



## Disparity in the Availability of Vocational High Schools with Developmental Needs Based on Regional Superior Potential

แดนนี่ ไมราแวน<sup>1</sup> สาริพุติน<sup>2</sup> เอน่า<sup>3</sup> และอินดา คอรรันนิสา<sup>4</sup>

Danny Meirawan<sup>1</sup>, Saripudin S<sup>2</sup>, Ana A<sup>3</sup>, and Indah Khoerunnisa<sup>4</sup>

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### บทคัดย่อ

สาเหตุของการว่างงานในผู้สำเร็จการศึกษาระดับอาชีวศึกษาเกิดจากแนวโน้มการจัดหาแรงงานของชุมชนไม่สอดคล้องกับชุมชน ผู้สำเร็จการศึกษามีความสามารถในระดับต่ำ จำเป็นต้องมีการพัฒนาศักยภาพหลักสูตรที่มีความเชี่ยวชาญ และผู้สำเร็จการศึกษามีความต้องการเพิ่มระดับศักยภาพของการศึกษาสายอาชีพ ที่มีกลยุทธ์ในการเร่งการพัฒนาในระดับภูมิภาคด้วยการเปิดโอกาสในการเพิ่มกิจกรรมทางเศรษฐกิจความต้องการแรงงานและความต้องการของผู้สำเร็จการศึกษาระดับมัธยมปลายอาชีวศึกษา การเชื่อมโยงที่เหมาะสมและการแข่งขันของโรงเรียนมัธยมอาชีวศึกษา ที่อาจเกิดขึ้น การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษาความแตกต่างในความพร้อมของโรงเรียนมัธยมอาชีวศึกษาที่มีความต้องการการพัฒนาตามศักยภาพของภูมิภาคใน West Bandung Regency ข้อมูลเกี่ยวกับความพร้อมของโรงเรียนมัธยมอาชีวศึกษาได้รับจากเว็บไซต์อย่างเป็นทางการของผู้อำนวยการฝ่ายพัฒนาโรงเรียนมัธยมอาชีวศึกษา ศักยภาพท้องถิ่นส่วนใหญ่ที่มีอยู่ใน West Bandung Regency อยู่ในภาคการเกษตร ศักยภาพนี้มีอิทธิพลต่อการครอบงำของเศรษฐกิจ ได้แก่ ธุรกิจการเกษตรและเทคโนโลยีชีวภาพปศุสัตว์การเพาะปลูก และการแปรรูปอาหารเครื่องดื่ม นอกจากนี้อุตสาหกรรมสร้างสรรค์และการท่องเที่ยวก็เป็นเรื่องปกติ มีโรงเรียนอาชีวศึกษา แห่งในบันดุงตะวันตกซึ่งประกอบด้วยความเชี่ยวชาญ 6 ด้านความเชี่ยวชาญ 15 หลักสูตรและความ 91 ความแตกต่างสูงระหว่างความพร้อมของโรงเรียนมัธยมอาชีวศึกษาที่มีศักยภาพทางเศรษฐกิจ เชี่ยวชาญ 201 ทักษะ และศักยภาพอุตสาหกรรมจะปรากฏให้เห็นความต้องการในการพัฒนาโปรแกรมที่มีความเชี่ยวชาญให้สอดคล้องกับศักยภาพที่สูงขึ้นของภูมิภาค

**คำสำคัญ:** ความสัมพันธ์ โรงเรียนมัธยม อาชีวศึกษา การพัฒนาศักยภาพ

### Abstract

The reason for the high level of open unemployment for Vocational High School graduates is not only due to the tendency of the community to choose a program of expertise that is in high demand. A low level of competency of graduates plays a role and increases the level of supply of labor that is not absorbed. Identification of superior regional potential provides new hope for

<sup>1</sup> Faculty of Technology and Vocational Education Indonesian University of Education Bandung, Indonesia, dmeirawan@upi.edu

<sup>2</sup> TEDC Polytechnic Bandung, Indonesia saripudin@poltektedc.ac.id

<sup>3</sup> Faculty of Technology and Vocational Education Indonesian University of Education, Bandung, Indonesia ana@upi.edu

