



The Future of Vocational Competence: Perspective of Vocational Teachers, Industries, and Educational Expert

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This study aims to formulate the future competencies of vocational needed by the world of work, and find the main aspects that graduates must have to support them in the world of work. This study used quantitative inquiry approaches with questionnaire or inventory, focus group discussion, interview, literature review, and documentation as the methods of data collection. The subjects of the study were 18 experienced teachers from 18 vocational school, 15 industries representatives, 6 vocational education experts, and 4 vocational education practice. Data were analysed descriptively. The results show that the future of vocational competence consist of specific competencies in the form of high-level technical skills supported by general competencies such as technology and information skill, honesty, mastering foreign languages, discipline, critical thinking, creatively and innovatively, responsible, attitude, teamwork, and communication skills. The study also found that soft skills or employability skills were the main aspects that graduates must have in a complementary integrated with hard skills.

Keywords: disruptive technology, competence, vocational, vocational teachers, expert

Citation: Wagiran., Pardjono., Triyono, M. B., Pratama, G. N. I. P., & Köhler, T. (2023). The future of vocational competence: Perspective of vocational teachers, industries, and educational expert. *International Journal of Instruction*, 16(4), 543-560. <https://doi.org/10.29333/iji.2023.16431a>

INTRODUCTION

Quality of Human Resources is a key factor in a country's development (Budhwar, and Debrah, 2001; King, and Osei, 2008; World Bank, 2019). The progress and retreat of a nation will be determined by its ability to prepare human resources in line with future challenges. "A well educated workforce is a key element to achieve competitiveness and prosperity" (Boutin, Chinen, Moratis, and Baalen, 2009) In this context, the preparation of human resources especially through vocational education cannot be separated from economic globalization (OECD, 2011; Unesco-Unevoc, 2014) disruption era (Kasali, 2017; Durrani and Wait., 2016), 21st century (Trilling, B and Fadel., 2009; LSN., 2011), industrial revolution 4.0 (World Economic Forum, 2016), technological disruptive (Schwab, 2015; Soon, 2019; Khanna and Kumar, S., 2020; Girasa R, 2020), and changes of generation characteristics (Levensen, 2010). In general, the world of work in the future will be characterized by uncertainty, rapid acceleration of change, high flexibility and adaptability.

Various countries redefined the characteristics of human resources with various dimensions, such as the Australia (Bullock, 2011); Unites States (Carnevale and Smith, 2013), Euro (OECD, 2011), Germany, England and Austria (Friedrich, F, 2012), South East Asia (Paryono, 2016), and South Asia (ADB, 2014). Various studies also conducted to redefine the characteristics of human resource needs according to the field of work such as mining (Carona, Asselina, and Beaudoin, 2019), manager (Fisher, E., 2011; Dainty, Cheng, and Moore, 2004), engineering (Wissenberger-Eibl, M., and Kugler, F., 2014), and business (Zaman, 2015). This was done as part of efforts to create an education system that is adaptive, anticipatory, and futuristic to the various demands of the change.

Vocational education as education that prepares students to enter the workforce (Thompson., 1973; Pavlova., 2009), education for occupation (Billet., 2011; Rojewski., 2009), or a bridge between education and the world of work (Education International, 2009) is demanded to be able to present the educational process in accordance with the demands of changing characteristics of the world of work. Around the world, technical and vocational education and training is widely seen as having a key role in promoting both economic and socio-economic growth, increasing productivity, empowering citizens and alleviating poverty (Unesco-Unevoc, 2014). On the other hand, the essence of vocational education is education for personal fulfillment and preparation for life.

The competencies possessed by Vocational Education students in Indonesia can be developed through critical, innovative and collaborative learning. Through application-based learning (approach using the E-ES application) it can be shown that student competence can be formed by means of groups and case studies (Supriyadi, et. all., 2020). This reinforces that the competency formation of Vocational Education students in Indonesia must develop with future demands, which are influenced by technological disruptions.

Sripan and Sujivorakul (2020), explored the variables that influence the formation of student competence through students' enthusiasm for studying vocational education in

Thailand. The variables considered included self-regulation strategies, school participation, self-determination, school identification and teacher autonomy. The variable has previously been studied in other contexts but not in vocational education. The results of this study can show that aspects of school participation, self-determination and school identification are the three variables that influence students to study vocational education in Thailand. Meanwhile self-regulation strategies, promotion of task-related discussions and support for teacher autonomy did not have a significant effect on students. The results of this study encourage further observation whether the formation of student competencies must be adapted to the external and internal environmental conditions.

