

The Essential Skills for Becoming a Today's Automotive Vocational Teacher: Focus Group Interview Study

Afri Yudiantoko¹⁾; Rita Fransina Maruanaya²⁾; Gunadi³⁾

¹⁾Engineering Faculty, Universitas Negeri Yogyakarta, Indonesia.

²⁾Fakultät Erziehungswissenschaften, Technische Universität Dresden, Germany.

Corresponding Author: afri_yudiantoko@uny.ac.id

Abstract

Vocational education, as a kind of education, has an important role not only for people to get a job but also for nations to grow their national economy. Vocational teachers, especially, are the keys to the success of vocational education, so the competencies required to become such teachers are crucial issues that need attention. This study aims to explore the most needed and recent competencies that an automotive vocational teacher needs to master to survive in career life. A Focus Group Interview (FGI) study with two main questions was used to collect data from 6 participants consisting of 3 automotive vocational teachers and three automotive industrial instructors. The interview was recorded, and the data was analyzed qualitatively. The findings stated that the ability to conduct sustainable learning or lifelong learning becomes the most essential competency that automotive vocational teachers need to have. Additionally, there is a suggestion to automotive vocational teacher education institutions to conduct instructional design of learning activities that could promote the abilities of sustainable learning for the students. This is necessary because automotive technology is developing very quickly, so vocational education should deal with that phenomenon by preparing qualified automotive vocational teacher candidates who can conduct sustainable learning or lifelong learning effectively.

Keywords: lifelong learning, sustainable learning, automotive vocational teacher candidates, automotive vocational teacher education.

Abstrak

Pendidikan vokasi memiliki peranan penting, tidak hanya bagi masyarakat dalam memperoleh pekerjaan, namun juga bagi suatu bangsa untuk mengembangkan perekonomiannya. Guru SMK merupakan salah satu kunci keberhasilan penyelenggaraan pendidikan vokasi, sehingga kompetensi yang dibutuhkan untuk menjadi guru tersebut merupakan hal yang krusial yang perlu mendapat perhatian. Penelitian ini bertujuan untuk mengeksplorasi kompetensi yang paling dibutuhkan dan terkini yang perlu dikuasai oleh guru SMK otomotif agar dapat mengembangkan karirnya. Penelitian ini menggunakan metode *Focus Group Interview (FGI)* dengan dua pertanyaan utama digunakan untuk mengumpulkan data dari 6 partisipan yang terdiri dari 3 orang guru SMK otomotif dan 3 orang instruktur industri otomotif. Wawancara direkam, dan data dianalisis secara kualitatif. Hasil penelitian menyatakan bahwa kemampuan melakukan pembelajaran berkelanjutan menjadi kompetensi paling esensial yang perlu dimiliki oleh guru SMK otomotif. Selain itu, terdapat saran kepada lembaga pendidikan penyedia guru SMK otomotif untuk mendesain pembelajaran sedemikian rupa yang dapat meningkatkan kemampuan belajar berkelanjutan pada siswa. Hal ini diperlukan karena teknologi otomotif berkembang sangat pesat, sehingga tantangan ini harus dijawab dengan menyiapkan calon guru SMK otomotif yang berkualitas dan mampu melakukan pembelajaran berkelanjutan secara efektif.

Kata Kunci: belajar sepanjang hayat, belajar berkelanjutan, calon guru SMK otomotif, Pendidikan teknik otomotif.

INTRODUCTION

Many challenges, in particular the emergence of the Industrial Revolution 4.0, the ASEAN economic community, and the modern lifestyle of the 21st-century era, bring significant effects on education. This is mainly because education should prepare the students to compete and survive in dealing with those challenges. Not only should they focus on preparing their students, but education should also consider and develop many educational concerns that could help students master essential skills for dealing with many challenges. Those challenges have changed how people live, how they learn, and also how they work (Schröder, 2019). Moreover, nations in the ASEAN region, especially, need to provide skilled workers so that they can compete in the economic community between nations in that region (ASEAN, 2008). Educational practitioners need to pay attention to both phenomena and challenges to prepare students as a nation's human resources to compete globally and survive in their careers.