<sup>4</sup> Post-Graduate Studies School Indonesian University of Education Bandung, Indonesia, indakhkhoerunnisa@upi.edu



vocational education. The strategy of accelerating regional development with the opening of opportunities for increasing economic activity demand for labor, and the needs of Vocational High School graduates are expected to be created as a result of optimizing the link and the match of Vocational High Schools with superior regional potential. This research aims to describe the disparity in the availability of Vocational High School with developmental needs based on regional potential in West Bandung Regency. The qualitative approach was used in this research. Data on regional superior potential was obtained by survey. Data on the availability of Vocational High School was obtained from the official website of the Directorate of Vocational High School Development. The majority of economic potential available in West Bandung Regency is in agriculture. This potential influences the dominance of the economy, are agribusiness, livestock, plantations, and food beverage processing. Also the creative industry and tourism are quite common. There are 91 Vocational High Schools in West Bandung Regency, consisting of 6 areas of expertise, 15 program of expertise, and 201 competencies of expertise. The high disparity between the availability of Vocational High School with economic potential and industrial potential is visible. The need to develop a program of expertise by superior regional is proposed.

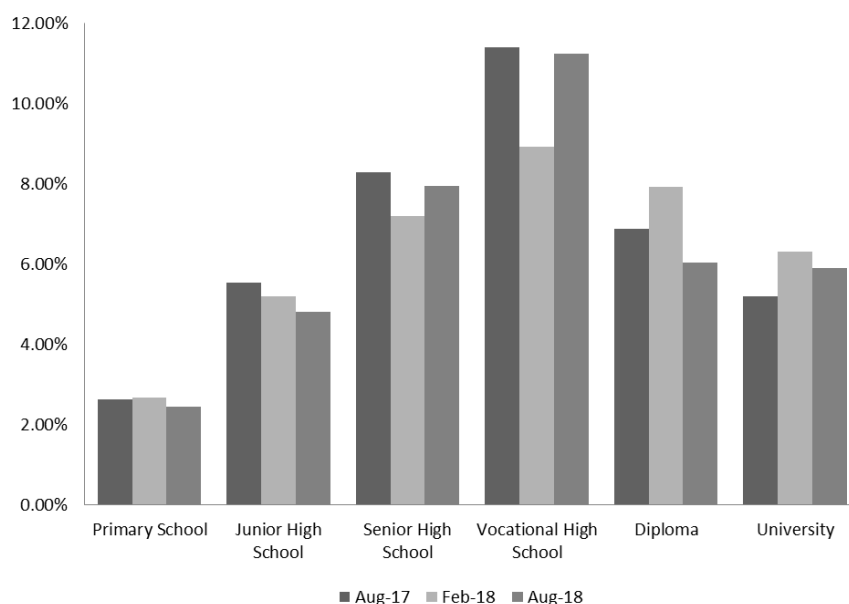
Keywords: Relevance; Regional Superior Potential; Vocational High School

## Introduction

As a result, changes have had a severe impact in the global economy of technological developments on the younger generations [1]. In Indonesia, the dominance of the open unemployment rate based on the highest education is occupied by Vocational High School graduates with a total of 11.24 percent, followed by Senior High School graduates with a total of 7.95 percent [2]. Open unemployment is an indicator to measure the level of labor supply that is not used or not absorbed by the labor market [2]. The offer of prospective workers who are not absorbed from the two levels of education is seen, while graduates of primary education tend to be more receptive to various types of work. The open unemployment rate, according to the highest education level completed in 2018, is presented in Figure 1. The cause of the high level of open unemployment has been linked to the lack of available employment opportunities [3]. However, another assumption that contributes to an increase in the unemployment rate is the low competency of prospective workers [4]. Lack of alignment of Vocational High Schools with the workforce, and the lack of response to the demands of economic development is also an illustration of current vocational education [5]. The tendency to focus on a single function to prepare students to be able to work in a particular field of expertise as employees are not in line with the demands of various labor market demands [6]. This condition is not by government policies in improving the quality of human resources through increasing the relevance of



education. Preparing vocational education graduates that are more oriented towards fulfilling the workforce and the needs of the industrial world is the main direction of the relevance of education [5].



**Figure 1:** The open unemployment rate according to the highest education completed in 2018

The connection between users of vocational education graduates and education and the compatibility between *employee* and *employer* is the basis for the implementation of vocational education [7]. Vocational education is economic education; therefore, it must be pro-creation of employment, pro-economic activities, and pro-welfare [5]. Questions of *what must be produced*, *how to produce it*, and *for whom its use* must be answered correctly. In line with the demands of the medium-term development plan for education, which is detailed with the *master plan* for accelerating and expanding Indonesia's economic development in 2025, it should be a concern for developers of Vocational High Schools [8].

