



Competency Evaluation of Automotive Vocational School Graduates

Bambang Sudarsono¹

¹Department of Automotive Technology Vocational Education, Universitas Ahmad Dahlan,
Indonesia
Kapas Street No.9, Semaki, Kec. Umbulharjo, Kota Yogyakarta, Daerah Istimewa Yogyakarta
55166

Corresponding author: bambang.sudarsono@pvto.uad.ac.id

Received: 14 September 2020. Accepted: 24 October 2020. Published: 30 November 2020

ABSTRACT

This study aims to determine the competencies possessed by graduates of SMK Otomotif students based on the point of view of the head of a car repair mechanic. The approach used in this research is descriptive with the research subjects of the chief mechanics of automotive repair shops in Purworejo Regency, totaling 15 mechanics. The instrument used was a questionnaire and analyzed descriptively. Before being used, the questionnaire was validated by an automotive education and engineering expert. The results showed that the highest percentage of achievement was found in social competence of 82.77%, personality competence of 77.78% and professional competence of 63.75%.

Keywords: Evaluation, Competence, Automotive Vocational School

INTRODUCTION

Vocational High School (SMK) is a level of education that aims to prepare Human Resources to be easily absorbed by the world of work [1]. SMK contains applicative theory and practice and is given according to the competencies expected by the world of work [2]. However, this hope is still far from the goal of SMK. From several sources, it is stated that SMK graduates who can be absorbed by the workforce have not met expectations, it is even more a dilemma when many SMK graduates do not work in accordance with their expertise [3].

There are several factors that cause Automotive Vocational School graduates to be less absorbed in the world of work, including the lack of job readiness of SMK graduates, the absence of a link and match between Vocational High Schools and the world of work, SMK not identifying the needs of the world of work, and lack of appropriate infrastructure with industry. So that indirectly it will affect the achievement of competency of vocational school students [4].

Job competence is needed and important in getting a job, because vocational students are required to have the skills needed in a job, both hard skills and soft skills. Currently the world of work is more likely to see prospective employees from soft skills, of course, by not ruling out hard skills which are skills that are skills [5]. The competency of Automotive Vocational School graduates consists of professional

competence or vocational competence, personality competence and social competence. Professional competence is intended more as a vocational or technical competence in the automotive mechanical engineering expertise program, which is used by SMK graduates in obtaining jobs. Personality competence is a characteristic that should be possessed by a SMK graduate, related to moral and mental values in a person. Social competence is intended as the ability of a SMK graduate to communicate in the work environment and cooperate in work groups [6].

There are still a few vocational students who have work readiness and don't know what the world of work really needs, so that when graduating vocational students will find it difficult to get a job in accordance with their field. This occurs due to the lack of information obtained by vocational students about the real world of work. The world of automotive work, especially workshops, has its own demands in seeing and assessing the ability of prospective workers to be recruited. The existence of a gap between the demands for work competence set by the industry and the material applied in SMK, demands relevance efforts from both parties. Efforts were made, among others, by asking the automotive industry's opinion on the material given to automotive vocational school students as prospective workers in the automotive workforce. Polat et al. Stated that the Automotive Vocational School aims to

train students to get the benefits, sufficient knowledge and skills needed by the automotive industry. So that the role of industry is very important and plays a role in advancing vocational education [7].

In addition, it is necessary to carry out an evaluation process of the automotive SMK curriculum materials to answer the needs of the world of work. The implementation of the process of relevance and evaluation of the material in the curriculum will assist automotive vocational schools in preparing professional automotive workforce candidates. In their research, Kazilan et al. Stated that in order to obtain optimal competence of SMK graduates, the participation of vocational education and the automotive industry is needed to provide a curriculum that contains elements of employment skills needed by vocational education and In addition, vocational and industrial education is expected to be able to create a business/ production unit for the needs of students with the aim of producing higher quality workers [8]. Research explained that to get optimal quality of automotive SMK graduates, industrial input and cooperation are needed in the learning process [9].

The curriculum material provided by automotive SMKs must pay attention to the demands of work competencies that exist in the automotive work world. One way to do this is by inviting automotive industry players to evaluate the content of the

curriculum applied in automotive SMK or by asking for perceptions from the world of work. Evaluation of the automotive world of work is absolutely necessary as one of the bases for fixing the content of the curriculum imposed by automotive SMK [10],[11].

