

Audit of Professional Competence of Automotive Productive Teachers Based on Teacher Competency Standards

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ABSTRACT

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Professional competence is a technical skill that must be mastered by productive Vocational School teachers. Unfortunately, to date no audit has been carried out. The aim of the research is to audit the level of professional competence of productive teachers in motorbike engineering and business based on teacher competency standards. The audit is focused on the knowledge aspect. The research method is quantitative. The population is productive teachers of motorbike engineering and business with a sample of five vocational schools using probability sampling. Data collection uses instruments. Data analysis uses statistics with the discrepancy evaluation model. Research procedure; problem identification, literature study, field observation, instrument creation, data collection, processing and conclusions. Research result; (1) 96.29% of teachers met the academic qualification requirements and 3.71% did not. Suitability of educational background with teaching obligations; 92.59% were appropriate and 7.41% were not appropriate. 33.33% of teachers are certified educators and 66.67% are not yet certified. (2) the results of teacher competency audits in the form of knowledge passports and training recommendations; 18.52% of less competent teachers are recommended to take basic training, 37.04% of moderately competent teachers are recommended to take intermediate training, 37.04% of competent teachers are recommended to take advanced training, and 7.40% of highly competent teachers are not recommended to take advanced training or professional development. The lowest mean sub-competency score was 2.4 in color matching, while the highest mean score was 3.7 in the battery sub-competency.



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Introduction

Teachers have an important role in educational success. The quality of teachers determines the success of learning and improves the quality of graduates. Teacher quality is determined by mastery and compilation of competencies; personality, social, pedagogical, and professional (UU No. 14 2005). Vocational High Schools (VHS) prioritize practical learning processes over theoretical learning. Productive teachers are teachers who carry out theoretical and practical learning processes based on professional competence according to their field of expertise. Quality and creative teachers can eliminate shortages of equipment, facilities and imperfections in school management.

The quality of productive vocational school teachers is influenced by their level of education, industry experience, mastery of science and technology, and communication skills. Productive teachers must master knowledge and skills proportionally and professionally as a basis for carrying out practical learning. Unfortunately, in terms of education level, the number of vocational school teachers with master's degrees is still small (Soenarto, S., et al, 2020), there are 25% of teachers who do not meet the academic qualification requirements and 52% do not have professional certificates (Angginabila, 2021) and there are 3.33% of productive arts and culture teachers who do not meet the qualifications academic (Susatya, E., et al, 2022). Many productive teachers do not have industry experience and skills according to industry standards, and many are even mismatched. Teachers have not utilized information technology as a means of creating learning media optimally because of teachers' weaknesses in computer knowledge and learning media (Suso, M., et al, 2021). The use of information technology-based learning media as a communication medium has not been maximized, so many teachers need to increase their competence in applying learning technology (Maknun, J., 2022). In fact, in the learning process, it has been proven that students who use integrated e-learning media have better learning outcomes than those who use the internet (Prastiyo, W., Djohar, A., & Purnawan, 2018). Weak mastery of learning technology makes the average teacher competency test (TCT) score for pedagogical competence lower than professional competence (Hermanto, R., 2016). The achievement of the average TCT score for productive teachers nationally is low, namely 53.02, the average TCT score for Yogyakarta City vocational school teachers is 67.08 by Direktorat Sekolah Menengah Kejuruan (2021), and the average TCT score for productive teachers in the field of building engineering expertise is 5.50, far below the national ideal standard of 8.00 (Dardiri, A., 2017).

Professional competence is the ability of knowledge and skills according to the field of expertise

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to be applied in carrying out and completing learning tasks. Professional competence is the main substance for productive teachers to teach practical learning and professional competence is obtained through professional education (UU No. 14 2005). Ideally, teachers must master four competencies and academically, pedagogical competency is an important indicator for assessing teacher performance (Setiawan, D., et al., 2020). Pedagogical competence includes knowledge and skills to understand students' character and psychology, with pedagogical competence it is hoped that teachers will work effectively and efficiently in educating and solving problems (Akbar, A., 2021) and the role of teachers as motivators and guides for students in learning will be more optimal (Riyadi, A., and Sudiyatno, 2023) ... teachers who understand competence pedagogics and professionals strive to apply learning strategies and methods relevant to student characteristics, integrating strengthening character education, literacy, higher order thinking skills, and 21st century skills (Wardoyo, C., Satrio, Y.D., & Ratnasari, D.A., 2020). Indicators of professional competence include, among others; mastering knowledge, having skills, being able to complete work, mastering goals, developing oneself, utilizing technology, and evaluating. One way to prepare prospective professional teachers is a professional teacher education program (Subroto, J. G., 2019).