The three main strategies for realizing it are regional economic development based on mapping the advantages and potentials of each region, developing national and international connectivity to achieve *locally integrated and globally connected*, and increase human resources and scientific capacity [9]. Optimizing the development of Vocational High Schools based on regional potential, has an excellent opportunity to contribute to the acceleration of the national economy. The regional potential is a high strength or essential ability possessed by a particular area in terms of natural resources, socio-cultural aspects, or human resources that can be developed. Also, the regional potential can produce an added value for the area [9]. In developing an area as a national development strategy, three factors are closely interrelated and interact with each other, are natural resources, human resources, and technology. An area that



has abundant natural and human resources, and can utilize and develop technology tends to develop faster [11].

The fact in the field, the development of Vocational High Schools, is still firmly tied to community anomalies, are by choosing a comprehensive program of expertise [9]. The tendency of Vocational High School graduates to find work in urban areas in the formal sector results in slow regional development because the skilled workers prepared prefer to work in areas. This research aims to explore the availability of regional potential from economic potential and industry potential.

## Research Method

Descriptive research method with a qualitative approach was chosen to describe the availability of Vocational High Schools in West Bandung Regency, aligned with the potential of existing regions. Information on regional potential includes economic potential and industrial potential obtained from the research results of the West Bandung Regency Research and Development Agency in 2016. Data of Vocational High School is obtained from the official website of the Directorate of Vocational High School Development, namely Primary Data of Vocational High School with the website address <http://datapokok.ditpskm.net>. West Bandung Regency as the place for research was chosen because it has a fairly diverse regional character, covering the potential of agriculture, tourism, and industry which is quite complete.

The population of this research is all the potential areas of West Bandung Regency. Research samples are economic potential, industry potential, and Vocational High Schools. Research data was collected using the document analysis method. Recapitulation table is used to assist the data analysis process. The four components of data analysis are data collection, data reduction and grouping, data presentation by tabulation, and the conclusion drawn in analyzing research data [10].

## Results and Discussion

### A. *Economic and Industrial Potential in West Bandung Regency*

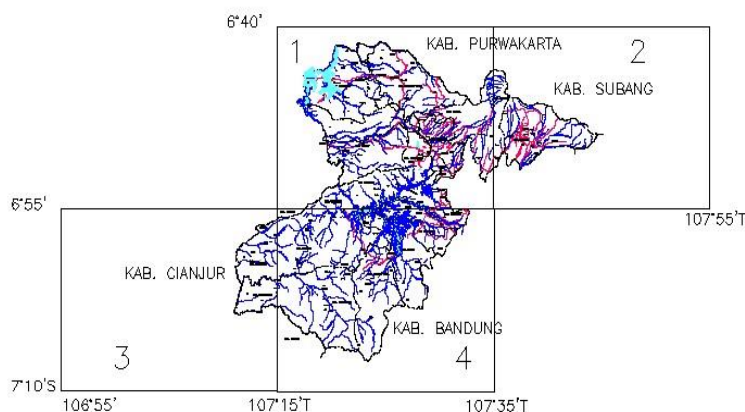


Figure 2: Map of West Bandung Regency

Geographically, West Bandung Regency is located between  $6^{\circ}, 373'$  up to  $7^{\circ}, 131'$  South latitude and  $107^{\circ}, 110'$  to  $107^{\circ}, 440'$  east longitude. With an area of 130,577.40 hectares, the geographical condition of West Bandung Regency has advantages in terms of communication and transportation. In terms of Government, West Bandung Regency consists of 16 Districts with a number of 165 villages. The map of West Bandung Regency is presented in Figure 2.

The local potential available in West Bandung Regency is agricultural potential. An area of 12,168 Ha of wetlands and 118,409 Ha of land is agricultural land. This potential influences the dominance of the economy in West Bandung Regency, namely the potential of agribusiness and agrotechnology, animal husbandry, plantations, and food beverage processing. In addition, the creative industry and tourism are quite common. The percentage of domestic products based on business fields in West Bandung Regency is presented in Figure 3.

