Artikel 4

by Wagiran Wagiran

Submission date: 06-Nov-2019 08:25AM (UTC+0700)
Submission ID: 1207930844
File name: 4.pdf (1.11M)
Word count: 5953
Character count: 34141

Cakrawala Pendidikan, Vol. 38, No. 2, June 2019 doi: 10.21831/cp.v38i2.25393

COMPETENCIES OF FUTURE VOCATIONAL TEACHERS: PERSPECTIVE OF IN-SERVICE TEACHERS AND EDUCATIONAL EXPERTS

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Abstract: Workforce in the 21st century has been marked by the acceleration of disruptive moves as the Industrial Revolution 4.0 and Society 5.0. This era requires human resources with new competencies that may be far different from current competencies. To present vocational education that is able to facilitate future human resource to learn compentencies that meet the need of future changes, vocational teachers should master new competencies comprehensively. This study aims to formulate the core vocational teacher competencies, hard skills and soft skills, which are in line with the various demands of the future. This qualitative research involved active vocational teachers and vocational education experts in several Focus Group Discussions and questionnaire completion. Research questions are focused on reflection of current teacher competencies and perceptions of teacher competencies in the future. The results lead to a conclusion that for future teachers, the core competencies are the pedagogic, content, and ICT competencies. These competences are relevant to hard skills aspects categorised as curriculum and content. In the aspect of soft skills, category living in the world is dominant. The three aspects considered very important for future vocational teachers are able to be exemplary, honest, and discipline. As a consequence, this research suggests to teacher educational institutes that produce vocational teachers to develop the teacher education curricula that integrates these key competencies in their vocational education teacher standards.

Keywords: 21st Century, compentency, vocational, teacher, hard skills, soft skills

KOMPETENSI GURU KEJURUAN MASA DEPAN: PERSPEKTIF GURU DAN AHLI PENDIDIKAN

Abstrak: Kondisi ketenagakerjaan memasuki Abad XXI diwarnai dengan akselerasi perubahan yang amat disruptif seiring bergulirnya Revolusi Industri 4.0 dan Society 5.0. Era tersebut membutuhkan sumberdaya manusia dengan kompetensi baru yang jauh berbeda dari kompetensi sebelumnya. Untuk menghadirkan pembelajaran di sekolah kejuruan yang mampu mengembangkan kompetensi tenaga kerja yang sesuai dengan tuntutan, guru kejuruan dituntut menguasai kompetensi baru secara komprehensif. Penelitian ini bertujuan untuk mendapatkan rumusan kompetensi utama guru kejuruan,*hardskills* dan *softskills*,yang selaras dengan berbagai tuntutan perubahan tersebut. Penelitian kualitatif ini melibatkan guru-guru SMK dan ahli pendidikan kejuruan secara aktif dalam beberapa *Focus Group Discussion* dan pengisian *questionnaire*. Pertanyaan penelitian difokuskan pada refleksi kompetensi guru pada saat ini dan persepsi kompetensi guru di masa depan. Hasil penelitian menunjukkan bahwa guru masa depan perlu memiliki kompetensi utama berupakompetensi *pedagogic*, menguasai isi pembelajaran dan TIK. Kompetensi inti ini relevan dengan *hard skills* yang dikategorikan dalam kurikulum dan isi. Dalam aspek *soft skills,* kategori living in the world adalah yang paling dominan penting. Tiga yang dipandang terpenting adalah keteladanan, kejujuran, dan kedisiplinan. Oleh karena itu, Lembaga Pendidikan dan Tenaga Kependidikan yang menghasilkan guru kejuruan disarankan mengembangkan kurikulum pendidikan guru kejuruan yang mengintegrasikan kompetensi-kompetensi utama tersebut dalam standar pendidikan guru kejuruan.

