The Relevance of Vocational High School Program With Regional Potency Priority in Indonesia

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Abstract: This research aims at identifying: (1) the regional potency priority; (2) the relevance of vocational high school program with regional potency priority; and (3) the irrelevance factors of vocational high school program with regional potency priority in 34 provinces around Indonesia. This study employed both qualitative and quantitative design. The data was collected by employing website exploration approach, observation, documentation, questionnaire, interview, and FGD. As for the data analysis, it was conducted qualitatively and quantitatively. The results of this study confirm that: (1) potency priority in the western part of Indonesia includes social and community service, agriculture, manufacture or creative industry, and marketing; in the central part of Indonesia it is predominated by agriculture, services, art, industry, fishery, and forestry; in the eastern part of Indonesia the potential priorities are mining, agriculture, and forestry. (2) The level of relevance of Vocational High School program with potency priority in the region reaches below 50% in 26 provinces and 8 provinces reach above 50%. (3) The irrelevance occurred due to weak coordination between vocational school policy stakeholders, the absence of clustering on potency priority in the region as a recommendation to develop vocational high school program, and the insufficient evaluation regarding post-implementation vocational high school development program.

1. Introduction

Regional potency can be construed as the ability to utilize and develop an area in generating economic value to support the survival and continuation of the community [1]. The diverse potency of a region is commonly composed of natural resources, socio-cultural, human resources. Dismally, the data regarding unemployed vocational school graduates each year has increased, i.e. in February 2016 amounted to 9.84%, up to 0.79% than in February 2015.

Vocational High School development orientation remains dependent on public interest [2], particularly on a popular program of the vocational high school. Inevitably, this phenomenon encourages vocational graduates tend to choose to seek work in urban areas and the formal sector and consequently regional development grow into insignificant progress [3]. In addition, the development of education in the province (subdistrict/district) are less relevant to the priorities of the potential of a region. In Indonesia from a number of provinces, there are various potential areas, both in terms of
culture, natural resources, social, and so forth [1]. Each area has a variety of potential areas which may improve the service and quality of vocational education.

regional potency is closely connected with input provider sector (backward linkage) and output user sector (forward linkage) [4]. Both connecting elements take into account regional potency priority development as incentives of other correlated sectors development. regional potency contributes significantly to the development of regional economic [5].

In recent days, the relevance of Vocational High School Education on the industry remain inconsiderable. It, consequently, generates an inequality on the absorption of Vocational High School graduates. For instance, in South Sulawesi, Makassar particularly, there is a Vocational High School which its programs are not relevant with the regional potency. Hence, to fulfilled the demand of employment, it is occupied by a worker outside the region. South Sulawesi is a well-known region as a primary producer of seaweed and cocoa which this regional potency is highly feasible to establish a vocational education program relevant to the existing potency. In the long-run, this will encourage the graduates to empower and develop the existing regional potency in order to improve the economic value within the region as well as creating more job vacancy. Identical with Central Kalimantan, particularly in Palangkaraya which is well-known as rice producer and agriculture product. Within Palangkaraya, vocational education program related to agriculture and plantation remains inadequate. Subsequently, most provinces in Indonesia require an additional consideration regarding the clustering of regional potency to improve the quality program of Vocational High School which has a needs-drastic level.

2. Method
Present study employed mixed method approach beginning with the qualitative method and further developing with a quantitative method. The data was collected by employing website exploration approach, observation, documentation, questionnaire, interview, FGD, and study result clarification to further investigate: (1) regional potency clustering, (2) regional potency priority clustering, and (3) vocational education program. The data obtained from the qualitative method is percentage data of regional potency priority relevance level with the vocational education program. The complete and detailed procedure of this study is illustrated in Figure 1.

![Figure 1. Research method procedure diagram](image-url)
3. Findings
The complete findings of regional potency clustering and Vocational High School Program relevance are illustrated in Table 1.