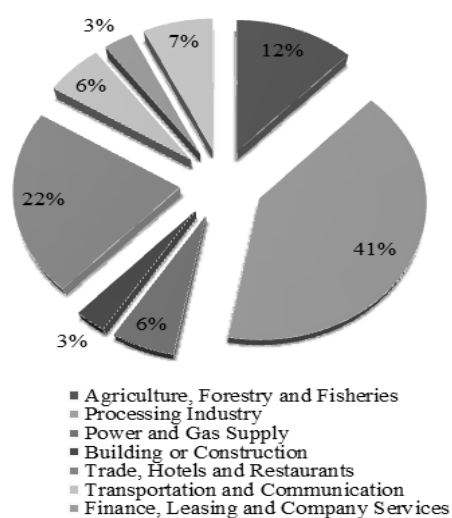


Figure 3: Domestic products based on business fields in West Bandung Regency



Some agricultural commodities are superior commodities in West Bandung Regency. Leading commodities in the field of horticulture are vegetables, fruits such as avocados, guava, bananas, and flowers such as chrysanthemum, gladiola, and orchids. Other agricultural commodities that are produced quite a lot in West Bandung Regency are rice, corn, and beans. The dominating potential of plantations is tea. Almost every sub-district produces and produces tea. Other plantation products such as coffee and rubber began to be widely marketed in big cities such as Jakarta and even Singapore, making it possible to export plantation products. Another potential that is quite abundant is livestock. The leading livestock is dairy cows and beef cattle. West Bandung Regency is one of the regions that fulfill the demand for beef in West Java. Optimizing the development of *Meat Business Center* (MBC) is quite strategic in driving the regional economy from their livestock potential. Fisheries potential in West Bandung Regency covers an area of 16,579 Ha by means of a reservoir with a floating net system. Many small, medium, and micro businesses in West Bandung Regency process fish into sausages, *abon*, or *pindang* as products to be sold [11].

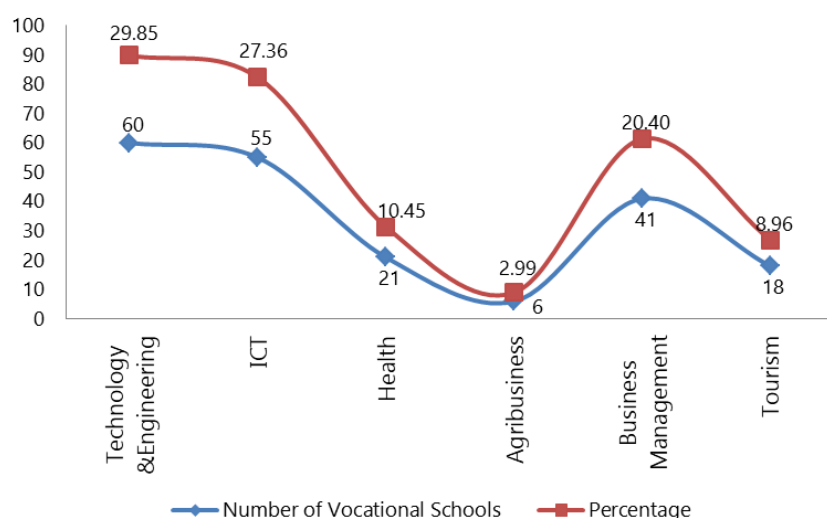
The existing industrial potential is dominated by small woven and food industries. Light industry in the field of agricultural and fishery products processing, and animal feed and fish processing industries are developing in five sub-districts. Further more, the mining industry, which is andesite, sand, marble, and limestone, is available in two sub-districts. Tourism potential is quite widely available in West Bandung Regency, namely the potential of nature tourism, heritage tourism, and family tourism. Examples of nature tourism in this region are Tangkuban Perahu Mountain, Burangrang Mountain, Maribaya Waterfall, Begonia Park, Stone Mountain, and others. Heritage tourism includes the bosscha observatory and the tomb of Karl Adolf Bosscha. Family tourism includes Kampung Gajah village, Lembang Bamboo village, Ciwangun Indah camp, Grafika Cikole tour, Floating Market, Farm House, and others. The potential of superior creative industries in West Bandung Regency is woven crafts, handicrafts made from bamboo, fish bones, crocodile skin, and shells. Creative industries in the field of food processing produce several distinctive products, namely Cililin Wajit and milk-based processed food in the Lembang area.

Determination of regional superior potential is not intended to create a *difference-holistic* according to various regional characteristics, but rather a step forward in developing regional development acceleration strategies in accordance with their potential [9]. The regional superior potential is expected to contribute to the regional economy which has a direct and equitable impact on each region in accordance with its superior potential.



