The Vocational Education Needs in Managing Local Potential in Upland and Coastal Areas: A Perspective of Local Government

Syaiful Nur Rohmad[1,*], Eddy Sutadji[1], Yoto[1]
[1]Vocational Education Departement, State University of Malang
*Corresponding author : syaifulnurrohmad@gmail.com

Geographically, Indonesia has an area stretching from upland to coastal. With these conditions, Indonesia has various potentials with each region having its own peculiarities. The government's attention to local potency has actually been shown in education. With the existence of regional autonomy, each region must be able to prepare vocational schools based on local potential with a number and areas of expertise that are in accordance with their respective regions. Therefore, local government is one of the important elements that can realise the compatibility between vocational high schools (VHS). So, this research will find out what VHS majors are expected by the local government, especially the sub-district government to manage local potential. This research uses a descriptive qualitative approach. The results show there are different competency requirements to manage local potential with different geographical conditions. The difference is clearly seen, dominant local potential in the highland is agriculture and the dominant potential in coastal areas is fisheries. Under these conditions, the goverment needs VHS graduates to manage local potentials of their areas. Major requirements in the highlands are technology and enginering,

information and communication technology, health and social worke rs, agribusiness and agrotechnology, business and management, tourism, art and creative industries. Majors required on the coast are technology and engineering, information and communication technology, health and social workers, agribisness and agrotechnology, maritime affairs, business and management, tourism, arts and creative industries.

Keywords : *vocational education, local potency, place-based education*

1. Introduction

Geographically, Indonesia has an area stretching from upland to coastal. With these conditions, Indonesia has various potentials. The potential of each region has its own peculiarities. The government's attention to this has actually been shown in terms of education. The government has launched a vocational revitalisation program in accordance with Inpres No. 09/2016 which aims to create a workforce capable of managing regional resources [1].

Regional resources can be managed appropriately; one of them through partnerships. Partnerships are a key element of place-based education that connects students with the community because society is part of the learning process [2]. From a macroeconomic perspective, the career of vocational school graduates is determined by the labour market of each region. Local labour is still very much needed with skilled conditions and complete vocational qualifications [3].

However, in practice, VHS major relevance with its local potential shows that from 34 provinces, 26 provinces have a relevance level below 50% and eight provinces above 50% [4];[5]. One area with a relevance rate below 50% is East Java. The relevance level of SMK with regional potential is only 33% [1];[4]. This figure is a relatively small number, even though actually SMKs in East Java have tried to develop study programs that are regionally oriented [6].

This irrelevance starts from small units, which is sub-districts and districts. From that, research several sample regions have been taken in East Java, one of them is Malang Regency. Malang Regency is the second largest region in East Java. Malang Regency stretches form upland to coastal areas. Therefore, to determine the suitability of labour needs to manage natural resources cannot be generalised.

With the existence of regional autonomy, each region must be able to prepare vocational schools based on local potential with a number of areas of expertise in accordance with their respective regions [7];[8]. Therefore, the regional government is one of the important elements that can realise the compatibility between expertise competencies. So, this research will find out what VHS majors are expected by the local government, especially the sub-district of a regional government to manage local potential.

2. Method

The research used a qualitative, descriptive approach. The following is data collection which will be processed according to the qualitative methods as follows.

2.1 Documentation

Documentation study also known as a literature study is collecting data techniques by studying documents to obtain information or data related to research. Data is divided into two forms which are primary and secondary data sources as archives, maps, images, and graphics [9]. In this study, documentation techniques are used to find out and obtain data on the potential of the region and VHS major programs in Malang Regency. Data sources in this research are from previous research, and government documents.

2.2 Observation

Observation is an activity carried out on a process or object. This is done with the aim of feeling and understanding the knowledge behind a phenomenon based on previous research or another source. The purpose of observation is to get the information needed to proceed to the analysis phase [9];[10]. In this study, observation techniques are used to obtain data in the field related to the potential of the region and VHS major in the Malang Regency.

