

The Competence and Performance of Indonesian Vocational School Teachers Based on Professional Certification



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Abstract: The teacher's role is very decisive in quality improvement efforts education. For this reason, teachers as learning agents are required to carry out the learning process as well as possible within the framework of educational development. The specific objectives of this study were to analyze the effect of competence on vocational high school teacher performance, both those who have followed professional certification and those who have not followed professional certification. First, descriptive statistics using the average score describe respondents' perceptions of teacher performance and teacher competence. Second, inferential statistics using regression analysis are used to test hypotheses. Finally, the t-test is used to analyze the difference between teacher competence and the performance of teachers who have not followed professional certification and those who have followed professional certification. The result is that competence influences teacher performance, which means the better the teacher's competence, the better the teacher's performance.

INTRODUCTION

The elementary level of education in Indonesia lasts for six years, followed by three years of junior secondary school (for a total of nine years of basic education), followed by three years of senior secondary school, and finally by four years of undergraduate higher education (Gray & Paryono, 2004). At the senior secondary level, pupils have the option of choosing between two different streams to join either Senior High School (Sekolah Menengah Umum) or Vocational High School (Sekolah Menengah Kejuruan). In the academic year 2019-2020, there were a total of 4,976,127 students enrolled in 13,944 senior high schools and 5,249,149 students enrolled in 14,301 vocational schools (The Ministry of Education and Culture of the Republic of Indonesia, 2020).

According to figures from the UN, the population of Indonesia in the middle of the year 2020 is projected to be 273,523,615 people. The labour force in Indonesia is quite huge that is represented by a high percentage of unemployment as well as a substantial number of jobless individuals with high levels of education, the dominance of the informal sector, and significant growth in urbanisation. Indonesia's population is

equivalent to 3.51 percent of the total population of the world (Alatas & Newhouse, 2010). In addition, the labour profile of Indonesia is characterised by a population that is highly educated yet jobless. According to findings from a study that spanned ten years, those who had completed senior secondary school (also known as senior high school and vocational high school) had the greatest rate of unemployment when compared to those who had completed basic, junior secondary, or higher education (Suryadarma et al., 2007). The increase in the country's urban population is the fifth and final distinguishing feature of Indonesia's labour force. In 1980, there was a 22.4 percent concentration of people living in urban areas. It is anticipated that by the year 2025, the percentage of the total population that resides in urban areas would have increased to 58.11 percent (BPS; Bappenas; UNFPA, 2005). This tendency will unquestionably make the workforce more unequal in terms of the competition for employment and the credentials required for those positions. Figure 1 explains that The greatest rate of unemployment, which was created by graduates of trade schools and was at 11.18 percent in 2018, dropped to 10.36 percent but then surged again to 13.55 percent in 2020, This number even exceeds all unemployment generated by education levels other.

According to the Act of National Education System passed in 2003, the primary objective of vocational education is to train students to perform specific tasks in the workplace (The National Education System, 2003). According to research that are pertinent to the topic, the rate of unemployment among graduates of vocational high schools is greater than that of graduates of senior high schools (Chen, 2009; Suryadarma et al., 2007). The efforts to strengthen the relevance of vocational schools for the employment market have been put into place and are now being implemented. These actions have been concentrated on enhancing the quality of the teaching staff, constructing new workshop facilities, and designing a curriculum that is relevant to the needs of the business (Kurnia et al., 2014). Nevertheless, there are still questions over the applicability of Vocational Schools to the job market. The implementation of competency standards into Technical and Vocational Education and Training or TVET's various systems is one of the newer approaches that are emerging with the aim of boosting TVET's relevance on a worldwide scale (ILO, 2006, 2009; Stanwick, 2009).

The first Ministerial Regulation about the Procedure of the Development of the Indonesian Competency Standards (SKKNI) was issued by the Ministry of Manpower and published in the Official Gazette. This Ministerial Regulation has been revised thrice, most recently in 2012, but prior to that in 2004 and 2007 (The Ministry of National Education, 2012). There are currently over 295 different areas of competency standards that have been defined (Ministry of Manpower of the Republic of Indonesia, 2013), every single area of competency standard was subject to regulation by a Ministerial Decree, which was implemented via the processes and given the legal status of the regulation (Setiawan, 2010). The Ministerial Regulation on the Procedure for the Development of Indonesian Competency Standards identifies two primary components: the first one is Indonesian Competency Standards as a framework for professional certification (also known as competency certification), and the second is Indonesian Competency Standards as a framework for CBET or competency-based education and training (ILO, 2006; Ministry of Manpower of the Republic of Indonesia, 2012).