RESEARCH METHODS

This study uses a descriptive approach to implementation in Purworejo Regency. The research sample were the head of automotive mechanics (especially car repair shops) in Purworejo Regency, amounting to 15 people. Sampling in this study was carried out non-randomly (non probability sampling), namely by purposive sampling method.

The head of the mechanic was chosen as the sample because the head of the mechanic was someone who was considered an expert in assessing the competence of mechanics in the workshop. Data collection in this study was carried out by using a questionnaire method or a questionnaire given to the head of the mechanic. Before the test instrument is used, validation is first carried out to obtain a valid test. The checking of research instruments was carried out by consulting the experts (expert judgment), namely learning experts and automotive engineering expertise.

Table 1. Guidelines for Making Questionnaire

Research Variable	The Component Being Measured
Professional Competence	General knowledge and skills
Personality Competencies	Attitude / Behavior at work
Social competence	Work Communication

(Source: [6])

The data analysis used in this research is descriptive analysis and percentage. The purpose of descriptive analysis is to describe the tendency of perceptions of the world of work to the competencies possessed by Automotive Vocational School graduates.

To describe the data in this study, first the data needs to be converted into a percentage. The following is the formula for getting the percentage of competency achievement.

$$\% = \frac{\sum x}{\sum x \text{ max}} \times 100\%$$

Information :

% = percentage of achievement

$\sum x$ = the sum of the scores on an item

$\sum x \text{ max}$ = the sum of the maximum scores

After the percentage of achievement is obtained, then the percentage interpreted based on the following rating scale.

Table 2. Percentage of Achievement Categories

Percentage	Category
76% - 100%	Well
56% - 75%	Pretty good
40% - 55%	Not good
<40%	Not good / bad

(Source: [12])

RESULTS AND DISCUSSION

Professional competence is a vocational/technical competence that is given by Automotive Vocational Schools to their students, in the form of learning materials in productive training courses. The level of professional competency mastery of SMK graduates is only 63.75%. This is supported by the opinion of several chief mechanics, who state that most automotive SMK graduates have not been able to carry out the testing or repair process on several systems. Required additional practice hours, appropriateness of tools and habituation of using practice tools.

Personality competence is a characteristic of Automotive Vocational School graduates related to the attitudes and behavior of automotive SMK graduates in the workplace. Personality competencies get a mean percentage of competency achievement of 77.78% with good category. The input given by the head of the mechanic is a work culture habituation in order to form an optimal work mentality.

Social competence is the ability of Automotive Vocational School graduates to communicate with fellow colleagues, superiors, and customers. According to some chief mechanics, communication skills are very important, because communication is the key to the service industry (especially workshops) in attracting customers. Obtained the average percentage of social competence achievement of 82.77 with good

category. The input given by the head of the mechanic is that routine discussion activities are needed both in practical activities and in theoretical activities in the classroom to train students' communication skills.

Table 3. Percentage of Competency Achievement of Automotive Vocational Schools Graduates

Competency Type	Achievement (%)
Social Competence	82.77
Personality Competencies	77.78
Professional Competence	63.75

The results of the above research are concluded that the basic competencies in service maintenance competency standards and machine repair management systems are still low, while the personality/attitude competencies and communication competencies work in the good category [14]; [1]; [13].

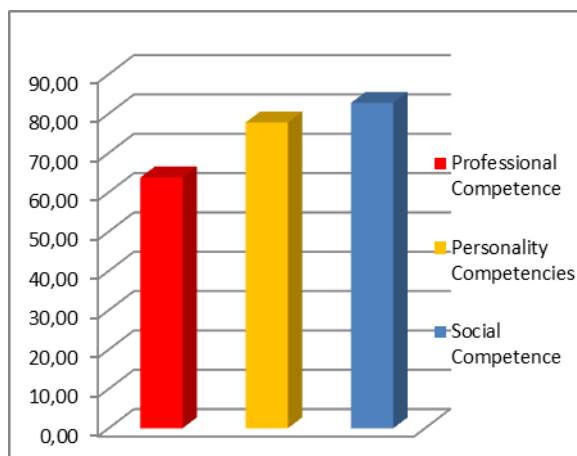


Figure 1. Competency Graph of Automotive Vocational School Students

The percentage level of competency attainment in Automotive SMK graduates varies. From these results it can be seen that

the highest percentage of achievement is found in social competence of 82.77%, personality competence of 77.78% and professional competence of 63.75%. The following is a graph of the competency attainment of Automotive Vocational School graduates.

