The innovation of technology utilisation in distributing employee by vocational secondary school career centre

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Abstract. Career Centre has a main role as a division in Vocational Secondary School (VSS) to bridge the students and alumni with their work field. Finding out how the success of the Career Centre’s performance is very important for evaluation purposes. This study aimed to: (1) find out the role of the Career Centre in distributing the graduates of VSS in Yogyakarta at the workplace; (2) find out the obstacle experienced and its solution. This was evaluation research using the quantitative descriptive approach. The results showed that Career Centre’s role was good accumulatively viewed from five aspects: (1) as seeker and provider of employment information; (2) conducting a coaching and employee briefing for students/alumni; (3) regarding stakeholders’ partnership; (4) regarding recruitment, selection, and graduate distribution; and (5) graduates tracing. As doing their role, Career Centres faced some obstacles, such as a limited number of administrators, mismatching skills among vocational graduates, less developed IT utilisation, and less organized administrative management. Career Centre’s performance has not been optimal thus it needs innovation. Optimizing technology utilisation by creating an information system with important and helpful features will improve the Career Centre in doing their role. Those features will facilitate the students, alumni, and administrators regarding job vacancies and recruitment information, work field recommendation, graduates’ tracing, administrative management, etc.

1. Introduction

Education is one of the needs of every human being. People will have difficulties to develop for doing something and certainly become an underdeveloped human without education. National Education System Law No. 20 of 2003 states that education aims to create a learning atmosphere and learning process so that students actively develop their potential to have religious-spiritual strength, self-control, intelligence personality, noble character, and skills needed by themselves, society, nation, and state. Vocational education is an education system that prepares students to have the knowledge and skills in certain fields of work needed by employment. Graduate marketing is one of the provisions in the implementation of the Vocational Secondary School (VSS) curriculum as well as the main measure in assessing its success.

VSS is projected to meet the needs of the middle-level workplace or to bridge between students and the workplace. The success of VSS in implementing educational programs is not only measured by the high student achievement and a large number of graduates but the success of graduates in the workplace.
One of the most considered problems in Indonesia is the high unemployment rate, so going to VSS is one of the solutions to reduce the existing unemployment rate. This was also supported by the government with the issuance of Presidential Instruction No. 9 of 2016 concerning the Revitalization of Vocational Secondary Schools in the Context of Improving the Quality and Competitiveness of Indonesian Human Resources. However, the Central Bureau of Statistics stated that VSS graduates contributed as the largest unemployment for 11.24% [2].

Each VSS has a Career Centre which needs to be professionally managed to bring the graduates to the workplace or industry. It also provides labour market information, provides career counselling and guidance, as well as work placements for graduates. Career Centre is expected to be able to provide career information services to the students towards their desired workplace. Career Centre is a partner of the Social Workforce Office and Transmigration. This was stated in the Joint Decree of the Director-General of Primary and Secondary Education at the Ministry of Education and Culture and Director General of Manpower Placement Development No. 009/C/KEP/U/1994 and No. KEP.02/BP/1994 concerning the Establishment of the Job Fair in the Middle Education Unit and Guidance for the Execution of the Job Fair. As a division that plays a major role in the preparation and placement of students as a prospective employee, it is expected to make a major contribution in terms of career decision making.

Career Centre of VSS in Yogyakarta has the programs which have been routinely carried out to run its role. These programs aim to facilitate the students and alumni to get a job, establish and develop a cooperative relationship with industry and stakeholders, carry out activities related to recruitment, and provide career guidance to graduates. Career Centre as a division which is assigned to deliver employee and motivate graduates to be confident in their abilities and be ready to have a career at the workplace by having the skills that they have acquired while studying in vocational education.