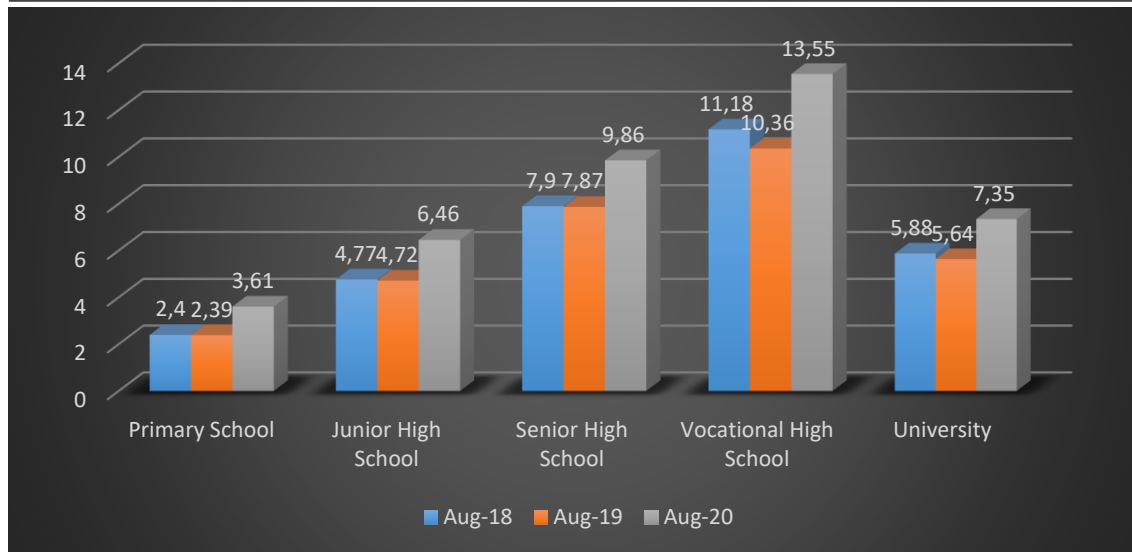


Figure 1. Unemployment rate based on level of education in August 2018, 2019, and 2020

Source: BPS (Central Bureau Statistics, 2020)

In spite of the powerful legal standing of the Certification Authority, which was directly accountable to the President of Indonesia, a declaration by the National Agency for Professional Certification (BNSP) found that the certification aspect of the Indonesian Competency Standards performed far below expectations. The report mentioned that after ten years since the promulgation, 19,052 certified assessors around the nation, 115 certified master assessors (qualified teacher of the assessor), and 41 certified lead examiners participated in certification activities (qualified as a trainer of the assessor and as a chief of certification process), with the full number of Indonesian Competency Standards certificates awarded reaching 2,086,688 (Tatang, 2014). Taking into consideration the 41.8 million employees that have a secondary school qualification or more, this figure is significantly lower than it should be. After 10 years after the policy's introduction, this indicates that just 5 percent of workers have skills that have been certified as meeting the Indonesian National Competency Standards. According to several reports, the implementation of CBET and certification of competency at Vocational Centers has not been successful as of yet (World Bank, 2011). There is only a limited quantity of information on the main reasons for the failure to deliver the Indonesian Competency Standards at Vocational Centers, which are managed by the government that is in charge of regulating the policy.

