Empowering local potential resources: strategies and challenges of vocational high school in East Java

FX S Sadewo, 1 D Utami, 1,* P Handoyo1 and F Pribadi1

1Sociology Department, Faculty of Social Sciences and Law, Universitas Negeri Surabaya, Ketintang Street, Surabaya 60231 East Java, Indonesia
diyahutami@unesa.ac.id

Abstract. The low interest of entrepreneurship in Indonesia can be seen from two factors, namely cultural and structural. However, it can be addressed through education, one of its strategy is through Vocational Entrepreneurship development program based on the potential of the region. This research seeks to see the readiness of SMK in developing entrepreneurship program in accordance with the potential of the region. The research approach uses Rapid Assessment Procedure (RAP) method. The research location is SMK in Tuban, Jember, Malang, Kediri and Pamekasan. The subject of the research is the managerial side of the school, including the curriculum development team, the School Committee and Vice Principals of Curriculum. The results of this study indicate that all principals already know about the potential of the region and have tried entrepreneurial development based on the potential of the area.

1. Introduction

Based on the study of World Economic Forum, Indonesia's global competitiveness decreased by 4 (four) ratings [1]. This is surprising because it happened in the era of Joko Widodo government. This government is so concerned to improve economic capacity. One of them with infrastructure development. Infrastructure development is used to attract investment from abroad. The results have indeed shown an increase in the economy. This is shown in market drying, macro-economic environment improvement, and financial development. This success was not followed by education and health services, work-sharing efficiency, female labor participation, and lastly technological readiness [2].

This low market share can indeed serve as an indicator that economic growth is not often with the acceleration of investment. The development of investments in the macroeconomic sector is slow and not in line with the opening of new jobs. Another thing that is not less important is the market share is the quality of employment in Indonesia. The findings of World Economy (2017) show that Indonesia's global human capital index (GHCI) is also low, which is ranked 64th just below Vietnam. This index not only measures human development, but more on its implementation. The indicators are capacity, development, deployment and know how of the human. This capacity variable is related to the level of education as an investment, this development is related to the education of trained and untrained workers. Deployment speaks of skill and accumulation applications at work age, and the last variable know how is related to the number of skilled workers. The weakness of the workforce in Indonesia turned out to be deployment and know-how. That is, Indonesia has low labor participation rate, high unemployment rate, and very few skilled labor[3].

The low figure in GHCI turns out to be followed by the Global Entrepreneurship Index number. This index is a continuation of the GCI (Global Competitiveness Index) combined with the Economic Freedom Index (IEF) and the Ease of Business Index (EDB). As a result, Indonesia is ranked 90th, losing to Vietnam (87), Philippines (76), Thailand (65), Malaysia (54), Brunei Darussalam (53) and Singapore (24) [4]. Following Schumpeter's opinion, this low entrepreneurial rate has implications for economic
growth and employment recruitment. In fact, sectors developed on the basis of entrepreneurship at the individual level, such as: micro and small business, have high absorption capacity.

This entrepreneurial ability can be trained, although some experts doubt it. Family and genetic environment factors are far more influential [5]. However, some educational experts have shown that entrepreneurship should be taught at various levels, including universities. In some countries, entrepreneurship education is integrated into various levels of education. Another option is to incorporate into vocational education. In Indonesia, there are two forms of vocational education. First, education stands alone in the form of training, such as: coursework and training center. Second, vocational education stands alone in the form of educational institutions, such as vocational high schools and universities. In the United Kingdom, vocational education is integrated into the public high school curriculum, although it is different between states (England, Wales, Scotland and Northern Ireland). For England (and Wales), and Northern Ireland, vocational education can be awarded at high school grade 2 in the form of courses that are integrated with the curriculum, while Scotland is implementing post-school training. This in turn can reduce the number of unemployed, especially when applied at the time of secondary education, moreover in the program the participants obtain certificates from the association until the national certificate that makes it easy to seek work[6] It was done because of government involvement, associations and companies.

There are other findings contrary to the case in Great Britain, in Germany the training program is conducted post-secondary education or in those who do not continue higher education. The time is tiered from 1-3 months, 6 months and 1 year. The result was no significant effect between the program and the long waiting time in finding a job[7]. The program only fills the time for the unemployed. The alleged cause is that no such qualification exists in the United Kingdom.