This study was conducted to find out the role of the Career Centre in distributing the graduates of VSS in Yogyakarta at the workplace and the obstacle experienced as well as its solution. Based on observations, Career Centres of VSS in Yogyakarta have constraints on the number of human resources and the comparison between the portion of teaching that must be fulfilled while working in the Career Centre. Furthermore, it was found that there was a mismatching skill among vocational graduates. Many graduates’ work fields did not relate to their study background in the VSS. It indicated that the performance of the Career Centre has not been maximally yet. It needs an innovation to ease their work without compromising the quality of its performance. Technology is widely used in the education field especially at industry revolution 4.0 nowadays. The use of technology in supporting the Career Centre can be used as innovation to increase its performance.

2. Method

This study took the form of evaluation research using a discrepancy model. The analysis was carried out with a quantitative descriptive approach. It was conducted at VSS in Yogyakarta with a total of 4 administrators of Career Centre, 28 students of XII grade, and 29 alumni who participated as a sample. This research was begun by researcher did the observation at the schools followed by comparing the existing conditions with the standards or indicators of the success of the role of Career Centre based on the implementation guidelines and other relevant literature so that it was known whether there were gaps and how big the gap was.

The research used 5 aspects of Career Centre’s role, they were: (1) as seeker and provider of employment information; (2) conducting a coaching and employee briefing for students/alumni; (3) regarding stakeholders’ partnership; (4) regarding recruitment, selection, and graduate distribution; and (5) graduate tracing. The research instruments used were questionnaires, interview, and documentation. The data that has been obtained from the questionnaire instruments were processed statistically and was analysed by using a quantitative descriptive approach. The analysis was used to calculate the mean, median, mode, standard deviation, data distribution table, and deciding the category. According to Djemari, the categories are divided into four as fellow Table 1[3]:

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Table 1:

| Category | Description |
|----------|-------------|
| Number   | Description |
| 1        | Category 1   |
| 2        | Category 2   |
| 3        | Category 3   |
| 4        | Category 4   |

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1. Improving the Quality and Competitiveness of Primary and Secondary Education at the Ministry of Education and Culture and Director General of Vocational Education in the Context of Improving the Quality and Competitiveness of Indonesian Human Resources.

2. Each VSS has a Career Centre which needs to be professionally managed to bring the graduates to the workplace or industry. It also provides labour market information, provides career counselling and guidance, as well as work placements for graduates.

3. Career Centre is a partner of the Social Workforce Office and Transmigration.

4. This study was conducted to find out the role of the Career Centre in distributing the graduates of VSS in Yogyakarta at the workplace and the obstacle experienced as well as its solution.

5. The research instruments used were questionnaires, interview, and documentation. The data that has been obtained from the questionnaire instruments were processed statistically and was analysed by using a quantitative descriptive approach.
Table 1. Grouping data by four categories

| Score | Category          |
|-------|-------------------|
| X < \bar{x} - 1.96\times \text{SBx} | Excellent (E) |
| \bar{x} > X \geq \bar{x} - 1.96\times \text{SBx} | Good (G)   |
| \bar{x} + 1.96\times \text{SBx} > X \geq \bar{x} | Sufficient (S) |
| X < \bar{x} + 1.96\times \text{SBx} | Less (L)    |

Noted:
X = Obtained score  
\bar{x} = Ideal mean score  
\text{SBx} = Ideal standard deviation

3. Result and Discussion

The data which has been obtained was analysed using a determined method. The description of the data includes the mean, standard deviation, mode, median, and frequency distribution. After obtaining the score from these points, the score of each item was calculated so that the score of the component of the evaluations of the Career Centre’s role was measured.

![Figure 1. Quality achievement score of the career centre’s role](image)

Based on Figure 1, it showed that the Career Centre’s role in each aspect was relatively good in general. Aspect 5 was intended for Career Centre’s administrators and alumni only, because the active students are not included in the graduate tracing. The data was obtained from the accumulation of each indicator which is used as a reference in the aspects to evaluate the Career Centre’s performance. The quality achievement score of the Career Centre’s role statistically in general can be seen in Table 2.