According to the legislation issued by the government, the creation of competence standards in Indonesian Competency Standards was required to use the Regional Model of Competency Standards produced by the International Labor Organization Regional Office in ASEAN (ILO, 2006). As a result of its implementation, the Indonesian Competency Standards are now situated within the national, as well as the regional and international contexts of the policy. The part that follows establishes a connection between the formation of Indonesian Competency Standards and the international TVET ecosystem. The Regional Model of Competency Standards or RMCS, which is supported by the International Labor Organization, has had a noticeable impact on the Ministerial

Regulation regarding Indonesian Competency Standards. RMCS is being implemented in Bangladesh, Cambodia, Lao People's Democratic Republic, the Philippines, Thailand, and Vietnam as part of an international trend in skill development programmes. The goal of these programmes is to promote mutual recognition of skills and qualifications in a variety of fundamental industries (ILO, 2006; Maclean et al., 2013; Stanwick, 2009). According to the International Labor Organization (ILO), the adoption and implementation of the RMCS in the nations of the Asia Pacific region would strengthen the relevance of education and training to the requirements of industry as well as the needs of individuals. It is envisaged that the RMCS would also lead to more efficient and effective skill development. This will be accomplished by establishing a flexible benchmark of abilities required in industry and providing additional assistance for the relevant TVET process of skills recognition. This will result in a description of the work that is performed within the industry, which will then serve as a guide for the development of training programmes that are tailored to meet the requirements of the industry (ILO, 2006, 2009). In light of what has been said above, one could make the argument that it would be appropriate to conduct an evaluation of the effectiveness of the policy of Indonesian Competency Standards that was borrowed in order to deal with the domestic challenge of increasing the employability of graduates of vocational centres and vocational schools.

The role of the teacher is extremely significant in efforts to enhance the standard of formal education. As a result of this, teachers, in their role as agents of learning, are obligated to facilitate the learning process as effectively as they can within the context of the evolution of education. As a result of the teachers' extremely important function and role in the expansion of the educational system, the teaching profession must be elevated to a higher level of respectability. Article 4 of the Indonesian legislation that was passed in 2005 regarding teachers and lecturers stresses that instructors serve as learning agents, and one of their functions is to promote the overall quality of national education. The instructor should work to enhance their performance in order to fulfil its responsibilities in an effective manner. According to Veizal Rivai & Ali Ghufro Mukti, (2005), performance is the achievement or success scale of an individual as a whole during a period of time in implementing tasks if tried to compare to different options, including work results, aim or goal or criteria that have been defined first and have been agreed upon together. In other words, performance is the result or success level of a person's overall efforts during a given time period. Performance may be defined as the readiness of an individual or group of individuals to carry out a task and finish it in a manner that corresponds to their responsibilities with the result being as they anticipate. The specific goals of this research were to investigate the impact that a teacher's level of expertise has on their level of performance in the classroom, taking into account both those teachers who have pursued professional certification and those teachers who have not pursued professional certification.

LITERATURE REVIEW

Teacher's Performance

There are many reasons why the teacher is so important in education, but one of the most important is because there are substantial qualities in effective teaching, and outstanding instructors have forceful influence on the learning outcomes of their students (Koedel et al., 2015; Stronge, 2018). According to Babalola (2004), in order to implement an exceptional educational system, there must also be excellent students, teachers, facilities, educational curriculum, and policies implemented by the government. When discussing education in a manner that is more student-centered, the focus is typically on how the attitudes of instructors influence the academic performance of their dimension. A teacher can leave an indelible mark on his students by the ways in which he teaches, as well as by the ways in which he conducts himself and the attitudes and behaviours he models for his pupils. This can help students develop mentally robust personalities and obtain a fresh perspective on the world. This is a preliminary investigation into the ways in which the attitudes of educators influence both the characters and the student's academic performances, in hence, the abilities, knowledge, attitudes, and actions associated with students are the results of these processes (Ulug et al., 2011).

Performance has been described by various experts, according to Adeyemi, (2010), teacher performance can be represented as a job performed by a teacher at a particular period of time in the school system to accomplish organizational purposes. Therefore, is reflected in the level of personal participation in carrying out organizational assignments (Ozuruoike et al., 2012). One of the many evaluations that can be used to determine a teacher's effectiveness is the one that Jacob et al., (2018) conducted in order to find the most qualified candidates for teaching positions in terms of their performance during the recruitment process, their academic background, and their scores on screening tests. It is claimed that this conclusion is quite powerful for correcting for non-random job selection as well as teacher selection to schools. However, only a very small number of studies had assessed their performance when they were qualified professionals or teachers who had not engaged in obtaining certified.