Kata Kunci: Abad XXI, kompetensi, vokasi, guru, hard skills, soft skills

INTRODUCTION

It is widely agreed that skillful human resources are always desirable even more in the current era what is so called the Industrial Revolution 4.0 and Society 5.0. The fast changes in technology as the impact of globalisation

have profound impact to education system. Specifically, vocational education is built to provide graduates beneficial for industries since they offer skills ready to be used by the employers (Billett, 2011; NCES, 2016; Sudira, 2016). Many surveys and research have been done to understand what skills are currently trending and expected by employers (Brockmann, Clarke, Méhaut, & Winch, 2008; Brockmann, Clarke, & Winch, 2008; Ellis, Kisling, & Hackworth, 2014). These research are very significant particularly to develop curriculum and instructional methods for vocational education.

The importance of research on the environment of the school is not doubted. As stated by Finch and Crunkilton (1999, p. 95), "The community surrounding a school has a major influence on the type of curriculum offerings, since local labor and supply demand, ... will aid curriculum planners in determining if established quality program standards can be met." Environment scanning includes not only the school resources and boundaries, but also the projected sources of employment. Knowledge about the trends in population is important to the teachers when developing vocational curriculum and instructions.

Vocational education is also known as technical education, technical and vocational education, or vocational education and training (Sudira, 2016). This paper uses the term of vocational education thoroughly. The vocational education refers to formal education system, such as high school that offers education of skills in meeting the needs of labour markets. There are at least nine vocational areas in which each represent a specific field-work: engineering, energy and mining, information and communication technology, health and social occupation, agribusiness and agro-technology, maritime, business and management, tourism, and arts and creative industry. For instances, vocational programs in the engineering field are construction, machinary, electricity, otomotive, and many more; while in the specific vocational programs of tourism includes hospitality, cullinary, catering, and fashion. The specification of the program means that there are particular job skills to be learned by the students (Tanggaard, 2007) since the aim of vocational education is to prepare students for successful employment in a labor market. Accordingly, the graduates are well trained during the education period and ready to use the skills at work.

Central to education system is the teacher (Johnston et al., 2016; Köpsén, 2014; Kukla-Acevedo, 2009; NCES, 2016). When the outcome of vocational schools are graduates to be occupied successfully in the field of their interest, this becomes the key role for the teachers that they should be able to design instructional system supporting the achievement of the outcomes. It is understood that the teacher is not the only component of the vocational education system, however their role is important as the active agent of the system. Their role brings direct impact to the process and also results of the education (Metzlera & Woessmann, 2012; Zhang, 2009). As a consequence, vocational teachers must have what it takes to teach and facilitate vocational students.

Grollmann (2008) asserted that the global reality of becoming vocational teachers is complex. The wide range of spectrum in vocational education becomes one of the determinants. Having professional skills is needed by a vocational teacher, in addition to their pedagogic competence (Flynn, Lissy, Alicea, Tazartes, & McKay, 2016). Vocational teachers are also expected to provide work experience and specific occupational knowledge to their students in order to facilitate school-to-work transition (Flynn et al., 2016; Grollmann, 2008). On the other hand, there is a shift of demand of labour market due to the current disruption era. Vocational school graduates may be required to have some new skills that are different to the older era. This brings consequence to vocational teachers to adjust with the complexity and changes.

According to Golombek and Johnson (2017), vocational teachers are different to academic teachers at public high schools. In some countries, the term of "productive subject matter" is used for job specific lesson, such as pottery, painting, brick laying, or welding; whereas generic lesson like language, mathematics, basic science, is named "normative subject matter". Both terms show a clear distinction that productive teachers may have more responsibility on preparing job-skills, while the normative teachers deliver more academic content as it is basing the productive knowledge. Nevertheless, it may be argued that normative

teachers at vocational education should be able to contextualise the basic knowledge within the specific vocational program (Gonçalves, Dias, & Peralta, 2018; Kamin, 2016; Köpsén, 2014). For an example, general mathematics for farming is obviously different to the mathematics for engineering students. This indicates that there are core competences distinguising vocational teachers to the public teachers needed to be identified in order to understand the characteristic of vocational teachers.