In Southeast Asia, the application of vocational education will vary. Its application depends on political, social, cultural, economic and historical parameters. The failure of vocational education often occurs because it is viewed as low education and for the poor, and is not taken seriously by the government on the one hand, and its orientation is not directed to the socio-economic changes of its people [8].

This happened in Indonesia in the Suharto government with the simplification of vocational education and is only done at school level after 9 years of primary education [9]. Vocational education post-primary education was only used to provide opportunities for students who could not continue to college. Meanwhile, the public still appreciated to public high school. The percentage of vocational education at the secondary and secondary levels is only 30:70. This lack of attention also resulted in the absorption of vocational education school workforce. The unemployment rate of vocational education has reached 11% of unemployment [10].

In the current era of regional autonomy, post-crisis monetary, the role of vocational education is actually very important. In contrast to public high schools, vocational high school education teaches entrepreneurship. Through entrepreneurship, vocational school graduates are able to capture opportunities from their local potential. Businesses that they will build are no longer imported, but derived from local potential. Therefore, a number of regional heads in East Java are struggling to develop vocational high schools by beginning to eliminate the cost of education[11]. The next question is how the vocational high school management effort in East Java develops local potential based curriculum. His efforts do not simply change the curriculum [12] Or, just not develop learning methods[13].

2. Methodology

This research was a study that examines the policies and implementation of curriculum development undertaken by the provision of vocational education. Development of the curriculum is one of the strategies undertaken by the school in building students' readiness and entrepreneurship. This research combines both quantitative and quantitative approaches, otherwise known as mix-methods. The mix-method model used is Rapid Assessment Prodecure (RAP), a method that combines critical in-depth observations and interviews [14]. Data were collected from questionnaires and interviews. The subject
of the research was the managerial side of the school, including the curriculum development team, the School Committee and Vice Principals of Curriculum.

For analysis, this research combined descriptive and qualitative quantitative analysis. Quantitative was been used for analysing about the school's knowledge of local potential. This knowledge was compared with data from local government. Qualitative analysis was aimed to look deeply at vocational school management efforts looking at local potentials in the region.

3. Results and Discussion

3.1. Vocational High School as the consequence of agriculture industry.

In East Java, the regional potential are agriculture and industry sectors. These sectors is consequences of its cultural ecology. East Java is divided into 3 (three) regions. That are coastal area, inland, and island (Madura, etc). This coastal region is a drier region and adjacent to the sea. Therefore, its potential is fisheries and agriculture. Despite less rainfall, some coastal areas are fertile areas for wetland farming. This happens because the coastal areas into river estuaries, such as Bengawan Solo and Brantas River.

| Regency       | Regional Potential                                    | VHS Status | Capital | Human | The leading Majors                                  |
|---------------|-------------------------------------------------------|------------|---------|-------|----------------------------------------------------|
| Malang Raya   | Agriculture & Plantation, farming, fishery, automotive industry (Karoseri) | Sng Public Surplus Surplus | Technology of Agriculture & Fishery and Otomotive |
|               |                                                       | Tm Public Surplus Surplus | Technology of Agriculture & Fishery |
|               |                                                       | Pjn Public Surplus Surplus | Technology of Agriculture & Farming |
| Tuban         | Fishery, Industry                                    | 1Tb Public Surplus Surplus | Building, Industry & Informatics |
|               |                                                       | 2Tb Public Surplus Limited | Culinary & Fashion |
|               |                                                       | AN Private Limited  | Technology of Informatics & Accounting |
|               |                                                       | KPe1 Private Surplus Surplus | Fishery |
| Pamekasan     | Salt industry                                        | 1Pm Public Surplus Limited | Technology of Informatics & Commerce |
|               |                                                       | 2Pm Public Surplus Limited | Technology of Informatics & Otomotive |
|               |                                                       | 3Pm Public Limited Limited | Tourism & Informatics |
| Kediri        | Agriculture, Farming, Industry based on Agriculture  | Nga Public Surplus Surplus Surplus | Culinary, Building & Otomotive Agriculture |
|               |                                                       | Pkn Public Surplus Surplus | Agriculture & Farming |
|               |                                                       | CBi Private Limited Limited | Otomotive, electricity & Building |
|               |                                                       | PHP Private Limited Limited | Offices dan Accounting |
| Jember        | Agriculture, Farming, Industry based on Agriculture  | 1Jb Private Surplus Surplus | Accounting, Technology of Informatics |
|               |                                                       | 4Jb Private Limited Limited | Accounting, Technology of Informatics |
|               |                                                       | Kar Private Limited Limited | Accounting, Marketing & Multimedia |
|               |                                                       | PGr1 Private Limited Limited | Otomotive |