Teacher's Competence

Competence is one of the characteristics that influence the overall performance of teachers (Johnson, 2002; Mohamed et al., 2017; Veizal Rivai & Ali Ghufon Mukti, 2005). The most important quality for individuals to have in any given professional sector, and the one that is most directly related to their chances of success, is competence (Kessler, 2008). Improving the quality of education may be accomplished in a number of ways, one of which is through increasing the level of professional knowledge and also competence held by teacher (Fernandez, 2013). Competency, which refers to a description of behaviour, and competence, which refers to a description of a job or job result, are two terms that emerge from two distinct branches of the concept of competence as it relates to suitability in work. These branches are named competency and competence, respectively (Jalal, 2007). The ability to create professional services is considered as requiring a variety of knowledge, skills, experiences, inventiveness, and individual members' capabilities, this combination is referred to as competence (Jac Fitz-enz & Barbara Davison, 2011; Kinicki & Kreitner, 2003; Rampersad, 2005).

The capacity of a teacher to fulfil their responsibilities in a accountable and effective manner is what we mean when we talk about teacher competency (Uzer Usman, 2006). The following are some indicators that may be used to evaluate the competency of teachers:

- a. The ability of teachers to organise learning objectives systematically, adjust learning media with the material presented, accommodate the use of Information and Communication Technology as a learning resource, and the ability of teachers to actualize the various potentials possessed by students are all examples of learning management (Marpanaji et al., 2018; Mumtaz, 2000; Numonjonov, 2020; Uzer Usman, 2006).
- b. Techniques for managing the teaching and learning process in the classroom; mastery of fundamental and educational and teacher insight; mastery of science; relating to teacher science in adjusting subject matter with core competencies and basic competencies; use of techniques for managing the teaching and learning process in the classroom (Caena, 2011; Horii, 2007; Mulyasa, 2005; Nunan & Lamb, 1996).
- c. Social interaction, bonding to the interaction between teachers with students both at academy and outside of academy, interacting with fellow colleagues, interacting with parents / guardians of students, and interacting with the surrounding community (de Souza Fleith, 2000; Gonzalez-DeHass et al., 2005; Pianta et al., 2002; Spencer & Spencer, 2008).

Following are two hypotheses that have been developed for this study based on the literature review that was discussed earlier:

H1: There is an effect of teacher competence on teacher performance.

H2: There is a difference between the competence and performance of teachers who have taken professional certification and those who have not participated in professional certification

METHODOLOGY

An explanatory survey approach, also known as the collection of information, to test hypotheses, was utilised in this research project as the methodology (Kelly & Davis, 1994). Respondents were taken from a sample of teachers from vocational schools in Indonesia, particularly in Central Java, East Java, South Sulawesi, North Sulawesi, East Borneo and West Sumatra as representatives. There was a total of 276 respondents, and the details included 172 teachers who have followed professional certification and 104 teachers who have not followed professional certification (Table 1). All respondents are a full-time teacher and at least has more than two years of teaching in vocational school and industrial experience.

The data collection instrument is a rating scale model questionnaire that consists of two parts. The first part, which consists of 12 items, is a questionnaire to measure respondents' perceptions of teacher performance which is described from five indicators: work quality, work accuracy, work initiative, workability, and communication. The second part consists of 12 items is a questionnaire to measure respondents' perceptions of teacher competence, which is described from four indicators: learning management, personality, scientific mastery, and social interaction.

Table 1. Total Respondents

Provinces	Respondents	Have followed Professional Certification	Have not followed professional certification
Central Java	55	40	15
East Java	56	42	14
South Sulawesi	47	25	22
North Sulawesi	39	25	14
East Borneo	37	17	20
West Sumatra	42	23	19
Total	276	172	104

Source: Data Processed

Table 2. Teacher's Performance

Indicator	Not followed professional certification	Followed professional certification	Mean
Work quality	4,32	4,49	4,41
Work accuracy	4,34	4,44	4,39
Work initiative	4,39	4,53	4,46
Workability	4,33	4,47	4,40
Communication	4,30	4,45	4,38
Total	4,34	4,48	4,41

Source: Data Processed

FINDINGS AND DISCUSSION

Teacher's Performance

The average score of 4.41 that respondents gave in response to the question places teacher performance in the high category, indicating that respondents' judgments of teacher performance are accurate. In Table 2, we show the average score for each of the indicators that are used to evaluate the performance of teachers.

