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Mismatching Skills, The Current Problem among Vocational Graduates in East Java

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Abstract

Preliminary study at Trenggalek Regency show that most of vocational graduates from multimedia department work as shopkeeper on the department stores or as a salesman/saleswoman. This fact realize us that the purpose of vocational high school is not achieved yet. The research aims to describe and present mismatching skills data among vocational graduates. This study is descriptive with quantitative approach which focuses on multimedia department. The data were gained from 2 public schools. This data is collected from students who graduate on 2017 school year in SMK Raya and three generation graduates from SMKN Jaya. The method that been used are documentation and interview from career center at each school. As a result from 279 vocational graduates on multimedia department, graduates who study in the suitable field is 9%, who continue their study in the different field 27%, who work on the appropriate field approximately 18%, who get their work in the different field around 38%, and 8% of graduates still in the waiting period. Finally, the conclusion is vocational graduates can't fill yet the job market at suitable field. Therefore, role of all education stakeholder are needed to reduce mismatching skills between background of study and field of work.

Keywords: Current Problem, East Java, Mismatching Skills, Vocational Graduates

Introduction

Vocational High School (VHS) is a school that prepare its student to enter the world of work. The learning process in VHS is technical and practical applied with long life education principal. This learning concept will produce professional and confidently graduates. Vocational education named as education for adult because it is designed to prepare a person become readiness employee. The statute number 20, 2003 section 15 verse 2 said that only certain skill which prepared trough vocational education. The field of every skill divide into some spectrum, such as technology and engineering, energy and mining, information technology and communication, health and social activity, agribusiness and agro technology, maritime, business and management¹⁰, hospitality, and art and creative industry (Direktorat Jenderal Manajemen Pendidikan Dasar dan Menengah Departemen Pendidikan, 2008).

temen Pendidikan, 2008). That education spectrum facilitate to make grouping the field and skill of vocational high school graduates.

The learning process that done at vocational high school based on decided curriculum by government. The result of this learning process will be suited with competence standard of graduates, which contained in education and culture ministry adjustment number 20, 2016. Beside that, education can't promote sustainability while it remains dominated by modern form of knowledge and pedagogy. (Pavlova, 2009). Generally graduates have to master the base competence which is on the graduates competence standard and specifically, master the base competence that given at learning process. Skills that gotten from learning process will be practiced at world of work, so it must suitable between the learned competence at the school and the field of work that will be entered.

The problem which happen at Trenggalek regency, East Java province is many vocational high school graduates work at the field that unsuitable with their education background. Based on the result of interview with productive teacher at one of vocational high school in Trenggalek, most of graduates work at marketing field. They work as shopkeeper, casier at the self-service store, marketer at mobile phone store, etc. They study about technology but they work at the marketing field, which everyone can do it, even junior high school graduates. The mismatching skills case can indicate that the purpose of vocational high school have been reached yet, that is prepare students become employees who ready to work in their field. This case can be the evaluation matter for government, especially Directorate of Vocational High School Development (DitPSMK). Skill mismatch also happen in Europe. Mismatch patterns strongly rely on the measure of mismatch that is adopted. In Europe, overeducation is enhancing and undereducation is decreasing on at least one value in at least half of the countries for which such trends can be rated. (Organización Internacional del Trabajo (OIT), 2014).

Allen & Weert (2007) found that the relations between educational mismatches and skill mismatches are much tighter. In each country, people who find jobs that do not match their field of education or their qualification level are for a large part in situations in which their skills are underutilized. The authors show however that the utilization of the skills acquired within the education system is lower in the two countries in which the horizontal and vertical matches between education and employment are the strongest (Germany and the Netherlands versus Spain, UK or Japan). This counter-intuitive result brings to the fore the importance of taking into account the heterogeneous dimension (national and individual) in our answers to these subjective questions. A mismatch between the level of education and the job level always has negative effects on the worker's wages and satisfaction, whereas a mismatch between the field of study and field of work has no significant effect, whatever the country. According to the Allen and De Weert's result (2007), it will be different with this result. They found that there is no significant effect about mismatch in the field of study and field of work. Maybe it is right, but for the institution such as vocational high school

or training center it will be the doubtfulness for the student or costumer that will join into. The capability of the institution is not good enough. If there is a department of multimedia so the output of it is a human resource that master in the multimedia field not in another field. In Indonesia, the vocational institution have a mission to transform the students from they do not have ability to do something to someone who master something that they have learned and implement their skill into world of work. With that objective, we have to pay attention to the suitability between educational background and field of work's employee that graduates from vocational institution. The method that they used is same with the method in this research, that is documentation, but in this research there is one method again that used to assembled the data, that is interview. The interview is used to know the performance of division that manage and inform job vacancy for the graduates of vocational high school.