Online learning is an alternative to learning in Vocational Education during the pandemic. However, online learning is still not effective in increasing student competence, due to limitations in high-level skills such as reasoning, critical thinking and calculation. The results of Rohendi's research (2023), show that the use of STEM-based media can increase the competency of Vocational Education students seen from all students or based on the level of student groups. Likewise, positive student responses to online learning using STEM-based media. The results of this study encourage proving whether post-online learning can also shape student competence in accordance with future demands.

Vocational High Schools have an important role in preparing graduates for work and reducing unemployment. Therefore, appropriate learning design is needed to prepare students to master the competency. The use of learning models is one of the strategies in learning design to improve learning outcomes, namely through Flipped Classroom during a pandemic which is felt to be effective in forming vocational student competencies (Ismaniati, et.all., 2023). This research is the first step to carry out in-depth studies related to students' abilities from the psychomotor aspect.

Indonesia as a country that places education including vocational education as the main instrument for the preparation of future human or labor resources (Sukamto, 2016) has made various efforts to improve the quality of vocational education in accordance with various future demands. Revitalization of Vocational High Schools (Presidential Instruction No. 9, 2016) was rolled out in an effort to increase the synergy of various stakeholders in improving the quality and competitiveness of human resources. This policy instructs all relevant ministries and institutions to take the steps needed to revitalize vocational schools to improve the quality and competitiveness of human resources and to compile maps of the workforce needs of vocational schools graduates. Improving the quality of vocational education is also one of the priority agenda in the National Medium Term Development Planning (The Ministry of National Development Planning (Bappenas), 2020).

Mismatch is still a major problem in vocational education (Sudira, 2017). Although strong vocational programme increase economic competitiveness, many vocational programme currently fail to meet labour market needs, do not adequately prepare young people for jobs, and are separated from the fast-changing world of modern economies (OECD, 2011). Wagner (Wagner, 2008) call this the global achievement gap, the gap

between what is even our best schools are teaching and testing versus the skills all students will need for careers, colleges, and citizenship in the 21st century. The same problem also occurs in Indonesia (Sayuti., 2015; Kementerian Pendidikan dan Kebudayaan., 2016). The Central Statistics Agency (Biro Pusat Statistik, 2019) noted that the level of open unemployment in August 2019 reached 7.05 million people or 5.28% of the total workforce of 133 million people. Vocational school graduates are still the biggest contributor to unemployment (10.42%), followed by high school graduates (7.29%), Diploma graduates (5.99%), post graduated (5.67%), junior high school graduates (4.75%) and basic education graduates (2, 41%).

One of the main factors of mismatch is the incompatibility of competencies produced by educational institutions (in this case is vocational schools) with competencies needed by the world of work (Kementerian Pendidikan dan Kebudayaan, 2016; Griffin, Coelhoso., 2019). Therefore, the study of the competencies of vocational schools required by the world of work is very important. This study aims to formulate the future competencies of vocational school needed by the world of work. Competence can be interpreted as capability or ability. Competency is a characteristic of an individual that is casually related to job performance (Spencer, and Spencer., 1993), a capability to perform at some future point (Le Deist and Winterton., 2005), the demonstrable characteristics of a person, including knowledge, skills, and behaviors, that enable performance (Dessler and Varkkey., 2011), or a set of knowledge, skills, or attitudes that help a person to perform successfully (Blanchard, and Thaccker., 2011).

METHOD

This study uses a quantitative method approach. The population of this study are stakeholders related to the implementation of Vocational Education in the Provinces of DIY, Malang, Jakarta, Bandung and Surabaya. The research sample was divided proportionally, namely experienced vocational teachers, practitioners, vocational education experts, and vocational education policy makers. Based on Isaac and Michael's table, the participants in this study included 18 experienced vocational school teachers, 15 practitioners and owners of industry, 6 vocational education experts from Yogyakarta State University, and 4 vocational education practitioners.

Quantitative data were obtained through questionnaires, interviews and documentation, while FGDs and literature reviews were conducted to strengthen the findings. The questionnaire used in this study included an open questionnaire and a closed questionnaire. An open questionnaire is used to reveal aspects of the basic abilities that must be possessed by VHSs. Closed questionnaires are used to express the urgency of skills that need to be possessed by VHS graduates. Focus Group Discussion questions are used to reveal basic competency data and the urgency of vocational school competencies. Interviews with vocational education practitioners were conducted to gather data on employment conditions and the competency needs of vocational graduates.