Work initiative receives a score of 4.46, making it the performance indicator for the instructor that stands out as having the highest score. According to these findings, teachers need to demonstrate an ability to instruct using a variety of learning modalities in order to receive a high category. Teachers that are willing to take the effort to include new concepts into classroom instruction will be able to encourage their pupils to adopt a growth attitude (Patrick & Joshi, 2019). The average score for the communication indicator (4.38) is the lowest of all the indicators. The implication of this outcome is that the standard of the instructor's work is not up to par. The teachers' performance has not been up to standard in terms of developing positive relationships with the pupils and their families. Burleson & Samter, (1990) provided a definition of communication skills and investigated the dynamic between a teacher and a student. Intense communication activities that take place between instructors and students, one of which is the capacity of teachers and students to negotiate with one other and resolve disagreements. These activities take place within the context of relationships between teachers and students (Frymier & Houser, 2000). The success of a teacher's contact with the parents of children

in terms of student attendance and their academic progress may be expressed via the communication activity, which is the primary reason why this activity is considered vital. This communication with its many facets is beneficial in all educational institutions, especially those that include school, instructors and parents (Ozmen et al., 2016).

The average score of 4.34 indicates that, according to respondents' perceptions, the performance of instructors who have not pursued professional certification falls within the "high" category. Utilizing a variety of learning models during the learning process with the highest average score demonstrates the teacher's effort. The average score for communication linked to creating relationships with students and parents is poor.

According to respondents' perceptions, the performance of teachers who have followed professional certification is in the high category, as indicated by the average score of respondents' answers of 4.48. The teacher's work initiative is shown by the use of varied learning models during the learning process with the highest average score. However, teacher performance in work accuracy has the lowest average score of 4.44, meaning that the accuracy in making decisions related to student learning needs to be improved. The accuracy of teacher work in schools can be overcome if a teacher works more effectively, where they do everything right, for instance, planning lessons, preparing learning environments, and conducting appropriate lesson introductions. An effective teacher is able to influence the lives of his students (Lupascu et al., 2014).

Teacher's Competence

The responses of the survey participants revealed an average score of 4.34, indicating that respondents believe that teacher competence falls within the "high" category. The average score for each of the indicators that are used to evaluate the quality of a teacher's competence is presented in Table 3.

The highest score is on the Mastery of teaching materials indicator with an average value of 4.47. The teacher's competence shows this in providing the material that is in accordance with the core competencies and basic competencies listed in the syllabus, using interesting learning techniques in the learning process in the classroom, and mastering the foundations and insights of education and teacher training. A teacher profession has capable of sharing knowledge, transferring skills, and providing attitudes to their students. The mastery of teaching materials is a crucial skill that requires to present with, in the teaching process thus, the impacted learning process in the school. Understanding of subject/material for teaching is required for a teacher; this gives the implication that the teacher should catch the major points (Ngugi & Thinguri, 2014). On the other hand, the social interaction indicator has the lowest average score with a value of 4.22. These results indicate that the competence of teachers in communicating with students, co-workers, parents/guardians of students, and the community still needs to be improved. In Vocational high school, the instructions process mostly from the teacher, a poor communication skill from teachers causes misunderstanding of the material and failure to accept the information. Acceptance of understanding in the classroom absolutely depends on teacher communication skills (Geier, 2021; Morreale et al., 2000; Yusof & Halim, 2014). All skills, attitudes, and knowledge possessed by a teacher will be in vain if the teacher has poor communication.