Béduwé & Giret (2011) said that the level of mismatch can be high for different reasons: young people with qualifications in certain education field considered the demand and selective, are sometimes offered jobs in fields that do not match their training; whereas people with qualifications in less demanding field see their potential employers turning away from them. The field of training and the diploma can also influence the individual productivity: within one training area and one educational level, there can be a high level of diverification among individual abilities. In this case, it is reasonable to believe that the matching process will lead only part of these graduates (those with the highest abilities) into jobs that are related to their field of education, particularly if this education/job match is accompanied by higher wages, whereas the others will not find jobs in their field of education. According to the result, mismatching between the field of study and the field of work is caused by the mismatching process that practiced in the vocational institution and the ability of student in their field are less. In this research, the author use interview method to know the process and performance of career center in the school to bridge between graduates and world of work. Same with Bruyere & Lemisre's research (in Béduwé & Giret, 2011), this research also using documentation method to gathered the graduates data. But in this research still show s the percentage of graduates mismatches in the vocational institution, especially in the Trenggalek regency. But in this research

have not applied yet the depth analysis about the relation between level of graduates competencies and the suitability their field of work.

Based on the match between education and job to the normative and objective measures, we can approve or oppose the subjective measures based on individuals' opinion about their job matches their training, or the skills they learnt at school match with something that required to perform their job (skill match). Allen & van der Velden (2001) found the result that there is little relation between the different measures of horizontal mismatches from Dutch graduates: a large number of graduates whose jobs matched neither their matched neither their education level nor their field of study say that the knowledge and skills they learned at school are useful in their jobs. It seems therefore that the skills acquired within the education system by young people can be transferred from one field of work to another more easily than the normative approach tends to simply. However, this result's research indicate that there is a negative effects of skill mismatches on the workers' wages and satisfaction. The effect on the wages and satisfaction's employee are much stronger than the associated with formal education job mismatches. The results suggest therefore that between the education level and the subject of study, it is the match between the competencies of young people have learned at school and those required to perform their job that has a determinant effect on their professional situation and their behavior on the labor market. Therefore, the knowledge that acquired in the school can be practiced in the world of work but the percentage of this knowledge is not big. The knowledge that can be implemented in the labor market is basic knowledge. According to the revitalization's objective that upgrade the human resource in Indonesia through vocational education, so the point is vocational institution must have good output on their field. Vocational education is different with general education that only learn the theory, the vocational education must master the special competencies suitable with the study program. So, the emphasizing of vocational education objective in this research is needed. This research will be a pioneer of evaluation research to uncover the effectiveness of vocational education implementation in Indonesia. From many discussion above, now we found some question about mismatching skill in the vocational graduates, were the graduates

of vocational education work in the suitable field? How the field of work's vocational graduates spread? Were the mismatching skill happened in the multimedia field graduates?

Materials and Method

This research used data of graduates from 2 public vocational high schools (SMKN), multimedia department in Trenggalek regency. The location of the research is in SMKN Raya and SMKN Jaya. Sample of this research use the last three years graduates from SMKN Jaya and the last one year graduates from SMKN Raya. SMKN Raya still have one generation of multimedia department because this is a new department at this school. The researcher collected data using documentation method. Data are assembled from career center (BKK) through tracer study list in that school. Beside that, interview also used to know the performance of career center whether they work effectively to bridge graduates with the world of work and give information to the graduates the job that they need. The coordinator of career center as an informant of this data. The informants came from 2 schools that we did the research in. So the informants were not the student but the teacher. The informants were asked about the career center activity and effectiveness.

The subject of this research is vocational graduates from multimedia department which is included from information technology and communication field. The reason why multimedia department has been chosen because multimedia is department which has development in technology rapidly. This is one of the important department to overtake the digital technology development. This research is important because we have to know where is the graduates working, is this suitable with their background study or not. This research will describe how many the percentage of graduates who work in the matched field, who are at the waiting period, and who work in inappropriate sector. Then from the result of this research can be found the solution and recommendation of the problem.

Data that we need is alumni activity, such as are they work at the suitable field or not, are they study to the higher education, and are they be an entrepreneur. This study located in Trenggalek regency, East Java province because this region have small rate of unemployment compare with the other region that have similar characteristic, such as Madiun, Magetan, Ngawi, Bangka-

lan, and Sampang (Badan Pusat Statistik Provinsi Jawa Timur, 2017). The small rate of unemployment can indicate 2 things, that is the manpower work at the suitable field with their competencies or they work but unsuitable with their background study and skills that they have. So, this study will uncover the reality that happen in the society about suitability between field of work and study background of vocational graduates.