The expertise program (EP) is part of the expertise field (EF). Vocational school has 10 EF, namely; construction and property technology, manufacturing and engineering technology, energy and mining, information technology, health and social work, agribusiness and agritechology, maritime, business and management, tourism, arts and creative economy by. Direktorat Sekolah Menengah Kejuruan (2021). Technology and engineering EF has 10 EP, namely engineering; machinery, automotive, welding and metal fabrication, logistics, electronics, aircraft, ship construction, analytical chemistry, industrial chemical engineering, and textiles. Automotive engineering EP has two skill competencies, namely; automotive light vehicle engineering and motorcycle business engineering (MBE). MBE vocational subject group materials include; basics of skills programs, creative and entrepreneurial projects, field work practices, and elective subjects.

Teacher competency standards (TCS) are an indicator that is used as a characteristic measure to assess teacher competency professionally. TCS was designed and developed by the Ministry of Education and Culture, educational institutions, experts, education experts and industry. TCS is arranged based on position level, type of position, type of engineering, and industry needs. TCS as a basis for grading training and determining productive teacher passport skills. Productive teachers are required to master competencies comprehensively in order to have hard skills and soft skills through training (Wagiran, et al., 2019). Productive teacher soft skills are developed through functional training (Sudana, I. M., Raharjo, D. W., and Suprptono, E., 2015). More than half of soft
Audit of Professional Competence of Automotive ... (Susatya, E., et al)

skills profiles show critical thinking behavior 61% (Komariah, K., et al., 2023). Functional training for productive teachers can improve and evaluate the learning process. TCT results are used to measure the level of mastery of pedagogical competence and professional competence of teachers in all subjects and all levels of school (Sumaryanta, et al., 2018). Teacher professional development includes the learning process, learning how to learn, and transforming knowledge into skills for the benefit of improving the quality of students (Setiawan, A. H., 2015). Teachers' general knowledge in the context of professional development is related to increasing the ability to carry out tactical and strategic tasks (Mulyadi, Y., et al, 2019).

Audit is a systematic evaluation process to look for objective evidence based on certain standards to determine the degree of conformity. Productive teacher professional competency audits include knowledge and skills. The professional competence of productive teachers is audited periodically within a certain period of time, depending on the provisions of the certification body. The audit process aims to ensure that the professional competence of productive teachers is guaranteed and meets standards, so that they are suitable for providing learning material to students. Productive teachers who fail the audit are required to take training according to the level of mastery.

Based on the literature review above, the state of the art research is knowledge gap analysis as a knowledge gap in the professional competence of productive MBE teachers with TCS. The novelty of the research is the compilation of knowledge gaps which are used as material for mapping knowledge passports, assigning teaching assignments, improving and developing teacher quality, as well as implementing teacher internships at industry. The final objective of the audit is to improve teacher quality so that practical learning is quality, teacher competency meets industry's needs, and minimizes the unemployment rate for vocational high school graduates. Apart from that, as an effort to align teacher capacity development with industry in order to improve the quality of vocational school graduates as a contribution to knowledge.

Method

Research Design

Quantitative research design with a survey approach. The population is productive teachers with MBE expertise competency. The sample was two state vocational schools and three private vocational schools using probability sampling and applying stratified random sampling. Data collection uses a questionnaire. Data analysis uses statistics with the discrepancy evaluation model. The research stages are; pre-field stage, field activity stage, and post-field stage.

Data Collection

Data collection uses; observation, distribution of questionnaires, and document study. The questionnaire was derived from the MBE skills competency TCS reference for the Malang Vocational Education Quality Assurance Development Center (VEQADC) as the Ministry of Education and Culture's Technical Services Unit in organizing technology and engineering guidance and counseling training. Data collection techniques are shown in table 1.