Table 1. Regional potency priority clustering

| Areas          | Province                                                                 | Priority                          |
|----------------|---------------------------------------------------------------------------|-----------------------------------|
| Western Part   | Aceh, North Sumatera, West Sumatera, Riau,                               | • Services                        |
|                | Jambi, South Sumatera, Bengkulu, Lampung,                                | • Agriculture                     |
|                | Bangka Belitung, Riau Islands, West Java, Central Java,                   | • Manufacturing industry          |
|                | DI Yogyakarta, DKI Jakarta, East Java, Banten, West Kalimantan, Central  | • Creative Industry               |
|                | Kalimantan.                                                              | • Trading                         |
|                | • Processing industry                                                   |                                   |
| Central Part   | Bali, West Nusa Tenggara, East Nusa Tenggara,                            | • Agriculture                     |
|                | South Kalimantan, East Kalimantan, North Kalimantan, North Sulawesi,     | • Services                        |
|                | South Sulawesi, Southeast Sulawesi, Central Sulawesi, Gorontalo, West     | • Art                             |
|                | Sulawesi.                                                                | • Industry                        |
|                | • Fishery                                                                | • Forestry                        |
|                | • Forestry                                                               |                                   |
| Eastern Part   | Maluku, North Maluku, West Papua, Papua                                  | • Mining,                         |
|                |                                                                         | • Agriculture                     |
|                |                                                                         | • Forestry                        |
|                |                                                                         | • Plantation                      |

Table 1 demonstrates that within the western part of Indonesia (18 provinces), it composes of regional potency priority which includes Services, Agriculture, Manufacturing industry, Creative Industry, Trading, Processing industry. In the central part of Indonesia (12 provinces), it composes of regional potency priority which includes Agriculture, Services, Art, Industry, Fishery, and, Forestry. While in the eastern part of Indonesia (4 provinces), it composes of regional potency priority which includes Mining, Agriculture, Forestry, Plantation. As for the percentage of Vocational High School Program relevance, it is presented in the following Table 2.

Table 2. The percentage of vocational high school program relevance with regional potency priority

| No. | Provinces     | Relevance percentage (%) | Relevant | Irrelevant |
|-----|---------------|--------------------------|----------|------------|
| 1   | Aceh          | 65.6                     | 34.4     |            |
| 2   | North Sumatera| 46.6                     | 53.4     |            |
| 3   | West Sumatera | 46.3                     | 53.7     |            |
| 4   | Riau          | 44.2                     | 55.8     |            |
| 5   | Jambi         | 42.8                     | 57.2     |            |
| 6   | South Sumatera| 38.9                     | 61.1     |            |
| 7   | Bengkulu      | 35.1                     | 64.9     |            |
| 8   | Lampung       | 35.3                     | 64.7     |            |
| 9   | Bangka Belitung| 39.4                    | 60.6     |            |
| 10  | Riau Islands  | 19.5                     | 80.5     |            |
| 11  | DKI Jakarta   | 71.3                     | 28.7     |            |
| 12  | West Java     | 56.7                     | 43.3     |            |
| 13  | Central Java  | 30.4                     | 69.6     |            |
| 14  | DI Yogyakarta | 60.2                     | 39.8     |            |
| 15  | East Java     | 33.0                     | 67.0     |            |
Table 2 shows that the percentage of Vocational High School Program relevance with Regional Potency Priority is relatively small percentages. It explains that as many as 26 provinces in Indonesia have relevance level below 50% of the Vocational High School Program relevance with Regional Potency Priority. The number of provinces that have a relevance level above the level of 50% of Vocational High School Program relevance with Regional Potency Priority is 8 provinces. While the analysis of interview results is presented in Table 3.

Table 3. The percentage results of interview on the program relevance

| No | Items of Questions                                         | Percentage |
|----|----------------------------------------------------------|------------|
|    |                                                          | Yes        | No         |
| 1  | Coordination of the draft Vocational High School program | 48.3       | 51.7       |
| 2  | Involvement in vocational programs                       | 74.4       | 25.6       |
| 3  | Real-problem analysis                                    | 33.1       | 66.9       |
| 4  | Given & Field Analysis                                   | 62.8       | 37.2       |
| 5  | Consortium finalization of Vocational High School programs| 39.5       | 60.5       |
| 6  | Mapping the region's potential                           | 88.4       | 11.6       |
| 7  | Priority potential mapping                               | 42.9       | 57.1       |
| 8  | Utilization of priority mapping results                  | 19.6       | 80.4       |
| 9  | Analysis of the effectiveness of the priority map        | 29.4       | 70.6       |
| 10 | Program synchronization                                   | 12.7       | 87.3       |
| 11 | Design consortium Evaluation                             | 39.2       | 60.8       |
| 12 | Consortium implementation evaluation                      | 44.6       | 55.4       |
| 13 | Periodical evaluation of program                         | 72.1       | 27.9       |
| 14 | Follow-up plan evaluation results                        | 70.7       | 29.3       |