This study used quantitative approach with descriptive analysis with documentation and interview as the technique that used to collect data. Instrument to collect data that used was interview guideline with open question so we will get complete answer from informant. Data documentation that we got from career center would inform us what is the activity of the multimedia department graduates after they left the school, whether work or they study to the higher education, whether the field of their work suitable with their background study, whether the field of study at the higher education appropriate with their background during on the vocational high school or whether they will be an entrepreneur. Whereas the data that gathered from career center is about the performance of that division. Is that division work properly and how about the distribution of vocational graduates especially multimedia department? How about their field of work? and how the career center bring the graduates to their dream work¹²

The objective of this study is to identify amount of graduates that have been worked, on the waiting period, and study to the higher education, know the percentage of multimedia department graduates that work on the suitable and unsuitable field, analyze data that have been assembled and give the solution about the problem that happen in this region.

Results and Discussion

Based on the data documentation from multimedia department graduates tracer study through career center in 2 public schools in Trenggalek, researcher found the result on the following data:

Data on the table indicate that amount of graduates from SMKN Jaya that work in the inappropriate field is 75 persons while the total of graduates who continue their study to the higher education is 65 persons. In the percentage count, 37% multimedia department gradu-

ates work in the field that unsuitable, 31% continue their study on the different field with their education background, only 20% work on the suitable field, 8% study to the higher education on the matched department with their education background, and 4% not give their information yet about their activity. When the data are grouped by the suitability, there are 68% graduates both of work and continue the study which is unsuitable with the field of multimedia department and the percentage for the field that have the similarities with the graduates education background, there are 28% from both of work and continue to the higher education. From that cumulative percentage data, we can summarize that the graduates from SMKN Jaya who work or continue their study to the inappropriate field is more than the amount of graduates that work or continue their study on appropriate field even the amount of graduates who have unsuitable field almost a half of the total of graduates on the multimedia department. It mean that there are mismatching between field of the work and the lesson that graduates learn when they study.

We assembled the data from SMKN Raya only one generation because this school still have first generation of multimedia department alumni. Based on the table, the amount of graduates from SMKN Raya who continue their study in the suitable field is 6 persons or 8% on percentage, graduates who study in higher education on the

Table 1. Graduates' activity

	SMKN Jaya			SMK N Raya	Total
	14/15	15/16	16/17	16/17	
Study on the suitable field	5	7	6	6	24
Study on the unsuitable field	23	26	16	11	76
Work on the suitable field	11	15	16	8	50
Work on the unsuitable field	31	21	23	32	107
Waiting period	1	1	6	14	22
Total	71	70	67	71	279

inappropriate field as many as 11 persons or 15% of graduates in a whole, graduates who work in the suitable field is 8 person or only 11% and who work in the field that different with their education background as many as 32 persons or 45%, and the graduates who still in the waiting period is 20% or 14 persons. We can conclude that in this school the percentage of mismatching field also have big portion. Both the graduates who continue their study and work on the inappropriate field have bigger percentage than the suitable one. This fact realize us that many vocational graduates choose their field of study or work different with their education background on the vocational high school. As whole of documentation data that done at this research, the mismatching skills on the multimedia department have dominated. As a cumulative calculation from three generation alumni of SMKN Jaya and one generation of SMKN Raya, obtained this data, graduates who study in the suitable field is 9%, student who continue their study in the different field 27%, then graduates who work on the appropriate field approximately 18%, and graduates who get their work in the different field with their skills around 38%, and 8% of graduates still in the waiting period to look for their job.

Beside the information that we get from documentation technique, this research also assembled data about career center. As a division from external relation sector, career center have a big influence on the delivery vacancy information matter to the student or alumni in the school. Based on interview with coordinator of career center on the 2 public schools in Trenggalek, the vacancy informed to the alumni and 12 grade student spread through WhatsApp group and attach vacancy brochure in the announcement board in front of career center. Beside that, in the beginning of first semester in the 12 grade, career center give interest questionnaire to the 12 grade students to know the student's direction after they graduate from the school, are they want to work or continue their study to the higher education. According to the interest questionnaire, career center group students into work and study to the higher education group. To the students who include in the work group, they will be the responsibility of career center, so there are every vacancy information, career center will inform it to them. Student who want to study to the higher education will be the responsibility of guidance and counseling division, so every information about campus registration will be shared to them. Guidance and counseling division together with career center are the team that collaborate

