



**THE DEMANDS FOR 21st CENTURY *GLOCAL* WORKFORCE
VIS A VIS SECONDARY VOCATIONAL SCHOOL 2013
CURRICULUM:SCHOOLS AND INDUSTRIES' VOICES**

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Abstract

As stated in the Blueprint of Smart and Competitive National Education 2005-2025, the mission of Indonesian education is to nurture smart and competitive Indonesians (*Insan Kamil/Insan Paripurna*) who are qualified and relevant to the demands for global and local (*glocal*) communities. One of the priorities of the blueprint is the development of vocational sector which is expected to contribute in decreasing the high unemployment rates among youth and fulfilling the demands for more globally competitive young-skilled human capital. This preliminary study attempts to explore the schools (teachers and school authorities) and industries' (employers and employees) voices toward young human capital—secondary vocational school graduates—demanded skills, predominantly in manufacturing and service sectors. Their voices are, then, linked with some issues in the latest 2013 curriculum. This study collects data through interviews (primary data) and documents of Indonesia Employer/Employee Survey of Skills/Labor Demand and Job Vacancies 2008 (secondary data) which involve schools and industries in DKI Jakarta, West Java, Central Java, East Java, Banten, Riau Islands, Lampung, and South Sulawesi. The findings reveal that schools principally claim that technical (job-related) and generic/life (communication, public speaking, attitude, and computer literacy) skills are the most important and demanded by industries. Meanwhile, industries mostly demand academic (English language skill), generic/life (creative thinking, problem solving, and behavior), and technical (mix of specific knowledge and skills to perform job). Great emphasis is put on technical, English, computer, and behavior skills. In addition, according to industries, for vocational school graduates, among those skills, technical skill is regarded as the strongest while English language skill is reported as the weakest, followed by computing and behavior skills. In addition, according to schools, the curriculum puts more weight on character building by extending the teaching hours of religion and Bahasa Indonesia subjects, which are good for students. However, a number of teachers highlight some concerns in terms of the reduction of teaching hours of English language and computer subjects, complicated assessment, and outdated school infrastructure. Based on the findings, this study concludes that there are still gaps between schools and industries' voices towards demanded skills *vis a vis* the 2013 curriculum.

Keywords: demanded skills, 2013 curriculum, vocational school, industry

INTRODUCTION

In 2005, the Ministry of National Education (now Ministry of Education and Culture Republic of Indonesia or MOEC-RI) released the Blueprint of Smart and Competitive Indonesian Education 2005-2025. The objective is nurture smart and competitive Indonesians (*Insan Kamil/Insan Paripurna*) who are qualified and relevant to the demands for global and local (*glocal*) communities (Kementerian Pendidikan Nasional, 2005). The Blueprint consists of four phases: phase 1 (2005-2010) emphasizes capacity improvement and modernization, phase 2 (2010-2015) under scores education



services development, phase 3 (2015-2020) focuses on regional competitiveness, and phase 4 (2020-2025) highlights global competitiveness.

As declared in the Blueprint, one of the key strategies is the development of vocational and training sectors (VAT). An initiative to significantly increase the ratio of vocational school compared to general school at the rate of 70:30 by the end of 2015 has been taken (Chen, 2009; Di Grapello, 2013; Ministry of National Education, 2005; Newhouse & Suryadharma, 2011). Prior to 2007, the ratio was approximately 20:80. However, since 2007 more secondary vocational schools have been established while the construction of public general secondary school has been frozen (Direktorat Pembinaan Sekolah Menengah Kejuruan, 2012; Newhouse & Suryadharma, 2011). In 2014, the statistics shows that the total number of vocational school is 11727—3034 public and 8693 private schools (Direktorat Pembinaan Sekolah Menengah Kejuruan, 2014). The available courses are business management, tourism, agriculture and forestry, fishery, engineering, arts, health care, aviation, and ship-building (Newhouse & Suryadharma, 2011).