Table 1. Data Collection Techniques

Research problem	Data collection	Instrument	Data source
Educational background, MBE professional competence, and level of training.	Observation, deploymentd instruments, and studies document.	Checklists, questionnaires, and document,	Headmaster, head of administration, and teachers.

MBE skill competencies have 32 sub-competencies (indicators). Indicator derivatives as materials for making questionnaires, as shown in table 2.

Table 2. Research Question Grid

Program Skills	Competency Skills	Indicators (number of items)
Automotive engineering	Motorcycle engineering and business	Valves (8), lubrication system (8) cooling system (6), fuel system and carburetor (7), exhaust emissions (5), battery (5), lighting system (6), starter system (6), repair electrical (5), steering system (7), brake system (6), clutch (7), wheels and chain (8), vehicle body (5), additional devices (4), masking (2), scale/corrosion (3), color matching (3), spray gun (5), body painting (5), paint drying (4), final painting (4), transfers, decals and stickers (5), body sealing (5), glass vehicles (5), window film (5), batteries and cables (5), protectors and connectors (4), circuit systems (5), switches and relays (5), lighting (5), and combination meters (5).

Research Procedure

The research procedures are; problem identification, literature study, observation of questionnaire preparation, data collection, processing and drawing conclusions.

Result and Discussion

Result

Research sites; Sedayu Bantul State VHS, Pengasih Kulon Progo State VHS, Berbah Sleman National VHS, Berbah Sleman Muhammadiyah VHS, and Prambanan Sleman Muhammadiyah VHS. The assessment standards and audit categories use the evaluation

reference for the implementation of the Ministry of Education and Culture's training as shown in table 3.

Table 3. Assessment Standards and Evaluation Categories for Training Implementation.

Number	Category
90,01 – 100	Highly competent (HC)
80,01 – 90	Competent (C)
70,01 – 80	Competent enough (CE)
60,01 – 70	Less competent (LC)
≤ 60	Does not meet the qualifications (DQ)

Data collection focused on personal data and the level of knowledge of productive MBE teachers. Personal data obtained from the results of document studies is shown in table 4.

Table 4. Teacher Personal Data and Coding

Num.	Teacher name	Code	Finished	Major	Certification
1.	Udin Suryo Prayogo	G1	S1	Mechanical Engineering	Not yet
2.	Mujiman Hermawan	G2	S1	Automotive education	Not yet
3.	Budi Santoso	G3	S1	Automotive education	Not yet
4.	Hari Suharto	G4	D3	Automotive Engineering	Not yet
5.	Tri Kurniadi	G5	S1	Mechanical Engineering	Not yet
6.	Banung Heru C.	G6	S1	Automotive education	Not yet
7.	Bayu Ashidqi	G7	S1	Automotive education	Not yet
8.	Adnan Hermana	G8	S1	Automotive education	Not yet
9.	Haifan Nurkholis	G9	S1	Automotive education	Not yet
10.	Edwin Yuliantoko	G10	S1	Automotive education	Not yet
11.	Choiruddin	G11	S1	Automotive education	Not yet
12.	Dadang Heryanto	G12	S1	Automotive education	Yet
13.	Melinda Astuti	G13	S1	Automotive education	Not yet
14.	Arief Hari S.	G14	S1	Automotive education	Yet
15.	Rohmat Martanto	G15	S1	Automotive education	Not yet
16.	Panggih Pribadi	G16	S1	Automotive education	Yet
17.	Yuli Istiawan	G17	S1	Automotive education	Not yet
18.	Beni Iswadi	G18	S1	Automotive education	Yet
19.	Nanang Tri P.	G19	S1	Automotive education	Not yet
20.	Agus Purnamasidi	G20	S1	Automotive engineering education	Yet
21.	Firman Palgunadi	G21	S1	Automotive engineering education	Not yet
22.	Wakidi	G22	S1	Automotive engineering education	Yet
23.	Adhawan P.	G23	S1	Automotive engineering education	Yet
24.	Arif Wibawa	G24	S1	Automotive engineering education	Yet
25.	Joko Prasetyo	G25	S1	Automotive engineering education	Yet
26.	Lundiawan	G26	S1	Automotive education	Not yet
27.	Rino Suasono Edi	G27	S1	Automotive education	Not yet

Data on the level of knowledge of productive MBE teachers was collected based on a questionnaire with 32 indicators, then reduced to 168 question items. The questionnaire answers

were processed using statistical analysis, after compiling data on the level of knowledge of productive teachers, MBE skill competencies, as shown in table 5.