The word of competence was introduced by the US educators when the competence-based-curriculum was proposed in the mid of 1990 (Harris, Guthrie, Hobart, & Lundberg, 1995). They define competence as characteristics on accomplishing a specific task. Cheng, Yeh, Liu, and Mok (2011) described it as an ability, a capability or the possesion of definite knowledge and skills, however, many has included attitude as part of competence. On the other hand, Kim et al. (2007) suggest that a competence should reflect four essential components, these are wholeness, mobilization, context-dependency, and learnability. First, it involves cognitive, affective, and behavioural aspects as a whole. Second, it makes possible the interconnection between the three aspects. Third, it demonstrates a specific context. Last, it can be learned. Moreover, core competence commonly refers to a very important or critical or urgent competence.

Pedagogical content knowledge has been argued to be a must competence for all teachers (Shulman, 1986), before Mishra and Koehler (2006) comprehensively explain that expected teachers should also posses technological knowledge. The integration of technology in the classroom is ultimate due to the rapid development and application of technology worldwide, including in industries. Accordingly, it is well understood that a competent vocational teacher needs pedagogical content and technological knowledge.

The distinction between competence and hard skill might be vague. It can be said that having hard skills makes somebody more competent. Although competence itself constitute knowledge and skills, hard skills are often related to specific ability or skill that can be learned (Miles & Wilson, 2004). This includes numeracy, literacy, and technical abilities.Thus, it can be said that competent teachers have pedagogic knowledge, content knowledge, or technological knowledge, while they have hard skills on organizing lesson, identifying student's characteristics, and managing classroom and assessment.

Pedagogy may be described as the knowledge of teaching consisting of knowledge when and how to use an instructional strategy to deliver a content learning with the available resources, technology, curricular, and in accord with the characteristic of the lesson as well as the students (Westbrook et al., 2013). Subsequently, it may be argued that aspects of relevant hard skills may be categorised into four: curriculum, content, student, and technology.

While hard skills can be related to operational, academic, or technical ability, soft skills are the opposite. However, it is not easy to describe what they are as soft skills (Cukier, Hodson, & Omar, 2015) due to the many possible attributes can be included, as well as the inconsistency definition in the literature.

Soft skills are sometimes associated with attitude, character, values, or life skills. Ellis et al. (2014) depicts soft skills as skills needed to be employed. They mention that there are twenty-three soft skills classified into six categories containing resource competencies, information competencies, interpersonal competencies, basic skills, thinking skilss, and personal qualities. Miles & Wilson(2004) argue that soft skills include communication skills, community skills, problem solving skills, information management skills, interpersonal skills, personal skills and technology skills. This indicate that soft skills support the acquisition of hard skills.

Binklley et al. (2012) introduce the KSAVE model that stands for Knowledge, Skills, Attitudes, Values and Ethics. Apparently, this model has been widely used to represent skills framework. The KSAVE model conssitutes of four categories: (1) ways of thinking, (2) tools for working, (3) methods od working, and (4) living in the world. Using this KSAVE model, soft skills may be elaborated in each category. Ways of thinking may include ability to learn, criticise, problem solve, take decision, creativity and innovation. While information and ICT literacy are categorised into tools for working, communication and collaboration are methods for working. Living in the world consists of personal aspects as part of community, such as

social responsibility, citizenship, life and career. Since the KSAVE model seems to be neat and has been used widely, this model is used as the conceptual framework of soft skills in the presented study.

List of competency standard may have been developed by many educators(Grosch, 2017), however, there is a lack of study that is able to provide holistic picture of competencies of vocational teachers integrated with the most relevant hard skills as well as soft skills.

This study aims to formulate the most required vocational teacher competencies, including hard skills and soft skills aspects, which are in line with the various demands of the future. Research questions were focused on reflection of current teacher competencies and perceptions of teacher competencies in the future, by limiting the investigation on teacher competence, hard skills, and soft skills using the theoretical framework reviewed above. The results of this study illuminates our knowledge about the perception of in-service vocational teachers and experts, and also provide empirical background for the reform of future vocational teacher education.