2.3 Selection of Variables

Local place-based learning has an important role in the 21st century. This learning method is able to improve the ability of students required by 21st century learning, namely: learning and innovation skills, digital literacy skills, and career and life skills [11]. Twenty-first century skills for students are very useful to improve the development of students to be able to face any changes in the world [12]. In its implementation, the government played an important role in the establishment of community vocational education. The government is not only responsible for providing but motivating them to have their own desire to receive vocational education [13].

In accordance with several statements regarding place-based education listed above, the local based education in accordance with the literature review of the literature above are:

a. learning is emphasised in local aspects such as history, environment, culture, economy, literature, and art in a place;

b. the community functions as a resource and partner in every aspect of teaching and learning;

c. relevant learning between the academic world and the real world;

d. graduates are absorbed to meet the local workforce.

2.4 Data Analysis

Qualitative data analysis is used to describe the relevance of vocational majors with regional potential in Malang Regency. This analysis generally uses Content Analysis. This method is used to determine human perception of certain things by using oral and written communication media [14]. The analysis is carried out through the following steps: 1) processing and preparing data from the results of documentation studies, interviews, and observations; 2) reading the entire data; 3) coding data; 4) describing data; 5) interpreting data. Furthermore, the results of the identification of each region are compared to see differences and similarities regarding the needs of departments in their area.

3. Results and Discussion

In accordance with the revised draft of the 2016 Regency spatial plan (RT / RW), which states that the development area in Malang Regency is divided into 6 [15]. Development area 1

service centers in Malang City, Lawang, Singosari, Dau, Karangploso, Wagir, Pakisaji, Tajinan, Bululawang, and Pakis. The 2nd development area is Kepanjen (as a Regency Service and Capital Center), Gondanglegi, Sumberpucung, Wonosari, Ngajum, Kromengan, Kalipare, Donomulyo, Pagak, and Pagelaran. The 3rd development area is Ngantang (Service Center), Pujon, and Kasembon. The 4th development area Tumpang (Service Center), Poncokusumo, Wajak, and Jabung. 5th development area is Turen (Social Service Centers), Dampit (Economic Service Center), Tirtoyudo, and Ampelgading. 6th Development area Port and Urban Service Centers in Sendangbiru, Sumbermanjing Wetan, Gedangan, and Bantur. The map of distribution of Malang Regency development area can be seen in Figure 1.

Every development area (WP) has a different and distinctive potential. This is not only a means of appearing differently and showing identity, but must be one way to accelerate regional development on its own [16], so each development area must have a vocational major based on specific local potential.
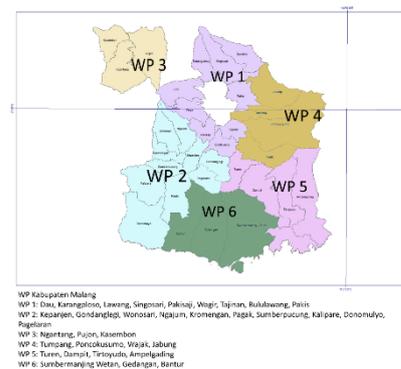

Figure 1. Malang Regency Development Area

From six development areas, there are few areas that have dominant areas in the mountains, and few areas that are dominant in coastal areas. Therefore, in the discussion, it was divided into two different regions namely the upland and coastal regions.

3.1 Upland Area

Areas in the upland are WP 1, WP 3, and WP 4. To conduct a qualitative descriptive analysis of vocational majors needed that must exist upland, the researcher first identifies local

potential. A data triangulation method is done by comparing the regional planning agency (BAPPEDA) and sub-district government. The following table (Table 1) is the result of identifying potential areas in the upland.

Table 1. Upland's Local Potential Range in Malang Regency

based BAPPEDA	Under the Local Government	Potency
Tourism	Tourism	Tourism
Agriculture	Agriculture	Agriculture
Industry	Industry	Industry
Plantation	Plantation	Plantation
Livestock		

The results showed that the plantation, agriculture, tourism, and industry are the biggest potential in the Malang Regency upland area. With its geographical conditions, it was very reasonable if seen from a considerable nutrient availability in upland, so it was suitable for agriculture and plantations [17]. Agriculture and plantation are the main sector that can be processed and require secondary sectors such as industry and tourism [18]. This exploration is important in terms of the welfare of society [19].