In 1870, the Dutch colonial government issued the law of economic liberation (Agrariche Wet). Under the law, private plantations were allowed to invest. As a result, in the late nineteenth and early 20th century, sugar and tobacco plantation was introduced at the coastal area and several are of inland. Tobacco was also introduced to Madura region. But, a long time ago before Dutch colonial era, on Madura, especially Pamekasan and Sumenep, the people produced salt. Meanwhile, in inland which
have mountain, higher rainfall and fertile soil, rural communities develop rice field. But, same as Madura and coastal, the crop plantation was introduced. The crops were tea, coffee and chocolate. Sugar and tobacco plans was conducted int lowlands and coastal areas of Southern Java. As a consequence of the development of plantations, a number of cities in coastal and inland such as Surabaya, Gresik, Pasuruan and Probolinggo, Madiun and Jember were established plantation processing plantation factories.

Consequently, the vocational education has been developed since the Dutch colonial government. In 1906 the Dutch colonial government designed an educational network from village to city with a distinction for the indigenous and the Europeans. Indigenous educational institutions designed established industrial and commercial center areas. For Europeans, schools were established in urban areas. After basic education (grade 6), indigenous people directed vocational education. This vocational education meets the needs of society (industry), namely: nurse, teacher and technique. In turn, the government also organizes education to become an employee (ambtenaar)[15].

It is increasingly seen in the direction of vocational high school development. This study shows that there are three vocational study programs developed by VHS management, namely: agriculture and plantation (22.89%), services (21.69%) and trade (20.48%). They also developed vocational education for tourism (13.25%), agricultural processing industry (9.64%) and mining industry (7.23%). In recognition of the manager, the potential of the region became the main reason in developing its vocational study program (41.46%). There is also a potential area as only one consideration alone (39.02%), other considerations are public interest, socio-economic conditions of learners and the ability of teachers. The latter two things become very important because it will impact on financing.

3.2. Strategy for Improving Curriculum and Branding Vocational School.

The development of this vocational school is full of challenges. For Indonesia, Andreas Schleicher (2005) has pointed out various problems in vocational education, ranging from public interest, private sector involvement, government attention to funding. Therefore, he suggested that central and local government should have special attention to Vocational High School (VHS). In addition, the private sector must also be involved in the development of vocational schools in the region [16]. This suggestion is very important for the people of East Java. In contrast to other provinces, the number of VHS (1,975) is higher than the General High School (GHS) (1,566), as well as the students who have reached 701,029. Compared to the national level, the number of open unemployed VHS graduates is smaller than the GHS, namely: 166,572 and 276,806 [17].

| No. | Answer options                                      | f | %    |
|-----|-----------------------------------------------------|---|------|
| A.  | Basic of Curriculum Establishment                    |   |      |
| 1   | The scarcity of study program in the region          | 5 | 8.20 |
| 2   | Public interest                                      | 21| 34.43|
| 3   | Analysis of local potential of regencies / municipalities | 23 | 37.70|
| 4   | Technological developments that occur at this time   | 17| 27.87|
| B.  | Referral Curriculum                                  |   |      |
| 1   | Education Office Regency Field of Vocational Secondary School (Dikmenjur) | 10 | 15.63|
| 2   | SMK Public / privat curriculum developer who first stands | 9 | 14.06|
| 3   | Experts from public/private college in Vocational Education | 8 | 12.50|
| 4   | Professional Organization related to study program   | 16| 25.00|
| 5   | Industrial Entrepreneurs associated with the study program | 21 | 32.81|

However, when looking at table 1 and answers to questions about the superior course, the manager actually faces various problems. In Jember, for example, they did not develop plantations because of the complex bureaucracy of plantation companies. "Although our place is in plantation area, but the
plantation here is managed by Public Plantation Company. For access to it almost all vocational
difficulties. For apprentices only, must be permit to Surabaya. And, rarely do they recruit employees.”
Or, “private VHS have difficulty funding to build a laboratory. The economic background of the students
is very low.” This is different from state VHS fully funded by the government, including teacher salaries
and administrative staff.