The data analysis technique in this study is descriptive analysis. The data that has been collected is selected and categorized according to the research objectives and interpreted

comprehensively. Data from closed questionnaires were analyzed descriptively quantitative with percentages. To analyze the results of open questionnaires, focus group discussions, and interviews qualitative descriptive analysis was used.

DISCUSSION

Basic Skills that must be Possessed by Vocational School Graduates

Teacher's Perspective

Based on the open questionnaire given to experienced vocational school teachers, thirty basic competencies were obtained which should have been graduated from vocational school. A description of the top ten basic competencies that vocational school should have and the percentage of their emergence is presented in Table 1.

Table 1
Top ten basic competencies that must be possessed by future vocational school (teacher's perspective)

No	Competence	Number of Appearances	Percentage
1	Knowledge and skills according to the field of expertise/technical skills	13	100,00
2	Technology and information skills	9	69,23
3	Honesty	6	46,15
4	Foreign language (English)	5	38,46
5	Discipline	5	38,46
6	Critical thinking, creativity, and innovative thinking	5	38,46
7	Responsible	4	30,77
8	Attitude	4	30,77
9	Collaboration skills	4	30,77
10	Verbal and written communication skills	4	30,77

Based on the data in Table 1 it appears that technical skills are the highest score with a 100% emergence percentage. Thus it appears that the main competencies that should be possessed by vocational school are technical skills. Besides these ten aspects, it was also found that other very important aspects possessed by vocational school were: the ability to solve problems; work ethic; social sensitivity; and faith, piety, and noble character.

The results of the focus group discussion with the teachers showed several important competency findings possessed by vocational school students in the future, including: discipline, fighting spirit, curiosity, and toughness. The competencies needed are in line with the demands of the 21st century skills, in fact they have been accommodated in the formulation of the vocational school curriculum, but in practice it is less than optimal due to the low ability of teachers.

Technical skills are the basic requirements for vocational school to enter the world of work. Other skills needed include: creativity and entrepreneurship, higher order thinking skills, information technology skills, communication and literacy skills, and social skills. Ability or competence can be divided into two namely technical and non-technical

skills. This the technical skills related to mastering the competence of the field of study or expertise needs to be strengthened by the non-technical abilities related to soft skills.

Industry Perspective

Based on the open questionnaire given to industry representative about basic competencies that should be possessed by vocational school, a variation of thirty-one basic competencies should be obtained by vocational school graduates. An overview of the top ten competencies that vocational school should have are presented in Table 2.

Table 2

Top ten basic competencies that must be possessed by future vocational school (industry perspective)

No	Competence	Number of Appearances	Percentage
1	Knowledge and skills according to the field of expertise/technical skills	11	68,75
2	Honesty	8	50,00
3	Discipline	8	50,00
4	Work ethic	8	50,00
5	Responsible	7	43,75
6	Health	5	31,25
7	Teamwork	5	31,25
8	Creativity	4	25,00
9	Communication Skills	3	18,75
10	Experience	2	12,50

Based on the data in Table 2, it can be observed that knowledge and skills according to the field of expertise/technical skills are the highest score with a 100% emergency percentage followed by other competencies. Besides these ten aspects, it was also found that other very important aspects possessed by vocational school were: foreign languages skills, intelligent, problem solving, resistance to pressure, adaptive, learning ability, and flexibility.

The results of focus group discussions with the industry reinforce the main competencies expected by the world of work. The urgency of these competencies will depend on the characteristics of the field of work. For jobs in aviation, foreign language skills, critical thinking skills, and resistance to stress are basic competencies that cannot be ignored. An aircraft technician is required to be able to translate manuals or engine and aircraft instructions, most of which are in foreign languages. The ability to think critically is needed to diagnose damage and determine corrective steps, while resistance to pressure is needed given the complexity and complexity of the work. In the area of electrical installation work, work safety and accuracy are the main aspects, considering that the work has a high risk and is associated with expensive materials. For the creative industry work, attitude, ability to work under pressure, and work in a team are important because the creative industry is attached to services that involve the trust of consumers, the accuracy of service according to the agreement, and the completion of tasks together.

Experts Perspective

Focus group discussion with Vocational education experts formulated that the main competencies needed by the world of work would depend on the characteristics of the world of work itself. In this case the world of work can be categorized into two namely the world of work oriented to products and the world of work oriented to services. Both have different characteristics that require different competencies. Therefore the formulation of competencies needed by the world of work needs to consider aspects of the characteristics of the world of work concerned.