Table 1 Statistics of Vocational Schools in Indonesia in 2014

No	Province	Public	Private	Total
1	D.K.I. Jakarta	62	533	595
2	West Java	250	1969	2219
3	Central Java	219	1210	1429
4	D.I. Yogyakarta	50	168	218
5	East Java	285	1371	1656
6	Aceh	111	52	163
7	North Sumatera	235	665	900
8	West Sumatera	98	89	187
9	Riau	88	143	231
10	Jambi	77	67	144
11	South Sumatera	87	151	238
12	Lampung	84	300	384
13	West Kalimantan	84	84	168
14	Central Kalimantan	78	40	118
15	South Kalimantan	56	53	109
16	East Kalimantan	94	142	236
17	North Sulawesi	69	89	158
18	Central Sulawesi	79	71	150
19	South Sulawesi	142	261	403
20	Southeast Sulawesi	80	53	133
21	Maluku	61	33	94
22	Bali	46	120	166
23	West Nusa Tenggara	88	149	237
24	East Nusa Tenggara	101	84	185
25	Papua	65	41	106
26	Bengkulu	54	27	81
27	Banten	77	513	590
28	Bangka Belitung	29	21	50

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29	Gorontalo	34	14	48
30	North Maluku	56	45	101
31	Riau Islands	27	55	82
32	West Papua	24	20	44
33	West Sulawesi	44	60	104
Total		3034	8693	11727

Source: Direktorat Pembinaan Sekolah Menengah Kejuruan (2014)

The strategy of prioritizing vocational education development is pertinent since unemployment among youth reached 25% or 5% of total population (Di Grapello, Kruse, & Tandon, 2011), in contrast, foreign investment rose as high as 50% (Drysdale, 2012). As vocational education prepares students for careers requiring expertise in a specific set of techniques, it is expected that the graduates who are equipped with skills relevant for industries can decrease the unemployment rates and achieve the demands for more globally competitive young-skilled labors (Di Grapello, 2013; Hendarman, 2010). Based on the 2009 labor survey, secondary vocational schools consistently contribute more workforces to industries compared to general secondary schools (Chen, 2009).

The previous evidences have revealed the importance of vocational education and young-skilled labor in the Indonesian context. As the response, the Indonesian government has tried to boost the quantity and advance the quality of vocational education sector. Realizing the strategic role of vocational sectors at the present time as the backbone of the country to nurture young-skilled human capital, it is important to look at the status quo—whether the vocational school students have been prepared to meet *glocal* touchstones. Considering this, the study is aimed at investigating the schools' and industries' voices towards vocational school graduates 21st century demanded skills *vis a vis* the latest 2013 curriculum.

21st Century Demanded Skills: An Overview

Skills are the key words for vocational school graduates as they are the most demanded by the industries. According to Di Grapello (2013), skills can be acquired through multiple-ways:

- Pre-employment education and training
- On-the job training (formal and informal)
- Work and life experience
- Learning from schools.

Moreover, Di Grapello (2013) divides skills into three main categories—academic, generic/life, and technical skills. First, academic skill comprises mathematics, literacy, and English. These skills are produced through formal and informal education or learning from schools. Second, generic/life skill consists of critical and creative thinking, problem solving, communication, leadership, and computer literacy. These skills are derived from early childhood parental education, education and training institutions through curriculum and pedagogical approaches, on-the job training, and working experience. Third, technical skill covers skills associated with profession and knowledge to perform jobs. These skills are acquired from formal education through curriculum, on-the job training, and working experience.

The above elaborations have illustrated the category of skills and skills acquisition processes. In addition, it has been acknowledged that one of the media to produce skills is formal education. Thus, school curriculum and classroom pedagogy are very salient to help the potential labors, the

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vocational school students, acquiring the skills. Having known the importance of curriculum and teaching pedagogy for vocational school students, the following part will briefly elaborate the emphasis and the pedagogical strategy embedded in the latest 2013 curriculum.

Vocational School Curriculum 2013: An Overview

According to Di Grapello (2013), the main responsibilities of vocational institutions are: (1) *to provide a system to produce a skilled labor force*, (2) *to ensure that the skills are updated overtime*, and (3) *to help unskilled students to acquire skills*. Thus, a well-designed curriculum is needed.