Table 5. Compilation of Knowledge Levels of Productive MBE Teachers

Subcompetence	Teacher code																											Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
Valves	4	4	4	3	3	4	4	3	4	4	3	4	3	4	4	3	3	4	4	4	4	4	4	3	4	4	4	3,6
Lubrication system	3	4	4	3	3	4	3	3	4	4	3	3	3	4	4	3	3	4	4	4	4	4	4	3	3	4	4	3,5
Cooling system	4	4	4	4	3	4	4	3	4	4	3	4	3	4	4	4	3	4	4	4	4	4	4	3	3	3	4	3,6
Fuel system and carburetor	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	3	3	3	4	3,2
Exhaust emissions	4	4	4	3	3	3	3	3	4	3	4	4	2	3	4	3	3	3	3	4	3	3	4	3	3	2	4	3,3
Battery	4	3	4	3	3	4	3	4	4	4	3	4	3	4	4	3	3	4	4	4	4	4	4	3	4	4	4	3,7
Lighting system	4	4	4	4	3	4	3	4	4	3	3	4	2	3	4	4	3	4	4	4	4	4	4	3	3	4	4	3,6
Starter system	4	4	4	3	3	4	3	3	4	4	3	4	3	4	4	3	3	4	4	4	4	4	4	3	3	4	4	3,6
Repair electrical	4	4	4	3	3	4	3	3	4	4	3	3	3	3	4	4	3	4	3	4	3	4	4	3	3	3	4	3,4
Steering system	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	4	4	4	4	3	3	3	4	3,1
Brake system	4	4	4	4	3	4	3	3	4	4	4	4	3	3	4	4	3	3	4	4	4	4	4	3	3	3	4	3,6
Clutch	4	4	4	3	3	4	3	3	4	3	4	3	3	3	4	4	3	3	4	4	4	4	4	3	3	3	4	3,4
Wheels and chain	4	4	4	3	3	4	4	3	4	3	4	3	3	3	4	3	3	3	4	4	4	4	4	3	3	3	4	3,4
Vehicle body	3	4	4	3	3	4	3	3	4	3	3	3	3	4	4	4	3	3	3	4	3	4	3	3	2	4	3,3	
Additional devices	3	4	3	3	3	3	4	4	4	3	3	3	3	2	3	2	3	2	3	3	3	3	4	3	3	1	4	3
Masking	4	4	3	3	2	4	3	3	4	2	3	3	2	2	3	2	3	2	3	3	4	3	4	3	2	3	4	2,9
Scale/corrosion	3	4	4	3	3	4	3	3	3	2	3	3	3	2	3	2	3	3	3	3	3	3	4	3	2	2	3	2,9
Colour matching	2	4	3	2	2	2	2	2	3	2	2	2	2	2	3	1	3	2	4	3	2	2	4	3	2	2	3	2,4
Spray gun	3	4	3	3	2	3	3	3	3	2	3	3	2	2	3	2	3	2	3	3	3	3	2	4	3	2	2	2,7
Body painting	3	4	3	3	2	3	3	2	3	2	4	2	2	2	3	1	3	2	4	3	2	2	4	3	3	2	3	2,7
Paint drying	3	4	3	3	2	3	3	3	3	2	3	3	2	2	3	2	3	2	3	3	2	2	4	3	3	2	3	2,7
Final painting	4	4	3	3	2	3	3	2	3	2	3	3	2	2	3	1	3	2	3	3	3	2	4	3	3	2	3	2,7
Trasfer, decal, & sticker	3	4	3	3	2	2	3	3	3	2	3	3	2	2	3	1	3	2	3	3	2	2	4	2	2	1	3	2,5
Body sealing	3	4	3	3	2	4	3	4	3	2	3	3	2	3	3	1	3	2	3	3	2	2	4	3	2	2	3	2,7
Glass vehicles	4	4	3	3	3	3	3	2	3	2	3	3	2	3	3	1	3	2	3	3	2	2	4	3	2	2	2	2,7
Window film	3	4	3	3	3	3	3	2	4	2	3	3	2	3	3	2	3	2	3	3	4	2	4	3	2	1	2	2,8
Batteries and cables	4	4	4	3	3	3	3	3	3	3	3	4	4	3	4	4	3	3	3	4	4	2	4	3	3	4	4	3,4
Protectors and connectors	3	3	2	3	2	3	2	2	3	2	2	3	3	3	3	3	2	3	3	4	4	2	4	3	4	4	4	3
Circuit systems	3	4	3	4	3	4	3	3	3	3	3	4	3	3	4	3	3	3	4	4	4	4	3	4	3	4	4	3,3
Switches and relays	4	4	4	3	3	4	3	2	3	3	3	4	3	3	4	3	3	3	3	4	4	4	4	3	4	4	4	3,5
Lighting	4	4	4	3	3	4	3	3	4	3	3	4	3	3	4	3	3	3	3	4	4	4	4	3	3	4	4	3,5
Combination meters	4	4	3	3	3	4	2	2	3	2	2	3	3	3	3	2	3	3	4	4	4	4	4	3	3	4	3	3,1