In the end, the local government workforce requires professionals who can manage the local potential which can be taken from the VHS graduate. Interview results obtained several VHS majors that government needed to meet local labor in plantations, agriculture, tourism, and industry sectors. More clearly it can be seen in Table 2 below.

Table 2. VHS's major needs in the upland area

Areas of expertise	Major	Potential requiring
Technology and engineering	Construction technology and property	Industry
	Mechanical Power	Industry
	Mechanical Engineering	Industry
	Industrial Engineering	Industry
	Automotive Engineering	Industry
	Electrical engineering	Industry
Information and communication technology	Computer Engineering and Information Technology	Industry
Health and Social Work	nursing	all sectors
Agribusiness and Agro-technology	Crop agribusiness	Agriculture and plantation
	Livestock Agribusiness	Agriculture and plantation
	Animal Health	Agriculture and plantation
	Agricultural Product Processing Agribusiness	Agriculture and plantation

Areas of expertise	Major	Potential requiring
	Agricultural engineering	Agriculture and plantation
	Forestry	Agriculture and plantation
Business and management	Business and Marketing	all sectors
	Office management	all sectors
	Accounting and Finance	all sectors
Tourism	Hospitality and Tourism Services	Tourism
	culinary	Tourism
	Beauty	Tourism
Arts and Creative Industries	Music Art	Tourism
	Dance	Tourism

3.2 Coastal Area

The coastal areas in Malang regency are WP 2, WP5, and WP 6. To perform descriptive and qualitative analysis of vocational majors that must exist in coastal areas, first the researcher identifies local potential. Data triangulation method are achieved by comparing the data of regional planners and local governments. There is then identification of local potential located in coastal areas (Table 3).

Table 3. Local Potency of Coastal Area in Malang

Bappeda	Local government	Potency
office block	Plantation	Craft
Tourism	Fishery	Tourism
Craft	Agriculture	Fishery
Fishery	Craft	office complex
Plantation	Tourism	Plantation
Mining	office block	
Industry		

Coastal areas, according to sub-district government, has potential plantations, fisheries, agriculture, crafts, tourism, and office blocks. The dominant potential in coastal areas is fisheries. Offices were selected because there is flatter area there. So, this region has the potential for an office as well. With the complexity of potential in coastal areas, it is necessary to manage coastal area with conservation principles [20]. Thus, a great need of local labor. Thus, the government requires expertise in the field below.

Table 4. VHS major needs in coastal areas

Areas of expertise	Expertise Program	Potential Need
Technology and engineering	Construction technology and property	all sectors
	Mechanical Power	all sectors
	Industrial Engineering	all sectors
	Automotive Engineering	all sectors
	Electrical engineering	all sectors
Information and communication technology	Computer Engineering and Information Technology	all sectors
Health and Social Work	Pharmacy	all sectors
Agribusiness and Agro-technology	Agribusiness Agricultural Product Processing	Agriculture
	Agricultural engineering	Agriculture
Maritime	Fishery	Fishery
Business and management	Business and management	all sectors
	Office management	office complex
Tourism	Hospitality and Tourism Services	Tourism
Arts and Creative Industries	Design and Craft Products	Tourism and craft

From the description above, there are different needs of the VHS major. So, the need of the VHS major must be tailored to local potential [1]. The difference is clearly seen, dominant local potential in the highland is agriculture and the dominant potential in coastal areas is fisheries.

4. Conclusion

Malang region stretches from the upland to coastal areas. Thus, there is the potential for high diversity. Different competency requirements manage local potential with different geographical conditions. The difference is clearly seen through the dominant local potential in the highland is agriculture and the dominant potential in coastal areas is fisheries. In addition, office blocks are also prioritised in relatively lower plains. Under these conditions, the goverment needs VHS graduates to manage the local potential of their area. Major requirements in the highlands are technology and enginering, information and communication technology, health and social workers, agribusiness and agrotechnology, business and management, tourism, art and creative industries. Majors required on the coast are technology and engineering, information and communication technology, health and social workers, agribisness and agrotechnology, maritime affairs, business and management, tourism, arts and creative industries.

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