Table 3 shows that there are nine aspects of the question which is worth less than 50%, including the coordination of the draft vocational high school program, real-problem analysis in vocational, consortium finalization of vocational high school programs, priority potential mapping, utilization of
priority mapping results, analysis of the effectiveness of the priority map, synchronization of each agency program, design consortium evaluation of vocational education, consortium implementation evaluation in vocational education. While there are five aspects of the questions that have scores above 50%, including the involvement in vocational programs, given & field analysis, mapping the region's potential, periodical evaluation of program, follow-up plan evaluation results.

4. Discussion

4.1. Regional potency priority in each region
Regional potency priority in each region has a diverse domination level. It happens since there is a difference on geographical condition of the region and the varied existing resource in each zone of the region. Within western part of Indonesia which consists of 18 provinces, the priority of potency is dominated by agriculture, manufacture industry, creative industry, trading, and processing industry. One instance of the region in the western part of Indonesia is Aceh. Aceh possesses three regional potency priority which composes of service, food processing industry, and agriculture. This condition occurs since Aceh possesses a considerable wide area of plantation and the soil is considerable fertilized [6],[7]. In addition, other study related to land conversion from rice field to palm oil plantation in Aceh reveals that Aceh possesses considerable and decent condition of land and feasible to be developed as agriculture or plantation industry [8], as well as provinces in the western part of Indonesia.

In the central part of Indonesia (8 provinces) a potency priority is dominated by agriculture, services, arts, industry, fisheries, and forestry. The geographic location of the central part has averagely extensive waters and forests that are suitable for the development of fisheries and agriculture sectors. Gorontalo has land suitable for agriculture [9]. In addition, other studies also show that the fishery potential of North Sulawesi province has a total production reached 8736.2 tons for domestic consumption, food industry and commodity exports [10].

In addition, other studies also show that the fishery potential of North Sulawesi province has a total production reached 8736.2 tons for domestic consumption, food industry and commodity exports [11]. In addition, there are a lot of potential mines in Papua, which until now has not been exploited to improve the welfare of local people [12]. The development of curriculum based on regional potency priority is presented in Figure 2.

![Figure 2. The development of curriculum based on regional potency priority](image)

According to the aforementioned explanation, regional potency priority should be taken into account to perform development acceleration of education in Vocational High School. Furthermore, it
is in line with The Law No. 20 of 2003 article 15 concerning on National Education System. It accentuates that Vocational Education is a secondary education which prepares the learner to possess a particular and specific skill in the certain field.

4.2. The relevance of vocational high school program

The development of Vocational High School is no longer refer to the quality improvement of graduates competence. The development of Vocational High School should be able to generate graduates to become an active contributor within their own region. This will further will manufacture prominent benefits from Vocational High School graduates and in the future, the graduates will be trusted as well as creating a new job vacancy. The establishment of Vocational High School program based on regional potency priority will generate an opportunity for Vocational High School graduates to develop and improve their skill and ability compatible with the potency of their origin region.

Looking at Indonesian circumstances, most region or provinces possess allow percentage of vocational education program which is relevant to the regional potency [8], [6]. For instance in West Sumatera, Vocational High School program which is relevant with the regional potency priority only amount to 46.6% while as for the program irrelevant with the regional potency priority amount to 53.4%. Consequently, it hampers the development of the potency of West Sumatera such as tourism and agriculture. Additionally, the biggest regional income of West Sumatera comes from tourism sector [13]. The identical case occurs in Banten. Vocational High School program which is relevant with the regional potency priority only amount to 47% while as for the program irrelevant with the regional potency priority amount to 53%. Banten, according to the data obtained, relatively has low relevance percentage of Vocational High School program to the existing potency. Sukamay argues within his research that trading and processing industry sectors in Banten take a role as the province’s [14].

It is inevitable that the improvement of regional potency could enhance local economic development. The improvement will eventually influence the demand of Vocational High School Graduates, thus the absorption of graduate increases in line with the development industry [2]. Additionally, the increasing demand for employment will increase the employment absorption in regional. The development of regional potency priority is required to take into account human resource supporting capacity and technology within the concerned regional.