For the past decades, the education curriculum has been transformed as many as eleven times, starting 1945 until 2013. The transformation of curriculum generally follows the world dynamic changes. In particular, for the latest 2013 curriculum, the reasons for the transformation are: (1) *future challenges* (globalization, advancement of information and technology, knowledge-based economy, creative industry, investment, shift of world economy, and effect of techno-sciences), (2) *future competencies* (communication competence, critical thinking, sense of diversity tolerance, and intellectual quotient), (3) *negative phenomena* (juvenile delinquency, drugs, corruption, plagiarism, and social unrest), and (4) *perspectives of society* (cognitive orientation, overload subjects, lack of character building) (Kementerian Pendidikan dan Kebudayaan, 2013a).

The transformations of the latest 2013 curriculum are within some aspects: (1) *graduate competencies*, (2) *curriculum structure*, (3) *teaching process*, and (4) *assessment*. First, in terms of graduate competencies, the latest curriculum is expected to nurture human capital who have both hard and soft skills and/or are equipped with attitudes, technical skills, and knowledge. Second, in terms of curriculum structure, the curriculum adds more competencies based on the spectrum of needs, reduces adaptive and normative oriented subjects, and emphasizes more on productive oriented subjects relevant to trends of industries. Third, in terms of teaching process, the curriculum implements exploration, elaboration, confirmation, observation, elicitation, process, presentation, conclusion, and creation. Besides, it promotes teaching and learning both inside and outside of the classroom as well as uses multiple-sources for learning. In addition, it encourages project-based learning. Fourth, in terms of characteristics of assessment, it uses competence-based assessment, authentic assessment (attitudes, skills, and knowledge), students' portfolio, benchmark assessment, and combination of basic and core competencies assessment (Kementerian Pendidikan dan Kebudayaan, 2013a).

In academic year 2013/2014, the curriculum has been implemented to 1021 vocational schools, 7102 teachers, and 514788 students (Kementerian Pendidikan dan Kebudayaan, 2013b). The government will involve more schools, teachers, and students in the coming academic year. The implementation of 2013 curriculum is expected to improve the quality of vocational school graduates so then they are able to be on par with *glocal* standard.

METHODOLOGY

The study employs a qualitative method while the data are collected through interviews and perusal documents (Indonesia Employer/Employee Survey of Skills/Labor Demand and Job Vacancies 2008 by World Bank). For the interviews, the participants are 45 vocational school members (40 teachers, 4 vice principals, and 1 principal of business administration, accounting, secretary, marketing, multimedia, computer engineering, automotive engineering, electrical engineering, mechanical electronics, and pharmacy fields/majors) in Lampung, South Sulawesi, Central Java, and East Java provinces. Meanwhile, for the survey, the participants are 200 employers/employees of



medium and large firms in the manufacturing and service sectors (manufacturing; construction; wholesale and retail trade; hotels and restaurants; transport, storage and communication; financial services; real estate, rental, and business services; and health and social assistance) in Riau Islands, DKI Jakarta, West Java, East Java, and Banten provinces.

FINDINGS

The study is objected to investigate the schools' and industries' voices towards vocational school graduates 21st century demanded skills *vis a vis* the latest 2013 curriculum. The first part of this section will elaborate schools' voices while the second part will explore industries' voices.

Schools' Voices: Vocational School Graduates Demanded Skills *vis a vis* the 2013 Curriculum

Based on the results of interviews with school members, there are various voices toward vocational school graduates demanded skills *vis a vis* the 2013 curriculum. However, one consensus is that the most demanded skill is job-related skill. A teacher from a business management stream vocational school lists some skills:

“...our graduates mostly work in service industries ...accounting in a private bank, product design in a shopping centre, office administration in a company, and computer networking and editing in computer service centre/store.” (Interview/Lampung-2)

Another teacher from an engineering stream vocation school states:

“Our students end up working for companies like Toyota, Suzuki, Daihatsu, Yamaha, Honda, PT Bouma, Samsung, PLN and these companies demand skills related to mechanical works, maintenance, electricity, car and motorcycle machineries...” (Interview/South Sulawesi-4)

One more teacher from health care stream also mentions:

“Students must be able to dispense drugs and create herb-based beauty product.” (Interview/Central Java-4)

Alongside with job-related skills, furthermore, a number of school members draw attention to some supporting skills which contain value of soft skills. Few teachers highlight the importance of attitude. One of them says that:

“Attitude is also significant, but our graduates still lack of this aspect.” (Interview/East Java-9)

Only one teacher points out the needs for communication skill and computer literacy. She explains that:

“...actually now communication and adaptation skills and computer literacy are very crucial for students...” (Interview/Lampung-16)

In addition, another teacher mentions public speaking skill.