For being able to produce qualified human resources, vocational education has a role in this issue (Moses, 2016; Paryono, 2017). Nations need vocational education to develop their economic growth (Billett, 2011; Bosch & Charest, 2008; Deaconu, Dedu, Igreț, & Radu, 2018; Guthrie, Harris, Simons, & Karmel, 2009; Iastremska & Martynenko, 2015; Magaji, 2015; Malhotra, 2015). This education could do such development by delivering the students to be able to work professionally in accordance with their educational field (Gough, 2010; Haron, Mohammad Hussain, Ali, Che Rus, & Mohammad Zulkifli, 2019; Rösch, 2013). The students could work well in their future careers since this education focuses on equipping the students with valuable skills that are needed in the world of work (Agrawal, 2013; Hollander & Mar, 2009; Owais, Al Abidi, Hatamleh, & Hussein, 2020; Zimmermann et al., 2013). Therefore, nations should focus on developing vocational education to help them grow their economic performance.

Indonesia is a Southeast Asian nation with a large population of more than 270 million people (BPS, 2020). Those people should be a potential human resource for Indonesia to develop the nation. However, the quality of Indonesian human resources still needs to be improved. UNDP (United Nations Development Programme) stated that the Indonesian human resource index ranks 107 out of 189 countries (UNDP, 2020). Moreover, the number of unemployed people in Indonesia is still high, with more than 9 million people (Badan Pusat Statistik Indonesia, 2020). Even more concerning, nearly a third of those people are graduates of SMK, which is supposed to be vocational education at the Indonesian middle school level, which can reduce the number of existing unemployment phenomena (Badan Pusat Statistik Indonesia, 2020). SMK faces many other problems beyond the high number of unemployed graduates. Firstly, SMK students have a low category of national examination in the expertise

field, which is 44.12 out of 100 (Kemdikbud, 2019). Secondly, the government data stated that the performance index of SMK's teachers was 77.12 (Kemdikbud, 2016). Therefore, some studies suggest that the quality of SMK's teachers needs to be improved (Sitorus, 2016; Suharno, Pambudi, & Harjanto, 2020; Suzaina Kadir, Nirwansyah, & Bachrul, 2016). This means the quality of Indonesian vocational education, which has a role in ensuring that students are able to work, still needs to be improved.

The efforts to improve the quality of teachers align with the efforts to improve the quality of education. This is mainly because teachers have many significant roles in running educational programs (Nielsen, 2010). Teachers are the key persons in improving the students' learning achievements (Borman & Kimball, 2005; Bourdon, Frölich, & Michaelowa, 2010; Fryer, 2011; Goldhaber & Brewer, 2000; Keller, Neumann, & Fischer, 2017; Kunter et al., 2013; Miller, Ramirez, & Murdock, 2017; Westley, 2011; Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). Apart from conducting teaching and learning activities, they also significantly affect educational administrative and management tasks (Shaikh & Khoja, 2012). Therefore, improving the quality of teachers is a strategic effort for improving the quality of education.

In the context of improving the quality of vocational education, preparing qualified vocational education teachers (SMK's teachers) becomes a crucial issue. This becomes a task for vocational teacher education institutions. Those institutions have a role in equipping the students with the ability to teach so that they could be able to be vocational teachers in their future careers (Shaughnessy & Boerst, 2018; Tatto, 2021). In teacher education institutions, two main elements need to be paid attention to for students: mastering the subject matters and being able to teach those matters (Kennedy, 1999). Therefore, vocational teacher education institutions need to consider those elements while they conduct teaching and learning activities.