Discussion

The level of professional competency knowledge of MBE productive teachers was analyzed using a discrepancy evaluation model, namely comparing the value of teacher competency knowledge with the TCS. The TCS was prepared by education experts, industry and education stakeholders under the coordination of the (VEQADC) Malang Automotive and Electronics Sector

which is tasked with improving the quality and providing quality assurance for automotive teachers. TCS is the basis for preparing training programs and determining the competency level of productive teachers.

The teacher's academic qualifications are a minimum of a bachelor's degree (S1) or fourth diploma (D4) and educational levels of D1, D2 and D3 do not have teaching authority. Table 4 data shows that of the 27 productive automotive teachers, 26 teachers have a bachelor's degree and 1 teacher has a D3 education. This means that 96.29% of productive automotive teachers meet the academic qualification requirements and 3.71% do not. Teacher academic qualifications influence the quality of learning and the quality of graduates. The quality of the learning process has a strong influence on student learning outcomes (Azizah., 2019). ...that teachers understand pedagogical and professional competencies by applying learning strategies and methods that are relevant to student's characteristics, integrating strengthening character education (Wardoyo, C., Satrio, Y. D., and Ratnasari, D. A., 2020). Judging from the suitability of competency between educational background and teaching obligations, table 4 shows that 25 (92.59%) teachers have an automotive educational background and two (7.41%) teachers have a non-automotive educational background. Pedagogical competence and professional competence also influence vocational school students' learning motivation (Wahyuningsih, R., 2017). Meanwhile, nine (33.33%) of the productive automotive teachers are certified educators and 18 (66.67%) of the teachers are not yet certified. The results of the analysis inform that the biggest problem for teachers is certification, where teacher certification is very closely related to teacher welfare. The professional competence of productive teachers can increase when they have obtained teacher certification (Kandloi, L. N., 2019).

A recapitulation of the academic qualifications of productive teachers with MBE skill competencies can be seen in Figure 1.

Figure 1 Recapitulation of Academic Qualifications for Productive Automotive Teachers

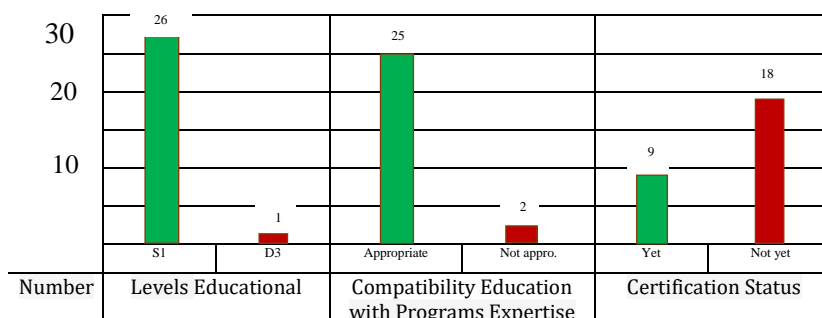


Table 5 shows that the level of productive MBE teachers' knowledge of sub-competencies, namely; 34.34% of teachers mastered the sub-competency categorized as quite competent with a Audit of Professional Competence of Automotive ...(Susatya, E., et al)