“Public speaking skill is important because they will work and meet people. However, both teachers and students have problems with this skill.” (Interview/Central Java-3)

On the other hand, the voices of school members are not unanimous when it comes to the relevance of the latest 2013 curriculum. Most school members recognize the relevance of the curriculum to industries, but some express their concerns. One teacher admits that:

“...the new curriculum is in line with both demands for industry and national education objective...but assessment is complicated.” (Interview/South Sulawesi-8)

Another teacher adds:



“It seems relevant...I can see the curriculum emphasizes affective compared to cognitive domains because industries want skillful workers with good personalities. ...more teaching hours for religion subject is good, but not sure with Bahasa Indonesia subject.” (Interview/Lampung-8)

Along the same vein, a teacher disagrees with reduction of the teaching hour of English subject.

“The 2013 curriculum is good... teachers are demanded to encourage students to actively participate in the teaching and learning process... English subject is important, but the teaching hour is reduced.” (Interview/East Java-1)

Some issues also rise among school members in relations to the latest 2013 curriculum. One teacher feels that:

“School is not ready with facilities...ours is out of date, different from the newest machines used by industries.” (Interview/East Java-5)

From the above voices, it can be derived that principally schools claim that the most demanded skills are job-related skills. According to Di Grapello (2013), this skill is categorized as technical skill. In addition, some teachers talk about the importance of communication and public speaking skills, only one teacher discusses the value of computer literacy, and two teachers highlight the significance of English. Di Grapello (2013) includes these skills as generic/life and academic skills respectively. Furthermore, schools feel that the latest 2013 curriculum—graduate competence, curriculum structure, and teaching pedagogy—is relevant to industries. However, there are still concerns with the extension and reduction of teaching hours, assessment, and school infrastructure.

Industries’ Voices: Vocational School Graduates Demanded Skills *vis a vis* the 2013 Curriculum

Based on the results of the Indonesia Employer/Employee Survey of Skills/Labor Demand and Job Vacancy 2008, a number of most demanded skills are revealed. Industries require the following skills from vocational graduates:

- a) Theoretical and practical knowledge relevant to job-related skills
- b) Basic mathematics and literacy
- c) Communication, behavior, and creative thinking skill
- d) Knowledge of information and technology (IT)
- e) English language.

According to Di Grapello (2013), theoretical and practical knowledge is included as technical skill while basic mathematics, literacy, and English are considered as academic skill. Knowledge of IT, communication, behavior, and creative thinking are categorized as generic/life skills. Furthermore, the survey also reports that for manufacture sector the most important skill is technical skill whereas for service sector the most demanded skill is behavior skill. However, there are some concerns with the skills of most of young labors—the graduates of vocational schools. They are weak in some important skills—English, computer, creative thinking, and behavior skills. In fact, there are growing demands for these skills. It is predicted that the demand for these skills will continue to grow over the next ten years as Gross Domestic Product (GDP), import of technology, and export-import sector keep growing.

On the other hand, in relations to curriculum, in general, industries admit that vocational schools have always tried to tailor its curriculum to specific labor market needs and this may increase graduates’ employability. Despite the good technical skill performed by vocational school graduates,



however, the industries expect that the curriculum can nurture graduates equipped with balanced-academic, technical, and general/life skills.

CONCLUSIONS

The study is objected to investigate the schools' and industries' voices towards vocational school graduates 21st century demanded skills *vis a vis* the latest 2013 curriculum. The findings reveal that: (1) the school members claim job-related (technical) and attitude (generic/life) as the most demanded skills, in addition, the latest 2013 curriculum is relevant to industries even though there are some concerns with the extension and reduction of teaching hours, assessment, and school infrastructure; and (2) the industries mention that technical skill is the most demanded, in addition, English language, computer, creative thinking, and behavior skills are now highly demanded. In conclusion, there are still some gaps between the schools' and industries' voices. There is always room for improvement in expanding this study.

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