Theoretically, vocational teachers need to always stay updated in their knowledge and skills on the developments of science and technology so that they can give meaningful teaching and learning activities for their students (Abdullah, Saud, & Kamin, 2019; Diep & Hartmann, 2016; Hunde & Tacconi, 2014; Nurhadi & Zahro, 2019; Subarno & Dewi, 2019). Therefore, the empirical data on the most needed competencies for being a qualified vocational teacher in this era need to be explored. This article concentrates on elaborating the most needed competencies of being an automotive vocational teacher and the consequences for automotive vocational teacher education institutions.

METHODS

A Focus Group Interview (FGI) method was used in this study to explore the topic of the most needed competencies of being automotive vocational teachers. This study used the

steps of Dilshad and Latif's study, which consists of 6 stages which are 1) planning the focus group, 2) group composition, 3) conducting the focus group, 4) recording the responses, 5) data analysis and 6) reporting the findings (Dilshad & Latif, 2013).

Firstly, in the planning stage, there are two important things that need to be decided: the objectives and the questions of FGI (Dilshad & Latif, 2013). This study has objectives for exploring the most needed competencies of being automotive vocational teachers in the recent era and the effort that automotive vocational teacher education institutions need to make. Based on the objectives, two main questions were asked to the participants: "*What are the most needed competencies of being a qualified today's automotive vocational teacher?*" and "*What are the consequences for automotive vocational teacher education institutions to prepare such qualified teacher?*".

Secondly, in the group composition stage, this study decided the participants. Some studies stated that the ideal number of participants in FGI is between 6-12 people (Denscombe, 2003; Dilshad & Latif, 2013; Krueger & Casey, 2015; Patton, 2002). Six participants were invited to this study, consisting of 3 automotive vocational teachers and three automotive industrial instructors. Below is the table that explains the characteristics of the participants.

Table 1. The Participants of the Research

| Participant Codes | Profession | Academic Qualification | Professional Experiences (years) |
|--------------------------|-----------------------|-------------------------------|---|
| Te1 | Auto. Voc. Teacher | Bachelor Graduate | 7 |
| Te2 | Auto. Voc. Teacher | Bachelor Graduate | 8 |
| Te3 | Auto. Voc. Teacher | Bachelor Graduate | 9 |
| In1 | Auto. Ind. Instructor | Bachelor Graduate | 6 |
| In2 | Auto. Ind. Instructor | Bachelor Graduate | 7 |
| In3 | Auto. Ind. Instructor | Bachelor Graduate | 8 |

Thirdly, in the stage of conducting a focus group, the author was the moderator who guided the FGI. The moderator started the interview by asking one of the participants the first question and then following the others. After that, the moderator tried to analyze and summarize the participants' answers and gave them back to the participants until the conclusion was reached. Then, it continued to the second question. The reliability of the collected data was based on the guidelines from Miles and Huberman (Miles & Huberman, 2016), which stated that the comparison between agreement and disagreement was 88%. An online video conference platform recorded this FGI, and it lasted approximately 90 minutes. The data of the

FGI was analyzed just after completing the FGI, and publishing the article would be the last stage for reporting the findings.

RESULTS AND DISCUSSION

Results

Participants emphasized that sustainable learning or lifelong learning ability is the most needed competency for being a qualified 21st-century automotive vocational teacher. The moderator gave the first opportunity for Te1 to answer the first question, followed by Te2 and Te3. After getting opinions from the teachers, the moderator invited In1, In2, and In3 to give their opinions. In the beginning, participants said there were a lot of competencies that were needed. However, after participants gave their opinions, the moderator allowed every participant to conclude and give a competency that is the most needed, and eventually, the sustainable learning ability was the competency that emerged.

Te1: talking about the most needed competencies, an automotive vocational teacher should be able to deal with challenges such as the development of automotive technology, the different characteristics of the students from time to time, etc.

Te2: the ability to adapt to survive such challenges that Te1 mentioned before is the crucial skill that automotive vocational teachers need to have. After being able to adapt, they need to make an effort to solve the problems from the challenges.

Te3: I just want to simplify and conclude, based on the previous teachers' opinions, that because in the automotive field, there are a huge number of vehicle brands, and each has its special characteristics and development, the teachers should conduct continuous or sustainable learning for dealing and stay updated with the development of automotive technology.