### B. Availability of Vocational High Schools in West Bandung Regency

A total of 91 Vocational High Schools are located in West Bandung Regency. 8 are of public, and 83 are private. Based on the results of a survey conducted by the Research and Development Agency in 2016, Vocational High Schools in West Bandung Regency cover 6 Areas of Expertise, 15 Programs of Expertise, and 201 Competencies of Expertise. Determination of the area of expertise refers to the spectrum of Vocational High School in 2016. Availability of Expertise in West Bandung Regency is presented in Figure 4.



**Figure 4:** Availability of Vocational High Schools in West Bandung Regency

Availability of Vocational High Schools in West Bandung Regency is dominated by Technology and Engineering Skills, namely 29.85% or 60 skill competencies, and Technology and Information Skills, with 27.36% or 55 competencies of expertise, Health Skills with 10.45% or 21 competencies of expertise, Agribusiness and Agrotechnology Skills, with 8.96% or 6 competencies of expertise, Business and Management Skills, with 20.40% or 41 competencies of expertise, and Tourism Skills with 8,96% or 18 competencies of expertise. In detail, the availability of Vocational High Schools based on existing competencies of expertise is shown in Figure 5.



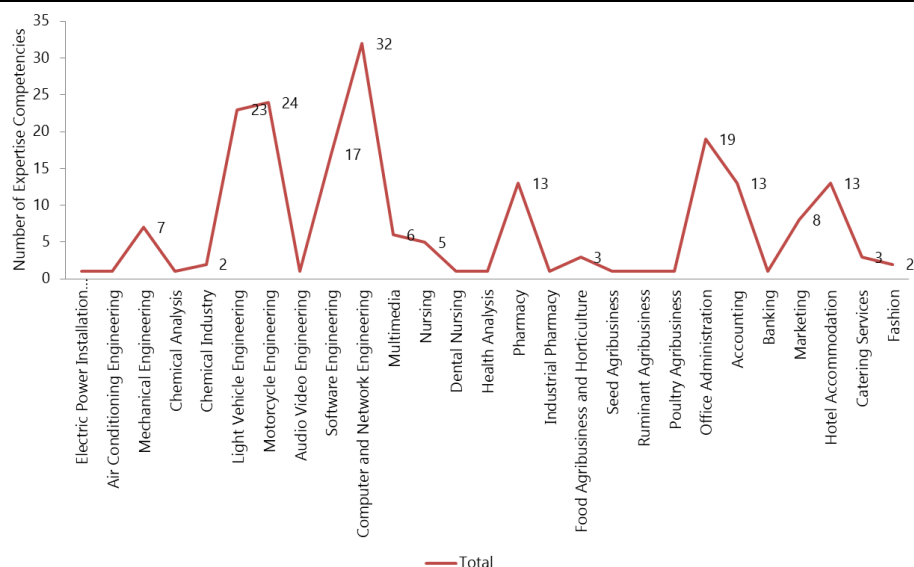


Figure 5: Availability of Competencies of Expertise in West Bandung Regency

The Directorate of Vocational High School Development in 1998 reformed vocational education with a *skill toward* concept in the year of 2020 based on *demand driven* as one of the efforts to harmonize vocational education with the needs of the community [5]. This effort is in line with the appeal of UNESCO on the development of vocational education to reorganize the organization and its coordination with the workforce and the availability of natural resources [12]. However, from the availability of Vocational High Schools in West Bandung Regency, there is a high disparity between the availability of Vocational High Schools and regional superior potential, both in economic potential and industrial potential. The implementation of Vocational High Schools is still based on the many people's interest in various programs of expertise, thus affecting many graduates who choose to find employment in urban areas in the formal sectors. This condition contributes to the delays in regional development and is not in line with the policies set by the government. In addition, the opening of new employment opportunities in accordance with regional potential is more difficult to realize.