Table 2. General evaluation results

| Item              | Aspect 1 | Aspect 2 | Aspect 3 | Aspect 4 | Aspect 5 |
|-------------------|----------|----------|----------|----------|----------|
| Career Centre administrator | 3.39 (85%) | 3.58 (90%) | 3.58 (90%) | 3.41 (85%) | 3.65 (91%) |
| Students          | 3.17 (78%) | 3.32 (83%) | 3.03 (89%) | 3.45 (86%) | -        |
| Alumni            | 3.21 (72%) | 2.68 (67%) | 3.55 (76%) | 3.17 (79%) | 2.94 (74%) |

Career Centre has a main role as a seeker and provider of employment information. It must ensure that these job vacancies are valid and deserve to be shared. A good relationship between Career Centre and the stakeholder such as industries will be profitable for both sides. The industries will give their job vacancy information and ask the schools to send their compatible students or alumni. The recruitment information is used to be shared by schools through the official school website, social media, and school
bulletin board. The partnerships also systematically influence the development of the students’ understanding and readiness to undertake careers [5]. Job vacancy information is also provided by the Social Workforce Office and Transmigration and the coordinator of each school. Job hunting is very important to be carried out by the Career Centre administrators. Pambayun stated that if Career Centre administrators are not active in conducting hunting jobs, many job openings that are actually relevant and potentially could be occupied by graduates but could not be recorded maximally [10]. Furbish & Reid stated that the career administrators have an ability to establish professional networks with career administrators in other schools [4]. Career Centers of VSS in Yogyakarta have a routine agenda which is organized by the Minister of Workforce and Transmigration of Yogyakarta, such as directing, training, and managing the Career Centre. Another collaboration is by providing information about job vacancies through the WhatsApp group. A harmonious relationship with the Minister of Workforce and Transmigration has to be allied because there are many benefits that Career Centre can be obtained such as job information, employment information and training, and cooperation in implementing career guidance.

Having a good relationship with the stakeholder not only to ease get job vacancy information for school but as well as an opportunity for having an apprenticeship place, teacher training centers, doing a recruitment process, conducting of coaching and employee briefing. Career Centre of VSS in Yogyakarta organizes career guidance collaborating with the stakeholder for the students to facilitate them to be ready for their career. Guidance and counseling are needed service for the students to prepare themselves in achieving success in a career [8]. Career Centers have to guide the students and alumni in their career decision making. This step is important for them because it can influence their decisions and ultimately career development process and career selection [15]. The activities are such as administrative preparation training to apply for work, psychology training, interview training, and ready for work training, developing a positive attitude, and developing academic competence [14]. These activities are adjusted to the needs of the industries. Career guidance activities have been under the standards as stated in the Minister of Workforce and Transmigration Regulation No. 07/MEN/IV/2008 concerning Labor Placement. The distribution of graduates to the workplace will not run optimally if it is not supported by broad and strong cooperation with the industries. This is similar to Pambayun’s statement, the effort to establish cooperation with the industries need to be done well so that it can build cooperation broadly and strongly with the industries by the establishment of the Memorandum of Understanding (MoU) [10]. Through a harmonious relationship, policies can be adjusted to the needs of VSS in increasing the rate of absorption of graduates into the workplace. It is an effective way to create a skilled workforce in the transition period from school to the workplace [1]. Yuniarti also stated that the cooperative relationship with the industry is a strategy to overcome the limited resources available in the field of vocational education [16].

Alumni are assets for VSS because some benefits can be obtained by the success of conducting graduate tracing. Alumni can give information about the job vacancy that they have, pleased to be an instructor for the students in some activities, give socialization about their workplace [7]. This is similar to Pambayun’s statement, the benefits of conducting graduates tracing are alumni as the promoter of VSS to their workplace, as one of the job information sources, successful alumni can help other alumni in implementing career guidance in VSS [10]. Skrzypk, et al. also said that alumni can provide students with a professional mentor and fostering ongoing connections and opportunities for alumni involvement. Therefore, it is necessary to communicate with alumni intensively [12]. Unfortunately, based on the result, the Career Centre of VSS in Yogyakarta still lacks administratively, such as collecting the alumni data. Most of them still do manually by writing those on books. It was not effective so that it need rearrangement. The mismatching of graduates’ work field with their study being another problem that caused the Career Centre’s performance was not maximally. Based on the data, it was found that only 44% of graduates who had suitable work with their background education. The finding of Soeharto’s study showed that the achievement of the standard competence of vocational education graduates in the province of Special Region of Yogyakarta only reached 0.57 [13]. The Career Centre’s performance
will be better when the suitability of job and education is paid attention because the purpose of the vocational school will achieve.

