.2% Agree that the impact of job training should be monitored and evaluated (monev) by VHS and stakeholders involved in this job training process periodically for a period of approximately 1 year. This monev process will produce data that assesses the success of job training for VHS graduates through the impact shown by these job training participants. This result will also be a recommendation for various parties to follow up on strengthening competencies for VHS graduates and assessing the good form of partnership between VHS and the workplace/industry that jointly organizes efforts to create employment opportunities in reducing the unemployment rate.

Discussion

Learning Strategies in VHS

The results of this survey provide a view that vocational learning in VHS has been planned in accordance with the demands of the workplace, but in its implementation it is necessary to increase its focus on components related to its impact in the workplace. This interpretation provides a reference that the learning process in VHS must be planned and carried out contextually by involving the workplace/industry directly as graduate users. Not only the learning process, but the learning evaluation process must also be adapted to the characteristics of the industry. To facilitate learning that is carried out contextually, preparation for learning that must be available includes learning materials that have been prepared jointly by the school and industry as well as the understanding of supporting teachers on work culture and the industrial environment that will be integrated in the learning process. Learning strategies must use an approach that is centered on student activities, for example by using a project-based learning model or work-based learning model. Learning activities that are currently being carried out need to be completed so that there is an improvement in the process as well as follow-up learning in VHS in the form of the need for an integrated competency certification process as a form of evaluation that can recognize the work competencies possessed by students or VHS graduates.

VHS Graduate Profile

An overview of the profile of VHS graduates can be seen from the interpretation of the survey answers above which indicate that VHS graduates have basically obtained a basic vocational knowledge in accordance with their chosen field of expertise in learning formally in VHS, but it turns out that the competence of these learning outcomes has not been fully recognized by the industry as users of VHS graduates. is the possession of a certificate of competence. From this perception, before the entry of VHS graduates into the workplace/industry, they must be equipped with adaptations according to the recommendations mentioned above in the form of training or other forms.

With the wide open opportunities and job opportunities for VHS graduates, Vocational High School graduates can work in accordance with their chosen field of expertise in learning at Vocational High Schools, or can also fill job opportunities in other fields that available. Apart from this, other activity options are entrepreneurship or continuing education at a higher level. In terms of career paths, it turns out that there are still vocational school

graduates who have received job opportunities who do not understand the career steps that must be followed, so that the conditions seen from some of their activities in the workplace have not found the right career success.

VHS Graduate Competency Improvement Program Recommendations

Observing the vocational learning process in VHS and the profile of VHS graduates, there are still a number of weaknesses that have an impact on the competence and readiness of graduates to enter the workplace. To meet the competency prerequisites so that they can enter the workplace properly, activities that can improve the quality of vocational graduates are needed. Program recommendations for competency strengthening for VHS graduates who want to enter the workplace include components of hard skills and soft skills in the form of job training jointly organized by VHS and industry that have work standards and procedures in implementing their career paths (Henderson et al., 2003). The duration of time used for the implementation of this training is about 3 months with the materials covering (1) Training and exams for competency certification, (2) Adaptation to activities in the workplace, (3) Knowledge of Career Stages and Paths, (4) Understanding of Work Culture, and (5) Professional Activities in the Workplace that can be carried out directly in contextual training. Training materials and competency certification can be provided for the hard skill component according to the competencies possessed by graduates according to the required industry standards. Adaptation of work activities can be carried out in the form of integrated activities in training activities, delivery of training materials is carried out in industrial activities, so that the training process that is followed becomes an early adaptation for prospective workers. The material for the career path is presented in the form of a career stage simulation, so that it becomes a Fig. of what graduates will do later when they work. Understanding of work culture includes hard skill and soft skill activities needed in the workplace. Hard skill components can be met according to the demands of competency certification, Furthermore, for the soft skill component, the components needed to support work activities such as ethics, communication skills, flexibility, responsibilities and other soft skill components that support work assignments are strengthened. These training materials are carried out directly as a form of simulation in the job training process as a form of professional activity.

The results of the training for strengthening the competence of VHS graduates must be impacted by the various parties involved, VHS as an institution that provides basic vocational skills for students to get feedback for improving the learning process and graduates to get a strengthening of the competencies they must have, so that it will strengthen the quality of graduates. VHS and make them ready to enter the workplace/industry. Industry as a graduate user must feel the impact of this activity, namely getting quality human resources (HR) to support its business activities and improve the quality of the company's products/services. As a result of this job training, it is hoped that all participants will get work activities in the appropriate industry and have good career prospects.) to all parties involved(Sumbawati et al., 2020). This measurement should be done within a period of 1 year to measure his career development.

CONCLUSION

To conclude, descriptive quantitative has been conducted to determine the competence of learning outcomes in VHS. This study found that learning had been planned and held with a dominance of hand skills (hard skills), with the expectation from teachers that graduates have work competencies that are in accordance with the demands of the workplace/industry, but the competence of learning outcomes possessed by graduates has not been fully recognized by the

public. workplace/industry, so that a competency strengthening model is needed in the form of job training for VHS graduates before they start professional activities in the workplace/industry with materials including (1) certification to acknowledge the skills they already have, (2) the process of adapting work culture, (3) career paths, (4) work activities and culture, (5) recruitment patterns and monitoring the impact of training results.

The weakness of this research is the acknowledgment of the learning process that has been carried out at VHS from the teachers who have had too high a maximum that has not been adjusted to the perception of technological and industrial developments on their learning. Another thing that must be improved is the use of the linkert scale for the right value according to the needs of the survey, so that it does not explain the learning deficiencies that occur. Finally, although the survey has been followed by a large number of respondents, this study suggests conducting a deeper study of the learning process that has been integrated with industry standard activities, so that the study of VHS learning is not only based on teacher perceptions, but also includes components of industrial demands. So that in the near future a collaborative study is needed between VHS teachers, vocational education managers and industry parties to quickly assess how adequacy their work competencies are.

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