CONCLUSION

The competency evaluation with the subject of the head of the automotive repair workshop mechanic shows the results that the automotive industry expects some improvement efforts from the Automotive Vocational School to improve and enhance professional, personal and social competence. Professional competence is a top priority because it is still in the poor category.

There needs to be joint action between the automotive industry and the Automotive SMK institutions in fulfilling / optimizing practical hours, practice facilities, working mentality and working communication with the relevance of the curriculum agreed upon by the industry and the Automotive Vocational School institute.

REFERENCES

- [1] M. J. A. Baitullah and W. Wagiran, "Cooperation between vocational high schools and world of work: A case study at SMK Taman Karya Madya Tamansiswa," *J. Pendidik. Vokasi*, vol. 9, no. 3, pp. 280–293, 2019.
- [2] S. Wahjusaputri, S. Fitriani, and T. Indah, "Teaching Factory Model for Increasing the Competency of

- Vocational Secondary Education Students in Indonesian Territory,” vol. 11, no. 1, pp. 48–63, 2020.
- [3] A. Mustikawanto, “Effect of Competency, Work Motivation, Industrial Work Experience and Facilities on the Readiness of Work for Senior High School Graduates in Electro Expertise Programs,” *Innov. Vocat. Technol. Educ.*, vol. 15, no. 1, p. 1, 2019.
- [4] Suharno, N. A. Pambudi, and B. Harjanto, “Vocational education in Indonesia: History, development, opportunities, and challenges,” *Child. Youth Serv. Rev.*, vol. 115, no. May, p. 105092, 2020.
- [5] B. Cimatti, “Definition, development, assessment of soft skills and their role for the quality of organizations and enterprises,” *Int. J. Qual. Res.*, vol. 10, no. 1, pp. 97–130, 2016.
- [6] B. Sudarsono and T. Sukardi, “INDUSTRY-BASED PRACTICUM LEARNING,” *J. Vokasi*, vol. 7, no. 1, pp. 43–55, 2017.
- [7] Z. Polat *et al.*, “Internship education analysis of vocational school students,” *Procedia - Soc. Behav. Sci.*, vol. 2, no. 2, pp. 3452–3456, 2010.
- [8] F. Kazilan, R. Hamzah, and A. R. Bakar, “Employability skills among the students of technical and vocational training centers in Malaysia,” *Eur. J. Soc. Sci.*, vol. 9, no. 1, pp. 147–160, 2009.
- [9] B. Sudarsono, “Industrial-based practical learning development for teacher competence of automobile technology Industrial-based practical learning development for teacher competence of automobile technology,” *ournal Phys. Conf. Ser. Pap.*, vol. 1446, no. 1, pp. 1–8, 2020.
- [10] P. Purnawan, B. Santosa, and A. Kurniawan, “Automotive Vocational High School: How Career Guidance and Parents Support Impact the Students’ Work Readiness,” *J. Vocat. Educ. Stud.*, vol. 3, no. 1, p. 61, 2020.
- [11] O. T. Laseinde and G. M. Kanakana, “Interventions to Skills Development in the Automotive Manufacturing Sector of South Africa,” *Ski. Dev. Sustain. Manuf.*, no. November, 2017.
- [12] S. Arikunto, *Dasar-Dasar Evaluasi Pendidikan (Edisi Revisi)*.: Jakarta: Bumi Aksara, 2003.
- [13] Y. Utanto, “The Management of Learning Innovation to Achieve The Quality of Graduates in SMK Negeri 1 Kuningan,” vol. 7, no. 1, pp. 52–58, 2018.
- [14] D. Frovihandika, Z. Arifin, and E. Widiastuti, “A Suitability Of Competency Certification Scheme For Automotive Vocational High School With LSP P1 Against Business and Industrial World Needs In Semarang City,” vol. 401, no. Iceri 2019, pp. 110–115, 2020.