METHOD

A qualitative approach was applied to obtain empirical data in order to answer the research questions. The approach is believed to assist the researcher in finding a comprehensive model of core vocational teacher competencies interacted with hard skills as well as soft skills. A number of eighteen vocational teachers from nine different expertise fields, who has been teaching more than ten years at vocational schools in Central of Java, Indonesia; six university lecturers majoring in vocational education; and four national stakeholders of vocational education are invited and involved actively in several Focus Group Discussions (FGD).

At the beginning of each FGD, the participants were asked to complete three questions. The first question is "List in order ten core competencies for an ideal future vocational teachers from the most needed to the least". This is an open question where the participants freely mentioned what they perceive as important competencies of vocational teachers. The second and the third question were given in 4-Likert's scale ranging from very urgent, urgent, less urgent, and not urgent. In the second and the third questions, thirty-three aspects of hard skills (Table 1) and seventy aspects of soft skills (Table 2) were to rate respectively. The data were then sorted from the most urgent to the least, before the percentage of the ten most urgent competencies, hard skills and soft skills were calculated and listed in descending order.

Table 1. List of hard skills

Category/Aspects			
	Content		**Curriculum**
1	Selecting/developing learning resources	1	Managing classroom
2	Designing learning material more interesting	2	Managing practicum
3	Organising content of subject matter	3	Arranging theoretical lesson
4	Mastering practicum content	4	Applying instructional method
5	Mastering theory	5	Conducting contextual learning
6	Understanding content of lesson	6	Able to do research
	Student	7	Understanding curriculum organisation
1.	Understanding student characteristics	8	Conducting lesson
2.	Motivating students	9	Conducting assessment
3.	Planning educating lesson	10	Involving in learning innovation
	Technology	11	Understanding standard of learning competencies
1	Having computer literacy	12.	Having information literacy
2	Using ICT for teaching	13.	Leading discussion
3	Using educational technology	14.	Having educational insight
4	Using media and educational tools	15.	Planning assessment
5	Using technological equipment	16.	Writing lesson plan
6	Having knowledge of recent technology	17	Accomplishing learning Administration
7	Creating media		

 doi: 10.21831/cp.v38i2.25393

Table 2. List of aspects of soft skills

	Category/Aspects		
	Living in the world		**Methods of working**
1	Able to manage conflict	1	Able to give advice
2	Applying ethics	2	Able to share creative ideas
3	Calm and confident	3	Able to speak foreign language
4	Compliance with rule	4	Collaborative with school elements
5	Discipline	5	Communication skills
6	Emphaty	6	Competitive and sportmanlike
7	Encouraged to achieve	7	Cooperative
8	Exemplary	8	Implementing plans
9	Flexible and adaptive	9	Listening skill
10	Friendly and sociable	10	Negosiation
11	Health and stamina	11	Organisation skill
12	Honest and trustable	12	Organising programs
13	Involving in school empowerment	13	Presentation skill
14	Knowing school condition	14	Report and evaluate activities
15	Knowing school environment	15	Report writing
16	Mature	16	Supple and polite in communication
17	Neat performance	17	Working durability
18	Orderline		**Ways of thinking**
19	Polite	1	Creative
20	Positive work attitude	2	Creative problem solving
21	Prestige	3	Critical thinking
22	Religious	4	Decision making
23	Respectful	5	Having global views
24	Responsible	6	Initiative
25	Self-concept	7	Innovative
26	Self-control	8	Interactive
27	Spirit at work	9	Leadership
28	Tolerance	10	Open minded
29	Work ethic	11	Outcome oriented
	Tools for working	12	Productive
1	Able to analyse information	13	Risk taking
2	Able to create timetable	14	Self-regulated
3	Able to plan programs	15	Systemic thinking
4	Able to use IT	16	Time management
		17	Willingness to learn
		18	Working effectively
		19	Working under preassure
		20	Written communication skill

The integration of these three components were used to construct the model of future vocational teachers in this study.