mean score below 3 and 65.66% of teachers mastered the sub-competency categorized as competent with a score above 3. The lowest average score for the color matching sub-competency was 2.4 and The highest average score in the battery sub-competency was 3.7. Sub-competencies with a low level of mastery are; masking, paint crust removal process, color matching, spray gun and operation, vehicle body painting, paint drying system, final painting, decal and check transfer, vehicle body sealing, motor vehicle windows, and window film. Table 6 shows the knowledge competency level of productive MBE teachers, namely; five teachers (18.52%) were less competent, 10 teachers (37.04%) were quite competent, 10 teachers (37.04%) were competent, and two teachers (7.40%) were very competent. The percentage of competency levels can be seen in figure 2.

Table 6. Recapitulation of MBE Productive Teacher Competencies

Number	Teacher Code	Average	Competency Level Based on TCS (%)	Category
1.	G1	3,50	87,56	Competent
2.	G2	3,63	90,79	Highly competent
3.	G3	3,48	86,92	Competent
4.	G4	3,11	77,78	Competent enough
5.	G5	2,66	66,43	Less competent
6.	G6	3,43	85,73	Competent
7.	G7	3,04	76,00	Competent enough
8.	G8	2,93	73,27	Competent enough
9.	G9	3,53	88,17	Competent
10.	G10	2,85	71,13	Competent enough
11.	G11	3,06	76,41	Competent enough
12.	G12	3,30	82,45	Competent
13.	G13	2,47	61,85	Less competent
14.	G14	2,89	72,36	Competent enough
15.	G15	3,51	87,63	Competent
16.	G16	2,54	63,62	Less competent
17.	G17	2,95	73,74	Competent enough
18.	G18	2,88	71,97	Competent enough
19.	G19	3,34	83,43	Competent
20.	G20	3,58	89,50	Competent
21.	G21	3,35	83,75	Competent
22.	G22	3,12	78,00	Competent enough
23.	G23	4,00	100	Highly competent
24.	G24	2,97	74,25	Competent enough
25.	G25	2,74	68,50	Less competent
26.	G26	2,75	68,75	Less competent
27.	G27	3,57	89,25	Competent

The lowest average teacher score was achieved by G13 teachers and the perfect score was obtained by G23 teachers. Judging from the average MBE knowledge competency, from 32 sub-competencies; The lowest competency average with a value of 2.4 occurred in the color matching

and mixing sub-competency, while the highest average value of 3.7 occurred in the battery sub-competency. The percentage of MBE productive teachers' competency knowledge level can be seen in figure 2.

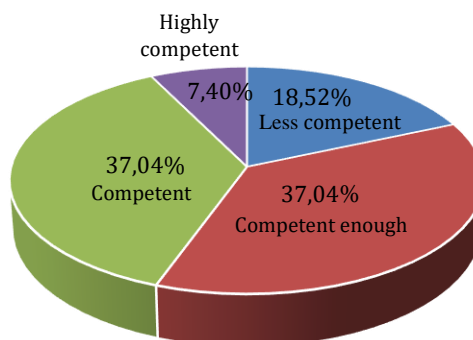


Figure 2. Percentage of MBE Productive Teacher Competency Knowledge Level

Knowledge passport of productive teachers, MBE skill competencies and training recommendations can be seen in table 9.