Based on those obstacles, it needs innovation to increase the performance of the Career Centre of VSS in Yogyakarta. This innovation can be promoted by paying attention to the recent condition, i.e. by utilizing technology. The digital age encompasses all jobs in the Industrial 4.0 era [11]. The use of technology in supporting the Career Centre’s role already exists, but it needs to be optimized to get better performance, especially to provide information for students and alumni about existing job vacancies, conducting graduate tracing, collecting job vacancy information, regarding administrative, and other activities. Creating a Career Centre information system for VSS in Yogyakarta will ease them in doing their role. The information system not only contains information about the job vacancy and recruitment process which can be accessed publicly through the school website and social media but more specific to focus on the students and alumni individually. It will be packaged in some features to facilitate the student, alumni, and Career Center administrator as well. They can access the information system by using their account so that security and confidentiality are guaranteed.

The information system will give a chance for the students and alumni to fill the form as their real condition and desire. They need to recognize themselves and to become aware of their interests and abilities during their career planning stage [6]. As an output, it will give the recommendation about suitable kind of work for them based on Career Centre administrators’ observation as well as regarding academic score, skill and capability, workshop, etc. The list of job vacancies which already accepted by the school will be appeared along with the recommendation. Career Centers have to direct students and alumni to choose their work field suitable for their educational background. The recommendation can be discussed further with the administrators in career guidance sessions which can encourage students’ career development and career decision [9]. The well-defined description of career guidance service and the recommendation are expected to ease its improvement [8]. The information system also can be used for administrative purposes, especially regarding graduates’ tracing. Besides getting the information, alumni can give the job vacancy information as well, especially at their workplace. Career Centre administrators will review the information first before sharing to the job seekers. The public can access the information at the Career Centre information system regarding the graph of statistical data, alumni distribution, and cooperating industries. This also benefits schools in order as a branding event.

Career Centre administrators have an important role to manage the information system if it is implemented. The administrators have to ensure the validity and updating of data. By using the information system, the administrator will not be troubled in searching the important data that they need as before, because the information system already has the useful features in one package. This information system as innovation will increase the performance of the Career Centre of VSS in Yogyakarta by using it wisely.

4. Conclusion

The role of the Career Centre of Vocational Secondary Schools (VSS) in Yogyakarta in distributing graduates as employee reviewed from five aspects accumulatively in the Good category. Those aspects are: (1) as seeker and provider of employment information got a percentage of 78.6%; (2) conducting a coaching and employee briefing for students/alumni got a percentage of 79.3%; (3) regarding stakeholders’ partnership got a percentage of 84.3%; (4) regarding recruitment, selection, and work distribution got a percentage of 83.3%; and (5) graduate tracing got a percentage of 82%. Career Centre of VSS in Yogyakarta had implemented the main function although not maximum yet. Because of doing its role traditionally most of the time, mismatching skill and work field, lacking administrative management, so it still needs the innovation to optimize their performances. Technology utilization is very helpful to do the Career Centre’s role. Creating a Career Centre information system for VSS in Yogyakarta will ease them in doing their role. The information system has an important and helpful feature to facilitate the students, alumni, and administrators regarding job vacancies and recruitment information, work field recommendation, graduate tracing, administrative, etc. The study was conducted
at VSS in Yogyakarta, considering by the suggested idea hopefully could be conducted in wider area so it could be a parameter nationally with the next findings of related research. Each aspect could be detailed to get more specific information.