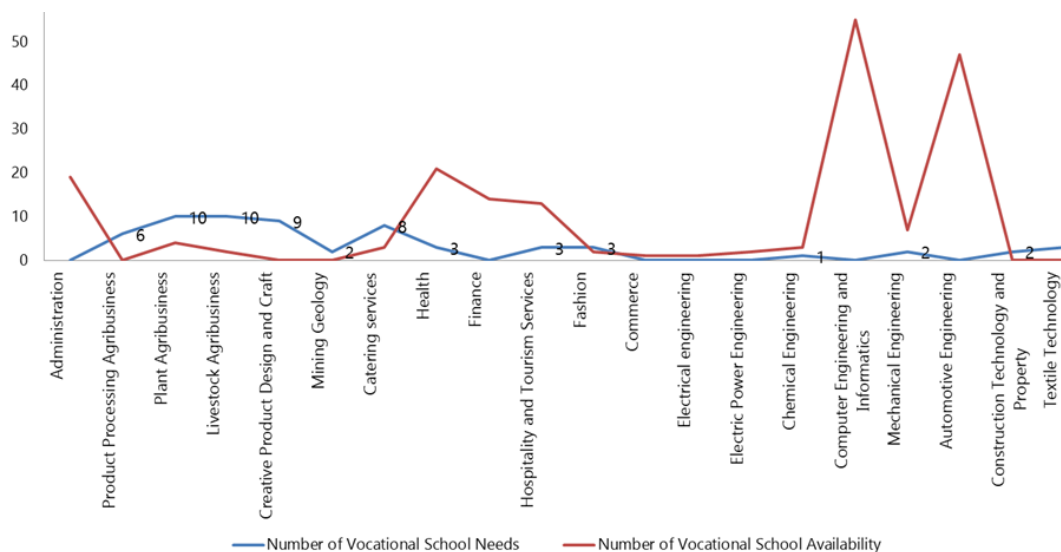
### C. Needs of Vocational High School in West Bandung Regency

The regional superior potential has *linkages* to the level of development, especially the development of education in a region [13]. The structure of education especially vocational education consists of three sectors, namely primary sector, secondary, and tertiary. The primary sector covers the achievement of graduate competencies, the secondary sector covers the workplace area, and the tertiary sector covers the level of development of education towards





the economy. Regional superior potential becomes an important part of the economic sector of a region.



**Figure 6:** Comparison of availability and needs of Vocational High Schools in West Bandung Regency

Referring to the results of the analysis of regional superior potential and the availability of Vocational High Schools in West Bandung Regency, the development of Vocational High School programs of expertise still needs to be optimized, including the programs of expertise in Plant Agribusiness, Livestock Agribusiness, Craft Design and Creative Products, Catering Services, Agricultural Product Agribusiness and Fisheries, Textile Technology, Nursing, Hospitality and Tourism Services, Fashion, Construction Technology and Property Business, Mechanical Engineering, Mining Geology, and Chemical Engineering. In detail, the programs of expertise proposed to be developed are presented in Figure 6. It is hoped that the disparity in the differences between available Vocational High Schools and regional superior potential can be reduced.

Management of Vocational High Schools and the issuance of its founding permit are two affairs that are currently the responsibility of the provincial government. This authority makes the provincial government act as '*power holders*' of their respective regional potential. Optimizing the suitability of Vocational High Schools with regional potential is hoped to spur economic growth which has implications for the increasing demand for labor and the needs for Vocational High School graduates to increase. The low level of *optimal-conformity* of Vocational High Schools towards regional potential causes many graduates to be unemployed and decide to continue pursuing higher education which is not relevant to their vocational skills [9].



Illustration of disparity in the availability of vocational high schools with workforce needs based on the availability of natural and industrial resources in West Bandung Regency must be a common concern. The results of this study are recommendations for a vocational high school development team in West Bandung Regency. The development of Vocational High Schools based on regional superior sectors must be sought to prepare human resources that encourage the growth of the multi-effect sector.

## Conclusion

The superior potential of West Bandung Regency is dominated by agriculture with prominent economic potential, namely the potential of agribusiness and agrotechnology, livestock, plantations, food processing, creative industries, and tourism. The availability of Vocational High School programs of expertise with the needs based on regional superior potential still shows quite a high disparity. The programs of expertise proposed to be developed in order to adapt to regional superior potential and the form of synchronization optimization between the preparation of skilled human resources and the availability of natural resources are namely program of expertise of plant agribusiness, livestock agribusiness, agricultural and fishery product processing agribusiness, creative design and products, catering services, textile technology, construction technology and property business, mechanical engineering, mining geology, and chemical engineering. The strong cooperation between institutions providing vocational education with the provincial government as '*power holders*' greatly determines the realization of the development of Vocational High Schools based on regional superior potential. Research on the disparity in the availability of Vocational High Schools with regional superior potential as an effort to develop Vocational High Schools should not only be done in West Bandung Regency. The use of technology to accelerate development needs to be a recommendation for further research, such as the use of Web GIS to map Vocational High Schools in Indonesia and potential industries in the regions.

## Refferances

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