4.3. The irrelevance of vocational high school program factors

Pursuant to the previous arguments, it is exposed that the number of provinces possessing the relevance program of Vocational High School with the regional potency is relatively small. This small number is a vital and crucial issue. In addition, this circumstance is urgently required to take into account as a priority in revitalizing the program within Indonesia. The factors which cause irrelevancy of Vocational High School Program is presented in Table 3.
The factors behind the irrelevance of vocational high school program are obtained through information and gathering during the research. The factors behind the irrelevance of vocational high school program are comprising of less coordination among the policy makers of Vocational High School, no mapping available regarding regional potency priority as a recommendation in developing Vocational High School Program, and low evaluation regarding post-implementation of development program within Vocational High School.

4.3.1. Less Coordination among Policy Makers.
Provincial governments which play a role in determining the vocational education policy based on the regional potency priority are Provincial Education Office, Regional Development Planning Board, and the Labour and Transmigration Provincial Office. The weak coordination of the three vital institutions in the determination of Vocational High School education policy based on the regional potency priority results in the impact of not synchronizing every program taken in each agency. For example in the Provincial Education Office intending to focus its program on the quality of vocational education according to the potential of the region. While the other institution does not put this as the priority.

On the other hand, it was less regularly coordinated previously with the provincial Labour and Transmigration Office and Regional Development Planning Board, hence the programs undertaken by the two agencies are commonly contrary to the programs of the provincial Education Office. It thus necessarily a Broken-point for each agency that would later lead to the low quality of vocational education.

4.3.2. Gaps existing on regional potency priority.
Vocational High School graduate gaps still occur between the number of graduates and the needs of the community. Graduates of vocational fields in marine and fisheries in 2016, for example, only 17,249 people, while the need for employment for the field reached 3,364,297 people. The graduate's gap is also seen in the field of agribusiness and agro-technology. Based on Basic Education Data October 2016, a requirement of the vocational graduate level workforce is available only 52,319 people. There is 445,792 employment demand for vocational high school graduates in the field, while in the tourism sector there are 707,600 people, but in 2016 the number of vocational high school graduates in this field is only 82,171 people. On the contrary, the number of vocational high school graduates in business and management fields is exceeding. The employment opportunities for this field are only 119,255 people, while the graduates reached 348,954 people.

Vocational education (SMK) is one of education that has the goal of preparing students to become productive human beings, able to work independently, develop the potential of their region in order to create new fields as well as become middle-level employment, in accordance with competence in the field of expertise [3]. In addition, Vocational High School also equips students to be able to choose a career, generate a tenacious and persistent behavior in competing, adapt with the work environment and develop a professional attitude.

Low in-depth evaluation on post-implementation vocational high school development program. The development of vocational high school education is a ceaseless agenda only by performing an existing development program. The issues within vocational education are perpetual, Whatever broken will grow back, whatever lost will be replaced, and the issues arising is complicated [3]. Reciprocally, the problem-solving solution for educational context sometimes creates a new issue and the issue is more complex. Therefore, vocational education development is considered as ceaseless development.

The stakeholders concerning the development of Vocational High School put a less concern on the program which does not fulfill the desired target and expectation, is possible to be revised or recovered. Additionally, in the revising stage, a program costing a high funding during its implementation and it does not fulfill the desired expectation could be improved and revised for further implementation. Indeed, this is possible to improve the quality of education as well as minimizing the funding of vocational high school program.
5. Conclusion
In accordance with the findings and the discussion within this present study, several points of conclusion can be generated. First, within western part of Indonesia, the priority of potency is dominated by agriculture, manufacture industry, creative industry, trading, and processing industry. While the central part of Indonesia is dominated by agriculture, services, arts, industry, fisheries, and forestry and the eastern part of Indonesia is dominated by Mining, Agriculture, Forestry, and Plantation. Second, the relevance level of Vocational High School program indicates that 26 province is below 50% and 8 provinces are above 50%. Third, the factors behind the irrelevance of vocational high school program are comprising of less coordination among the policy makers of Vocational High School, no mapping available regarding regional potency priority as a recommendation in developing Vocational High School Program, and low evaluation regarding post-implementation of development program within Vocational High School.

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