Table 9. Knowledge Passport of Productive MBE Teachers and Training Recommendations

Teacher Code	Score	Level Knowledge Passport					Rekomendasi, follow;
G1.	87,56	○	○	○	○	○	Advanced level training.
G2.	90,79	○	○	○	○	●	Development level training.
G3.	86,90	○	○	○	○	○	Advanced level training.
G4.	77,78	○	○	●	○	○	Intermediate level training.
G5.	66,43	○	○	○	○	○	Basic level training.
G6.	85,73	○	○	○	○	○	Advanced level training.
G7.	76,00	○	○	●	○	○	Intermediate level training.
G8.	73,27	○	○	○	○	○	Intermediate level training.
G9.	88,17	○	○	○	○	○	Advanced level training.
G10.	71,13	○	○	○	○	○	Intermediate level training.
G11.	76,41	○	○	○	○	○	Intermediate level training.
G12.	82,45	○	○	○	○	○	Advanced level training.
G13.	61,85	○	○	○	○	○	Basic level training.
G14.	72,36	○	○	○	○	○	Intermediate level training.
G15.	87,63	○	○	○	○	○	Advanced level training.
G16.	63,62	○	○	○	○	○	Basic level training.
G17.	73,74	○	○	○	○	○	Intermediate level training.
G18.	71,97	○	○	○	○	○	Intermediate level training.
G19.	83,43	○	○	○	○	○	Advanced level training.
G20.	89,50	○	○	○	○	○	Advanced level training.
G21.	83,75	○	○	○	○	○	Advanced level training.
G22.	78,00	○	○	○	○	○	Intermediate level training.
G23.	100	○	○	○	○	○	Development level training.
G24.	74,25	○	○	○	○	○	Intermediate level training.
G25.	68,50	○	○	○	○	○	Basic level training.
G26.	68,75	○	○	○	○	○	Basic level training.
G27.	89,25	○	○	○	○	○	Advanced level training.

Description: ○ Less competent, ● Competent enough, ○ Competent, ● Highly competent

Table 9 of MBE productive teachers' knowledge passport and training recommendations shows that; five teachers scored below 70 and were recommended to take basic level training, 10 teachers scored below 80 and were recommended to take intermediate level training, 10 teachers scored

below 90 and were recommended to take advanced level training, and two teachers scored above 90 and were recommended to take training advanced level or professional development.

Professional competence is a teacher's ability which consists of knowledge and skills applied in carrying out and completing learning tasks. Teacher competency has a positive and significant effect on vocational school student learning achievement (Hapsari, D. W., & Prasetio, A. P., 2017). The quality of teacher competence has an impact on improving students' skills (Joko, B., S., 2021). Indicators of professional competence include, among others; mastering knowledge, having skills, being able to complete work, mastering goals, developing oneself, utilizing technology, and evaluating.

Recommendations for training as material for preparing programs to improve teacher quality in accordance with competency gaps. Productive teacher training can provide new insights into individual performance for the vocational teaching profession effectively (Arifin, M. A., et al, 2017). Improving teacher quality can also be done through industrial internship programs. Internship programs have many benefits for schools and the world of work (Rachmawati, A., D., and Kusumah, Y., K., 2023). In the internship program, internal competency testing is carried out by productive teacher assessors and external competency testing by industry practitioners, as well as management of competency assessments in industry-based vocational education and training (Vachruddin, V., et al, 2023).

Research limitations; ideally, audits of productive teachers' professional competencies are carried out with knowledge audits and skills audits. Due to limitations; costs, time, technical implementation, and procedural, skills audits cannot yet be carried out. However, knowing the level of productive teachers' knowledge of subject matter can map the basic qualities of productive teachers. As an alternative, a skills audit can be carried out when the teacher is taking functional training according to the training level.

Conclusion

Conclusion; (1) 96.29% of productive automotive teachers meet the academic qualification requirements and 3.71% do not. Conformity between educational background and teaching obligations; 92.59% were appropriate and 7.41% were not appropriate. 33.33% of productive automotive teachers are certified educators and 66.67% of teachers are not yet certified. (2) the results of teacher competency audits in the form of knowledge passports and training recommendations, namely; 18.52% of less competent teachers with a score below 70 are recommended to take basic training, 37.04% of moderately competent teachers with a score below

80 are recommended to take intermediate training, 37.04% of competent teachers with a score below 90 are recommended to take advanced training, and 7.40% of highly competent teachers with scores above 90 are recommended to take advanced training or professional development. The lowest mean sub-competency score was 2.4 in color matching, while the highest mean score was 3.7 in the battery sub-competency.

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