Based on interviews with vocational education experts obtained the formulation of basic competencies that should be owned by vocational school graduates in harmony with the development of local, national, regional, and global contexts. MA (Director of Vocational Development) states that the competency of vocational school needs to be formulated by considering various aspects including regional development, technological development, social development, economy, and culture. The current generation can be categorized as Z generation with the characteristics of students happy with themselves, students learn from many sources, and multi-tasking ability. The demands of the 21st century bring the consequences of skills that graduates should have, such as: critical thinking and problem solving, creativity and innovation, collaboration, communication, and local advantage. MA (vocational education expert) based on research he has done in large industries in the fields of production and services suggests that of 100% prerequisites, a minimum of 60% is related to character, 25% ability to think logically and learn, and 15% is related to skills. Thus the aspects of character and soft skills become very important aspects that are given to graduates. The development of science, technology, economics, and globalization which is so fast also affects the changing characteristics of the workforce needed. By looking at current conditions and future predictions, MS (vocational education practitioners) agree that the competencies possessed by vocational school are no longer sufficient, therefore it is necessary to formulate new competencies of vocational school in line with future labor demands.

The Urgency of Vocational School Competencies Needed to Enter the World of Work

Teacher's Perspective

There are 37 aspects of abilities that have been identified that are related to the abilities that vocational school need to have. Based on the perspective of teachers, it can be described that these 37 aspects all have a high urgency or need to be owned by vocational school with a score between 3.23 to 4.00. The top ten urgency skills needed by vocational school are shown in Table 3.

Table 3
Top ten competencies that vocational school need to have the highest (perspective)

No	Competence	Score	Percentage
1	Honesty	4	100,00
2	Discipline	4	100,00
3	Responsible	4	100,00
4	Collaboration	3,77	94,23
5	Problem Solving	3,62	90,38
6	Technical skills	3,77	94,23
7	Communication Skills	3,77	94,23
8	Information Literacy	3,69	92,31
9	Work ethic	3,77	94,23
10	Work safety	3,85	96,15

Based on the data in Table 3 it can be observed that honesty, discipline, and responsibility are aspects that absolutely must be possessed by vocational school. All respondents agreed that these three aspects were the main abilities that all vocational school graduates must possess. Other abilities that are also very important are confidence, and cooperation. Technical skills is a very important aspect also possessed in addition to the ability to cooperate, communicate, be creative, information Technology skills, health and fitness, be productive, and think logically.

The results of the focus group discussion with vocational teachers show that competencies that are very important and "guarantee" the success of vocational school careers in work according to teachers are generally competencies in the attitude aspect. Some teachers are of the opinion that the most important aspect is attitude, while intelligence number two, because character education is intended to equip students with good attitude and morals. However, there are also those who interpret that success is influenced by 8% of soft skills and 20% is determined by these hard skills with the note that hard skills are filled first and then covered with soft skills. The ability in each field still holds the most important role, while soft skills follow the steps and the implementation of hard skills. Thus the presence of soft skills will strengthen the hard skills that have been possessed by graduates. The existence of hard skills and soft skills are complementary, not negating one another or one is more important than the other.

Based on the discussion it can be formulated that hard skills remain the basis for graduate success, while soft skills play an important role in the career development of graduates in work. Therefore both are needed in an integrated manner. Soft skills will be very important for graduates to develop themselves in work and achieve a better career.

Industry Perspective

Based on data obtained from industry obtained the order of the top 10 important skills possessed by vocational school. Important abilities that need to be had by vocational school according to industry circles according to their urgency are shown in Table 4.

Table 4
Top ten competencies that vocational school need to have the highest (industry perspective)

No	Competence	Score	Percentage
1	Honesty	3,94	98,44
2	Discipline	3,94	98,44
3	Responsible	3,88	96,88
4	Collaboration	3,69	92,19
5	Problem Solving	3,31	82,81
6	Technical skills	3,50	87,50
7	Communication Skills	3,31	82,81
8	Information Literacy	3,19	79,69
9	Work ethic	3,56	89,06
10	Work safety	3,56	89,06

Based on the data in Table 4 it can be seen that honesty, discipline, responsibility, and collaboration are very important or most urgent aspects possessed by vocational school. The next competence that is also very important is health, including fitness and productive. Technical skills is also the main ability that must be possessed along with initiative, adaptive, and logical thinking.

Based on tables 3 and 4, namely data from teachers and industry perspectives, the following statistical deviations are obtained.