Figures 1. Empowering Regional Potentional for High Performance of Vocational Program

Table 2 shows how the management strategy in developing the curriculum of its superior program.
They also strive to engage industry entrepreneurs at the local level. In addition to academic reasons,
they hope that local industry employers can send their employees to become teachers. In addition, they
can use it as a laboratory, place of apprenticeship and workplace for graduates. This way is done by the
manager of Private Vocational School. School based management strategy is very important to introduce
its [18]. The success of attracting industry entrepreneurs has become a branding for VHS (see Figure 1).
Indeed, this kind of branding is a by-product of curriculum implementation needs, unlike that of a
vocational school administrator in Taiwan [19].

4. Conclusion
Developing vocational education is a strategic step to improve the quality of human resources. This is
done by regency/city and provincial governments. Nevertheless, from the results of this study,
vocational education remains oriented to regional potential, ranging from natural resources, industrial
and business networks, to local government networks, although it can not be denied to observe the public
interest. The condition of VHS in East Java, especially in these four regency, differs from the sources
owned. Ownership of these sources determines the strategy and choice of courses that are made superior
by the VHS. In VHS, surplus human resources and other capital can develop a study program that is
oriented to various regional potentials. In addition, the study program in turn has a better branding. This
condition is contrary to VHS which is less than human resources and other capital.

5. References
[1] Hanouz M D, Baller S and Browne C 2016 The Global Competitiveness Report 2016–2017 ed K
Scwab (Geneva: the World Economic Forum)
[2] Investments I WEF Competitiveness Report 2016-2017: Indonesia falls to 41st
[3] Forum W E 2017 The Global Human Capital Report 2017. Preparing people for the future of
work. vol 2014, ed K Schwab (Geneva: World Economy Forum)
[4] Ács Z J, Szerb L, Autio E and Lloyd A 2017 Global Entrepreneurship Index (Washington, D.C.:
The Global Entrepreneurship and Development Institute

[5] Forber D P 2017 “Born, Not Made” and Other Beliefs About Entrepreneurial Ability The Wiley Handbook of Entrepreneurship ed G Ahmetoglu, T Chamorro-Premuzic, B Klinger and T Karcisky (Hoboken, NJ: John Wiley & Sons Ltd) pp 273–91

[6] Codie N and Leney T 2005 Vocational education and training in the United Kingdom. Short description. (Luxemburg: Office for Official Publications of the European Communities)

[7] Hujer R, Thomsen S L and Zeiss C 2004 The Effects of Vocational Training Programmes on the Duration of Unemployment in Eastern Germany. Discussion Series

[8] Tilak J B G 2002 Vocational Education and Training in Asia 40

[9] McMahon W W and Jin H J 1989 Vocational and Technical Education in Indonesia: Theoretical Analysis and Evidence on Rates of Return 1–44

[10] Group O B 2017 Indonesia recruits industry leaders to strengthen vocational education..pdf

[11] Sholikah B S 2016 Risma: Sekolah di SMK Banyak Keuntungannya http://www.republika.co.id 1

[12] Munastiw E 2015 The Management Model of Vocational Education Quality Assurance Using “Holistic Skills Education (Holsked)” Procedia - Soc. Behav. Sci. 204 218–30

[13] Mustapa M A S, Ibrahim M and Yusoff A 2015 Engaging Vocational College Students through Blended Learning: Improving Class Attendance and Participation Procedia - Soc. Behav. Sci. 204 127–35

[14] Beebe J 2004 Rapid Assessment Process Enc Soc. Meas. 0 1–17

[15] Teeuwen D and Doorn H 1940 Education in the Netherlands East-Indies 1–13

[16] Schleincher A 2015 Reviews of National Policies for Education Education in Indonesia Rising to the Challenge ed A Schleincher (Paris: OECD Publishing)

[17] BPS Jawa Timur 2017 Provinsi Jawa Timur dalam Angka. Jawa Timur Province in Figures 2017 (Surabaya: Badan Pusat Statistik Provinsi Jawa Timur)

[18] Bandur A 2012 School-based management developments and partnership : Evidence from Indonesia Int. J. Educ. Dev. 32 316–28

[19] Hung Y and Fu C 2010 Brand management model of vocational high schools in Taiwan Procedia- Soc. Behav. Sci. 2 4229–33

Acknowledgment

The team of authors would like to thank the Research and Development Agency (Balitbang) East Java Province, especially Mr. Supriyanta and Mr. Irtanto, also to the informants and respondents. It is a great joy to know the difficulties and expectations in developing vocational education.