5. References

[1] Baser, JA, et al. 2017 Competency of National Dual Training System Industry Advisors. Jurnal Pendidikan Teknologi dan Kejuruan, Vol. 23, No. 4, pp. 328–338
[2] Central Bureau of Statistics 2018 Agustus 2018: Tingkat Pengangguran Terbuka (TPT) sebesar 5,34 Persen. Accessed from https://www.bps.go.id/pressrelease/2018/11/05/1485/agustus-2017-tingkat-pengangguran-terbuka--tpt--sebesar-5-34-persen.html on 28th June, 2019
[3] Djemari, M 2008 Teknik Penyusunan Instrumen Tes dan Nontes. Yogyakarta. Mitra Cendikia Press
[4] Furbish, D., Reid, L. 2013 Best Practices in Career Education and Development in New Zealand Secondary Schools. Australian Journal of Career Development, 22(1), pp. 14-20
[5] Hambali, IM 2019 Examining the Relevance of Indonesia Vocational High School Career Outcome to The Labour Market. Journal of Social Studies Education Research, Vol. 10, No. 1, pp. 133-155
[6] İnce Aka, E., & Taşar, M. F 2020 Prospective Science Teachers’ Views on Career Planning and Their Self-efficacy Levels for Career Decision-Making. International Online Journal of Education and Teaching (IOJET), 7(3), pp. 960-975
[7] Indana, L., Soenarto, S 2019 Vocational Career Center as the Bridge Between Industry and Vocational High School Graduates. Jurnal Pendidikan Teknologi dan Kejuruan, Vol. 25, No. 2, pp. 219-228
[8] Martaningsih, ST., Soenarto, S., Istiyono, E 2019 Strengthening Partnerships with Industries for Vocational Education and Teaching (OBE) in Industrial 4.0 Era. Journal of Social Work Education, Vol. 55, No. 3, pp. 449-459
[9] Okolie, UC., et al. 2020 How Careers Advice and Guidance Can Facilitate Career Development in Technical, Vocational, Education, and Training Graduates: The Case in Nigeria. Australian Journal of Career Development, 29(2), pp. 97-106
[10] Pambayun, Nirmala AY., Wagiran, W 2014 Kinerja Bursa Kerja Khusus (BKK) SMK Negeri Bidang Keahlian Teknologi dan Rekayasa di Kabupaten Sleman. Vocational Education Journal, Vol. 4, No. 2, pp. 246-261
[11] Prihatnoro, CR 2020 Vocational High School Readiness for Applying Curriculum Outcome Based Education (OBE) in Industrial 4.0 Era. International Journal of Curriculum and Instruction, Vol. 12, No. 1, pp. 251-267
[12] Skrzypek, C., et al. 2019 Mentoring Connections: Implementing a Student-Alumni Mentor Program in Social Work. Journal of Social Work Education, Vol. 55, No. 3, pp. 449-459
[13] Soeharto 2012 Pencapaian Standar Nasional Pendidikan di Sekolah Menengah Kejuruan Daerah Istimewa Yogyakarta. Cakrawala Pendidikan, Vol. 31, No. 1, pp. 23-37
[14] Uy M. A., Chan K. Y., Sam Y. L., Ho M. H. R., Chernyshenko O. S 2015 Proactiveness, Adaptability and Boundaryless Career Attitudes: The Mediating Role of Entrepreneurial Altermess. J. Vocat. Behav, 86, pp. 115–123
[15] Ulaş, Ö., Yıldırım, İ 2016 The Development of Career Decision-Making Self-Efficacy Scale. Turkish Psychological Counselling and Guidance Association, 6(45), pp. 77-90
[16] Yuniarti, N 2016 Strengthening Partnerships with Industries for Vocational Education Effectiveness and Efficiency. Proceeding of the 8th International Convention of Indonesian Association of Technological and Vocational Education (APTEKINDO) and 19th Indonesian Congress of FT/FPTK-JPTK, Medan, EI-03-019, pp. 19-25