Table 5
Top ten competencies that vocational schools must have (deviation from teacher and industry perspective)

No	Competence	Average	Deviation	
		Score	teachers	Industry
1	Honesty	3,97	0.03	-0.03
2	Discipline	3,97	0.03	-0.03
3	Responsible	3,94	0.06	-0.06
4	Collaboration	3,73	0.04	-0.04
5	Problem Solving	3,465	0.155	-0.155
6	Technical skills	3,635	0.135	-0.135
7	Communication Skills	3,54	0.23	-0.23
8	Information Literacy	3,44	0.25	-0.25
9	Work ethic	3,665	0.105	-0.105
10	Work safety	3,705	0.145	-0.145

Based on the data in the table above, it can be explained that the highest score based on the average is in the aspects of honesty, discipline, responsibility, and cooperation which are very important or most urgent for VHS. However, when viewed from the deviation, the aspects of information literacy, communication skills and problem solving abilities are aspects that are very much needed in schools and industries. So that from these findings it is necessary to describe the appropriate learning formula to shape all aspects of the competency of vocational students in the future.

Experts Perspective

Focus group discussion with vocational education expert related to the urgency of competency which is very important possessed by vocational school basically agreed that the urgency of each ability or competence will depend on characteristics of the world of work. 21st century learning is learning soft skills and entrepreneurship besides technical abilities. Besides that, information technology skills is one of the key aspects. Therefore curriculum and learning need to be designed to develop soft skills optimally through various innovations and cooperation with industry.

The results of discussions with vocational education experts indicate that the competencies that are highly needed by vocational graduates in the future will greatly depend on the conditions of employment in the 21st century. Vocational school graduates must have strong basic skills, so learning is needed that can strengthen these basic skills. In terms of character, vocational school are required to be able to teach honesty with honesty. Thus the aspect of character is a very important attribute possessed by vocational school graduates. In the 21st century, very important abilities possessed by graduates include: leadership, digital literacy, communication, emotional intelligence, entrepreneurship, global citizenship, problem solving, and team working.

From the data on basic competencies that must be possessed by vocational school above it can be formulated that basically mastery of the field of expertise/technical skills is a basic competency that must be possessed by vocational graduates. All respondents agreed that technical skills is an absolute must to have as a basis for graduates to enter the world of work. Countries have accepted that high-level technical skills are important in the digital world and have developed higher-level vocational education qualifications, including postgraduate degrees, to deliver these (Jones, 2018). However, indeed this ability cannot stand alone and must be supported by other abilities. TVET systems provide young people with generic, transferable skills to support occupational mobility and lifelong learning, and with occupational-specific skills that meet employers' immediate needs (OECD, 2011). Twenty-first century capabilities, in particular, represent the knowledge, skills, attitudes and dispositions individuals must acquire to adapt to complex and unknown circumstances (Barnett & Coate., 2005).

European Union countries for example have identified the capabilities they consider necessary to remain globally competitive and to best prepare individuals for lifelong employment. These comprise high-level technical skills, core skills and a range of capabilities referred to in the EU as transverse capabilities - "the ability to think critically, take initiatives, solve problems and work collaboratively will prepare individuals for today's varied and unpredictable career paths ... particularly entrepreneurial skills " (Boutin, Chinen, Moratis, and Baleen., 2009). This is also in line with the formula proposed by Biesma et.al (Biesma, Pavlova, Merode, and groot., 2007) that competencies can be categorized in two traditions, vocational or field-specific competencies, and generic competencies. Generic competencies as the combination of learning, analytical and problem-solving abilities, applicable in various domains. Many jobs today, and many more in the near future, will require specific skills — a

combination of technological know-how, problem-solving, and critical thinking as well as soft skills such as perseverance, collaboration, and empathy (Kim, 2019).

This study also found that innovation, critical thinking skills and problem solving, communication, and collaboration are dominant aspects that are felt to be important to be mastered by vocational school graduates. This finding is in line with Wagner's opinion (Wagner, 2008) that to enter the new world of work in the 21st century requires seven survival skills, namely: critical thinking and problem solving, collaboration across networks and leading by influence, agility and adaptability, initiative and entrepreneurialism, effective oral and written communication, accessing and analyzing information, and curiosity and imagination. Paryono (Paryono, 2016) in his study found that in this 21st century technology was fast changing and expectation from industry is high, TVET graduates must be prepared with the appropriate knowledge, skills, and attitude to enter the labor market. Regarding collaboration capability, business will need to realize that collaboration on talent issues, rather than competition, is no longer a nice-to-have but rather than a necessary energy (World Economic Forum, 2016).