The thirty-three aspects of hard skills are developed from the four categories of knowledge needed by vocational teachers discussed above, while the seventy aspects of soft skills are listed based on the description of the four categories in the KSAVE model. These are used as the theoretical framework to focus and shape the model aimed in the study.

The FGDs were led by the first author of this paper and was conducted in small groups of the same category of participants. The discussion occured after the participant completed the questions described above. The main purpose of the discussion was to obtain some understanding of the perception what they are required by future vocational teachers, why the core competencies, hard skills, and soft skills are urgent, and how they perceive these as important. The small group discussion let the participants to share their thought verbally, and elaborate when

asked by the researchers. They might compare, contrast, add more details, clarify or confirm their statements as the discussion went through. The data was transcribed, categorised into themes and then sub-themes, and was subsequently used to conclude and explain the constructed model generated by the rating results.

FINDINGS AND DISCUSSION

Findings

The main finding of this study is the conception of vocational teachers or experts involved in this study. As mentioned previously, the data was gathered by interacting directly with the participants to understand their thought regarding the current situational aspects of vocational teachers, hence driving the formulation of the core competencies, hard skills, and soft skills expected to have by future vocational teachers.

It can be seen from Table 3, the ten key competencies in descending order from the highest percentage, which means the frequently mentioned by the participants, to the lowest percentage. The top three competencies may be mapped into hard skills as they represent hard skills of vocational teachers. Followed by soft skills for the fourth to sixth competencies. These results show that core competencies for teaching are mostly hard skills, without eliminating the relevancy of soft skills.

Findings on hard skills and soft skills perceived to be urgent by vocational teachers/ experts can be seen in Table 4 and Table 5 respectively. It is notable that two categories of hard skills appear in the top mostly perceived to be critical for future vocational teachers. Curriculum that is part of the pedagogic knowledge remains the most important, both for delivering practicum and theoretical subject matters. Curriculum includes how learning and instruction is managed, and the other related activities. Practicum is usually a hands-on activiy or workshop where students can learn to apply knowledge, to perform a scpecific task, or to solve a case. Content category represents content knowledge, which is specific in a domain, needed for future vocational teachers to be professional. The results show that both practicum and theory content are important to master.

It is interesting to highlight that the category of living in the worlds, with the top three aspects are mentioned by all participants, these are honest and trustable, discipline, and exemplary. It seems likely the perception of future teacher's soft skill is more to show good attitude to students, and to build liveble community at school. The only one aspect appears as the category ways of thinking is innovative and creative. Perhaps, this aspect is a result of continuous learning, which might be more likely simultaneously gained after having expertise or a high level of hard skills.

Discussion

This research was firstly aimed to identify the core competencies for future vocational teachers, along with the most urgent hard skill and soft skill aspects. Using the perspective of in-service vocational teachers and experts, this study also proposes a model of competency of future vocational teachers. The accumulation of perceived core competencies, most urgent aspects of hard and soft skills has been depicted. Based on the rational and thought constructed during the FGDs, the model is discussed in the following.

First of all, as the number of vocational schools, in fact, has been increasing recently, not only in Indonesia (Harto, 2016) but also in many other countries (Messman, Stoffers, Van der

Table 3. The ten core competencies perceived by vocational teachers/experts

No	Competencies	% of occurance	Relevant to
1.	Pedagogic competence	84,62	Hard skills
2.	Content competence	76,92	Hard skills
3.	ICT competence	53,85	Hard skills
4.	Creative	38,46	Soft skills
5.	Innovative	38,46	Soft skills
6.	Verbal and written communication	30,77	Soft skills
7.	Understanding student's characteristics	23,08	Hard skills
8.	Religious and pious	23,08	Soft skills
9.	Personal competence	15,38	Soft skills
10.	Foreign language mastery	15,38	Soft skills

Tabel 4. The ten most important hard skills perceived by vocational teachers/experts