each other under coordination of headmaster vice, external relation sector. Career center build a good connectivity with the student and alumni. Career center always inform vacancy information to the alumni. It always keep communication good between graduates and school. Career center is very welcome to the alumni from all of generation, whether old or young generation, as long as they need vacancy information. Alumni who need vacancy information, they can come to the career center and ask for the information. All of information about vacancy will be given to the alumni who need it. In other hand, career center also have a task to collect information about the work absorption from graduates through tracer study. With that information, school will know the percentage of graduates' absorption in the world of work and can make an evaluation from the result that it get to increase the work absorption of vocational graduates, especially multimedia department.

According to the result ¹ this study, there are mismatching between field of work and field of study with the education background on the vocational high school. Many vocational graduates, especially multimedia department work and study in the field that unsuitable with their competencies. Graduates work on various field but doesn't match with their skills. Majority, graduates work on the marketing field because this field doesn't need special skill, graduates from all department can apply to this field. Different with the qualification of multimedia field that need work experience and special skills on digital editing, design and photography or videography. Like in UK, whether competencies continue to have a future will depend on their ability to adapt to the emerging and transforming paradigms, atmospheres and environments. (Stokes, 2017). On the other hand, graduates who continue their study to the higher education also choose the department of study in different field. The choice of department of study are influenced by some consideration from multimedia department graduates, such as distance to the study location, cost of study, their passion of study, and opinion from parent. Majority, graduates choose department that differ ¹¹ with their competencies during study in the vocational high school. This case have to be concern to the school and government to reach the objective of vocational education. Vocational education aims to create graduates who

ready to work in the special field. The result of this research show that the objective of vocational education have not been reached yet well. Vocational graduates should master their competencies and work or continue the study at the suitable field. But in the fact, majority of vocational graduates especially multimedia department in Trenggalek regency doesn't master their competencies so they work and continue their study on the inappropriate field. From this data research, majority graduates work in the marketing field. This field should be matched with graduates marketing and accountant department. Multimedia department graduates should be work in the matched field, such as design, photography and film.

Economic theory recommend that when labor demand increases for any given skill and surpass its supply in the market, the relative fees and salaries of workers who have these skills should increase. (Holzer, 2013). The mismatching skill not only happened in Indonesia, but also in USA. This case taken place in Chicago city. Skill mismatch is an important aspect of labor market because of the impact can have on unemployment and the limited ability of monetary policy to mitigate its impact. (Faberman & Mazumder, 2012).

Career center as a division in the school that bridge between alumni and world of work implement its task well. Career center give student choices to determine their future, between to work and continue their study to the higher education. Career center also facilitates student the information of job vacancy that is a collaboration between school and industry. Both career center of two public schools have done their task well. The thing that need to be added is career center's task to direct student to the suitable field to work or suitable study program to continue the study to the higher education. It is important to help vocational education reach the objective. Career center suggestion will be considered by vocational students. Career center can be role as vocational guidance. The research that have done in Spain showed that vocational guidance was a successful program that has helped facilitate labour insertion of participating students. (Rodriguez, 2013)

Conclusion

The result of this study shows that there are mismatching skills between education background of vocational graduates especially from multimedia department with their field of work and study program that they will learn in the higher education. It indicate that vocational graduates can't fill

yet the job market in the suitable field. The important thing we can underline from this study that school especially career center should give a direction to the students during their study to choose the field that suitable with their work or study in the higher education. This matching of field of work and education background is the important point from vocational high school. The matching skills and field is the point from the objective of vocational high school in Indonesia. Through this research, we realize that the mismatching skills not only happen at the university graduates but also to the vocational high school graduates. To decrease the problem of mismatching skills, good cooperation is needed between school and industry. This cooperation can start from job vacancy that suited with the competencies of the students, so there is delimitation on the kind of industry which can cooperate with the school. Another way, school must built good cooperation in every department that its have, so every department have an industry which will receive the graduates after they finished their study. In the future, the research that matched is the quantitative research with survey method to know the reason why the vocational graduates choose the field of work or field of study are unsuitable with their education background. When the reason have been known, we also can resolve the mismatching problems that happen through government or stakeholder policy.

Suggestion

Based on the results of the research, there are suggestions for future research. (1) The research will be interested when the researcher investigate about the factor that influence graduates to choose their job. It will can be the answer of the mismatching skills. (2) For further research, the researchers can be expanded in the higher education or university, so researcher also can detect is there mismatching skill in this education level?

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