A study by Carnevale (Carnevale and Smith, 2013) in America found that in the structure of the economy has shifted from an industrial economy to a postindustrial service economy, new skill requirements have emerged. In general, the demand for specific academic and vocational skills has been augmented with a growing need for general skills - including learning, reasoning, communicating, general problem-solving skills and behavioral skills. Communication skills such as reading comprehension, critical thinking, speaking and active listening are skills that are highly valued in occupations. Critical thinking is a skill that is often touted by employers as a necessary requirement for success in many occupations. Moreover, 96% of all occupations consider critical thinking to be either very important or extremely important to that job. Research conducted in Vietnam (Thang and Wongsurawat., 2016; Yao, Tuliao., 2019) found that English language skills, adaptability and soft skills were crucial to the self-perceived employability. The five soft skills in their study (i.e.com communication, teamwork, professionalism, problem solving and lifelong learning) all strongly and positively impacted self-perceived employability.

This study also found that soft skills are one of the main keys of competence. Core skills, key skills, transferable skills, general skills, non-technical skills, soft skills, essential skills, common skills, necessary skills, life skills, and employability skills are terms that are often exchanged to describe the ability of self-development in the workplace (NCVER., 2003; Jackson., 2012; Lauder., 2013; Hasan, Yasin and Yunus., 2016; Messum, Wilker, and Jackson., 2015). This is in line with various findings about the urgency of soft skills in determining one's success in the workforce (Husain, Mokhtar, Ahmad, and Mustapha., 2010; Ken, and Ying., 2012) Overall, social skills such as persuasion, emotional intelligence and teaching others will be in higher demand across industries than narrow technical skills (World Economic Forum, 2016). The findings of this study indicate the relationship that soft skills are complementary and complementary to hard skills.

Overtoom [Overtoom, 2011] states that basically employability skills are needed for success at all levels of education. A study conducted in various Asia Pacific countries (Unesco, 2014) basically strengthens the formulation of the competency dimensions of vocational education graduates covering 3 aspects (Unesco, 2012) namely: (1) foundation skills, (2) transferable skills and (3) technical and vocational skills, all of which are required for youth to access gainful employment. Recent research on graduate employment addresses generic competencies as skills, abilities and attributes that complement the field of specialization of employees for work performance (Mitchell, 2003).

From the focus group discussion it was also found that the skills required would depend on the type of work. This is in line with studies (Overtoom, 2000; Sayuti, 20015) which suggests various dimensions of employability skills as non-technical skills that can be transferred to enter the workforce, survive, develop a career in the workplace, or develop a career and survive in a new workplace. These skills can be classified into basic skills, thinking skills and personal qualities or fundamental skills, personal skills, and teamwork / collaboration skills. Studies conducted in six ASEAN countries (Kim, 2019) also show that the soft skills required also depend on the level of work.

The new knowledge economy that has emerged has replaced the remote skills of the assembly lines of yesteryear with flexible technologies and 'high-performance work systems' that rely on more skilled and autonomous workers. In an era of flexible production and service delivery systems and more rapid economic change, workers not only need better technical preparation, they also need sufficiently robust skills to adapt to changing requirements on the job (Carnevale and Smith, 2013). Research conducted in Vietnam (Tran, 2015) shows that in new market-based and global economy requires workers to not only possess technical skills, but also general skills such as being able to communicate well, understand English, work with a team, think creatively, take initiative and work independently under pressure. Studies conducted by Griffin and Coelhoso (Yao and Tuliiao, 2019; Griffin and Coelhoso., 2019) formulate the five soft skills (i.e.com communication, teamwork, professionalism, problem solving and lifelong learning) all strongly and positively impacted self-perceived employability. The role of employability skills is getting stronger along with the results of various studies (Lauder, 2013) which found that the root of the problem of unemployment is the low soft skills or employability skills of graduates.

CONCLUSION

The results of the study show that future vocational competencies consist of special competencies in the form of high-level technical skills supported by general competencies such as technology and information skills, honesty, mastery of foreign languages, discipline, critical thinking, creative and innovative, responsibility, attitude, teamwork, and communication skills. In addition, soft skills or work skills are the main aspects that graduates must have in complements that are integrated with hard skills.

The recommendations can be made about the importance of integrating high-level technical skills (specific vocational skills) and soft skills (employability skills) in

curriculum development, learning and assessment of vocational education. Skillful curriculum design will be necessary to ensure that individuals are able to achieve the mix of core skills, technical skills and capabilities needed at each critical life and employment stage.

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