No.	Aspects	% of occurance	Category
1.	Managing practicum	100,00	Curriculum
2.	Arranging theoretical lesson	98,08	Curriculum
3.	Mastering practicum content	98,08	Content
4.	Mastering theory	96,15	Content
5.	Understanding content of lesson	96,15	Content
6.	Involving in learning innovation	94,23	Curriculum
7.	Understanding standard of learning competencies	94,23	Curriculum
9.	Understanding student's characteristics	94,23	Student
9.	Using media and educational tools	94,23	Technology
10.	Using ICT for teaching	94,23	Technology

Table 5. The ten most important softskills perceived by vocational teachers/experts

No.	Aspects	% of occurance	Category
1.	Honest and trustable	100,00	Living in the world
2.	Discipline	100,00	Living in the world
3.	Exemplary	100,00	Living in the world
4.	Calm and confident	98,08	Living in the world
5.	Responsible	98,08	Living in the world
6.	Work ethic	98,08	Living in the world
7.	Spirit at work	98,08	Living in the world
8.	Polite	96,15	Living in the world
9.	Religious	96,15	Living in the world
10.	Innovative and creative	96,15	Ways of thinking

Heijden, & Mulder, 2017; NCES, 2016)indicated that the need of qualified workforce increases. Additionally,it shows that the government pays more attention to the need of skill-ful human resources to meet the demand of labour market. Nevertheless, this brings consequence that more professional vocational teachers are expected. The current study adds our knowledge of some competencies perceived by existing teachers and vocational experts towards the knowledge or skills should be acquired by teachers for the 21st century vocational education.

The core competencies were found to be relevant to aspects of hard and soft skills, however, it is indicated that hard skills are more needed than the soft skills when it comes into competent vocational teachers. This result is align with previous research indicating that to be a competent teachers, managing instruction and the content is part of the desirable skills for teachers (Mishra & Koehler, 2006).

As disscused in the previous section, Mishra and Koehler (2006) suggested that it is important for teachers to have technological knowledge, and therefore to be able to integrate them as technological pedagogical content knowledge. The current study confirms that the first three core compentencies are related to pedagogical and technological knowledge, concurrently they are supported by the hard skill aspects of curriculum and content. This is supported by statements given by vocational education experts during the FGDs, by Expert-MBT for the pedagogic competence, by Expert-MCS & UPI for the content competence, and by Expert-SKN for the technology competence, as follows.

"Learning in vocational and public schools is different, the important aspect is supervision, so teachers must have strong pedagogic competence. It is also that learning in vocational schools is ended by competency test." [Expert-MBT]

"The fast development indeed requires new competency, and so for vocational teachers. New competency must be formulated, while basic ability is strengthen... The main thing is that teacher must have strong mastery in a subject matter." [Expert-MCS]

"A successful education can be seen from two aspects, these are teacher and student. The preparation of vocational teachers must

be relevant with the spectrum therefore [the teacher] really master the competence of their field." [Expert-UPI]

"Competencies of future graduates may be replaced by computers, therefore new paradigm is needed. Accordingly, teachers need to master how to use new technology." [Expert-SKN]

Nevertheless, aspects of soft skills should not be overlooked as the finding also shows that the relevancy is in balanced with the aspects of hard skills. The FGDs give insights that soft skills are often understood as character or attitude of teachers. The KSAVE model used as the framework of soft skills in this paper assists the researchers to distinguish the aspects of soft skills (Binkllley et al., 2012). The category of living in the world that turns to be the dominant aspects found in this research indicated that desirable future vocational should be those who are able to be good citizen, determined life and career, and have responsibility as a personal and part of the community. Giving the results that the top three mentioned soft skills are honest and trustable, discipline, and exemplary, it may be argued that the internal vocational school system should represent a well-being community. This finding is in line with previous study (Ellis et al., 2014), and is emphasised by the following statements from the teachers during the FGDs. The Teacher SMK-PIUS and SMKN-6 stated about the competencies for students, becoming exemplary and discipline. Arguably, the similar competencies are expected for the teacher. Besides that, the Teacher SMKN-2 stated about social responsibility that is to adapt with the external school environment.