Following that, other participants from industries (In1, In2, and In3) strengthened the opinions of the teachers by giving their experiences of the importance of conducting sustainable learning. Although they work in specific automotive brand industries, they still need to stay updated with the development of automotive technology in their specific brands to survive in their career. *“This has consequences for teachers. Suppose those who work on only one automotive brand must always be updated. In that case, teachers must also always learn about various developments in the automotive sector to give students meaningful learning activities”*. Therefore, the ability to conduct sustainable learning or lifelong learning is crucial to be mastered by automotive vocational teacher candidates.

After having a conclusion of the most essential competencies that automotive vocational teachers need to have, participants emphasized that instructional design focusing on promoting the ability of sustainable learning is essential to be implemented in automotive vocational teacher education institutions. They have the same perspectives and opinions that whatever the

subjects, they must be designed to have learning activities that promote students to apply the principles and strategies of effective lifelong learning.

Te3: after deciding on the most needed competencies because of the complicated challenges, it is time to suggest automotive vocational teacher education to prepare their students to conduct sustainable learning or lifelong learning effectively. As automotive vocational teacher candidates, the students need to have essential abilities related to the strategy to conduct such activity effectively.

In2: yeah, it could be strengthened by the importance of learning activities during career life, especially for automotive vocational teachers.

Discussion

The ability to conduct effective sustainable learning or lifelong learning is the most important competency needed, followed by a suggestion to develop instructional designs that accommodate such ability, which are the findings of this study. Lifelong learning has a simple meaning: continuous learning, which is using students' knowledge from previous learning to help their future learning (Chen & Liu, 2016). Lifelong learning ability is recognized to be an essential competency for being able to survive in career life (Abdullah et al., 2019; Diep & Hartmann, 2016; Hunde & Tacconi, 2014; Nurhadi & Zahro, 2019; Nurtanto, Sofyan, Sudira, Kholifah, & Triyanto, 2020; Subarno & Dewi, 2019). In the era of the 21st century, if someone wants to succeed in their career life, he or she needs to conduct sustainable learning or lifelong learning as routine activities (Carolyn Medel-Añonuevo, Ohsako, & Mauch, 2001). Therefore, theoretically and empirically, this ability is necessary for working life.

Theoretically, vocational teachers should have the ability to conduct sustainable learning to stay updated on the development of science and technology (Abdullah et al., 2019; Diep & Hartmann, 2016; Hunde & Tacconi, 2014; Nurhadi & Zahro, 2019; Subarno & Dewi, 2019). Especially for automotive vocational teachers, empirically, they need to keep learning every time without any exception. It is mainly because there are so many brands of automotive vehicle products, such as Mercedes Benz, Volk Wagon, Honda, Toyota, Daihatsu, KIA, Hyundai, Mitsubishi, etc, that force them to have sufficient knowledge and skills about such brands. The teachers need to prepare their students to become mechanics in the automotive after-sales industries (Menengah, 2018), so they need to equip their students with meaningful teaching and learning activities in accordance with many existing automotive brands. By having sufficient knowledge and skills about such many brands, for example, the teachers could create learning activities for the students that are beneficial for their future careers.

Apart from that, vocational teachers need to stay updated with the changing technology in the educational area as well (Abdullah et al., 2019; Hunde & Tacconi, 2014; Nurhadi & Zahro, 2019; Nurtanto et al., 2020; Subarno & Dewi, 2019). This is an essential step for teachers

to build teaching and learning activities with relevant content and up-to-date educational technology in equipping students with relevant knowledge and skills needed by the world of work. Therefore, equipping the students as automotive vocational teacher candidates with the ability to conduct sustainable learning is indispensable.

CONCLUSION

To sum up, the ability to learn sustainably and lifelong is the most needed competency of automotive vocational teachers. Moreover, automotive vocational teacher education institutions should consider developing instructional designs that promote such an ability for their students as automotive vocational teacher candidates.

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