"I agree that industry does not need smart person, but person with good attitude. For teachers, they need good education related to soft skills, including pre-service teachers, they must be able to be good example to students." [Teacher SMK-PIUS]

"Teachers must be able to give students space to be creative since this is able to develop life skills to students. At the moment, we often see students have lack of competencies in discipline, fight, curiosity, and durability ... or what else ..." [Teacher SMKN-6]

"Teachers are often confused by policy that keeps changing, then teachers need to have ability to understand government rules." [Teacher SMKN-2]

The current study is challenged to construct the model of competency of future vocational teachers as proposed in Figure 1. This picture let us understood that what core competencies are built along with the certain hard and soft skills. Plackle et al. (2018) argue that students should be taught by teachers who have developed the application of knowledge and attitude. As well Johnston et al. (2016) assert that vocational teachers should be competent in using resources at vocational schools to facilitate the development of productive skills. It was said by the Expert-MGA and teacher SMK-PIKA in the FGDs, the integration between core competencies, aspects of hard and soft skills is not impossible, quoted below.

"The challenge of vocational education is mostly for productive teachers. Currently, there

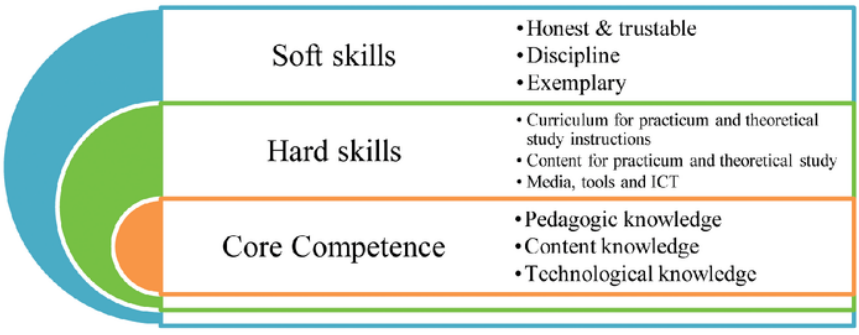

Figure 1. Model of competence of future vocational teachers

are only 22% vocational teachers in the specific competence, the rest are normative and adaptive teachers. Additionaly, tools and equipment at vocational schools are two generation older, and little involves industry. Teachers are supposed to be able to conduct creative instructions that is instructional method that strengthen student's ability in critical thinking, creativity, communication, and collaboration." [Expert-MGA]

"Future teachers, as described by Ignatian values, must have competence, conscience, and compassion. These values will bring reflective pedagogy, therefore enable to form graduates with good character." [Teacher SMK-PIKA]

To sum up, the model shown in Figure 1 might be used as empirical information by the vocational education policy makers to reconsider integrating the urgency of hard and soft skill aspects in the vocational teacher education. The teacher educational institutes that produce vocational teachers is urged to develop the teacher education curricula that integrates these key competencies in their standards. This institute also plays important roles in organising continuous professional developemnt skills for vocational teachers, as a means to sustain teacher's competencies (Grollmann, 2008). Furthermore, it is agreed that vocational education is a formal program to assist graduates some skills ready to be used in the workforce (Billett, 2011; Flynn et al., 2016). It is interesting that the current teachers and experts in vocational education perceives particular competencies thought to be urgent, however a further study should be done involving employers in wide range of labor market.

CONCLUSION

The results lead to a conclusion that for future vocational teachers, the core competencies that are relevant with the hard skills aspect are the pedagogic knowledge (instructions), content knowledge, and educational technology. In the aspect of soft skills, the main competencies that are considered very important for future vocational teachers are able to be exemplary, honest, and discipline. These belongs to the category of living in the world, which means the urgency of soft skills is to equip teachers with competencies to maintain well-being of the school community. The integrated model of competencies suggests to teacher education institutes that produce vocational teachers to develop the teacher education curricula that integrates these in performing their vocational education standards.

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