Table 3. Teacher's Competence

Indicator	Not followed professional certification	Followed professional certification	Mean
Learning Management	4,27	4,47	4,37
Personality	4,31	4,34	4,32
Mastery of teaching materials	4,21	4,73	4,47
Social interaction	4,20	4,25	4,22
Average	4,24	4,45	4,34

Source: Data Processed

Table 4. Regression Analysis

Variable	Constant	Beta	t	Sig	Adjusted R Square
Teacher Performance	9,647	0.841	22.159	0.000	0.640

Source: Data Processed

The respondents' perceptions indicate that the level of competence possessed by instructors who have not pursued professional certification falls within the high category. This is shown by the average score of 4.24 that respondents' replies received. The competency in one's personality receives the highest score, with an average value of 4.31. Based on these findings, it appears that the instructor is capable of giving pupils with examples that are positive, kind, and courteous to a high degree. On the other side, the average score for social interaction skills is 4.20, which is the lowest score overall. This finding suggests that the capacity for communication between instructors and students, as well as among coworkers and the parents and guardians of kids, is still lower than it is in other sectors.

The respondents' perceptions show that the level of teacher's competence who have followed professional certification is falls into quite high category, this is demonstrated by the fact that the average score obtained from the respondents' responses was 4.45. The highest score is in the scientific mastery competence, with an average value of 4.73. teacher competence in providing the material following the core competencies and basic competencies listed in the syllabus, using interesting learning techniques in the learning process in the classroom, and mastering the foundations and insights of education and teacher training. Social interaction competence has the lowest average score with a value of 4.25. This finding suggests that the capacity to interact between teachers/instructors and students, colleagues, and the parents or guardians of students is still behind the ability of other areas.

The Influence of Teacher Competence on Teacher Performance

Table 4 shows the linear regression equation showing the effect of teacher competence on teacher performance is $= 9.647 + 0.841 (X)$. The positive sign (+) indicates that the relationship between the variables is one-way, meaning that the higher the teacher's competence, the higher the teacher's performance. The hypothesis test shows that the f value is greater than the t-value of 22.159 while the t-test is 2.829, which means the t-value is greater than the t-table value, while seen from the significant value, it shows a significant value of 0.000 which means it is smaller than 0.05. So, it can be concluded

that the first hypothesis is accepted, which means that teacher competence significantly affects teacher performance. Based on the adjusted R square value, from the model in this study, teacher competence has an influence on teacher performance by 64%, other factors outside the research influence the remaining 36%. These results are in line with research which concludes that there is a significant influence of competence on teacher performance. This relates to Antera, (2021); researchers agree on the major characteristics of professional competence, including the contextual and developing character of professional competence and its interaction with action. Interrelationships exist between concept usage and the concepts of proficiency and proficiency's four components: performance, qualification, and professionalism.

Differences in Teacher Competence and Performance based on Professional Certification

The statistical calculations using the T-test showed a significance value of 0.06 which means greater than 0.05. Thus, it can be concluded that there is no difference in the competence of teachers who have followed professional certification and those who have not followed professional certification (Table 5). These results show that teachers who have passed professional certification have better teacher competencies compared to teachers who have not passed professional certification.

The findings of statistical calculations about the performance of teachers also reveal a discernible divide between those educators who have pursued professional certification and those who have not pursued professional certification (Table 6). According to this result, instructors who have pursued professional certification have a greater performance rate than teachers who have not pursued such certification. Certification refers to the process of awarding certificates to educators who have demonstrated that they have fulfilled a set of requirements, including having the necessary academic credentials, being competent, being physically and mentally healthy, realising national education goals, and providing appropriate welfare (Mansur, 2007). Certification is a process of acknowledging that a person already has the competence to carry out educational services in certain educational units after passing the competency test organized by the certification body. In other words, educator certification is a competency test process designed to reveal the mastery of educator competencies as the basis for providing educator certificates and fulfilling the need to improve professional competence. Therefore, the certification process is seen as an essential part of efforts to obtain a competency certificate in accordance with established standards (Estriyanto et al., 2017).

Table 5. Differences Between Competence for Teachers Who Have Not and Have Followed The Professional Certification

T-Test: Equal Variance Assumed		
	Not followed professional certification	Followed professional certification
Observations	104	172
Mean	52.0667	53.7674
Sig	0.006	

Source: Data Processed

Table 6. Differences Between Performance for Teachers Who Have Not and Have Followed The Professional Certification

	T-Test: Equal Variance Assumed	
	Not followed professional certification	Followed professional certification
Observations	105	172
Mean	50.6476	52.3081
Sig	0.005	

Source: Data Processed

CONCLUSION

Competence influences teacher performance, which means the better the teacher's competence, the better the teacher's performance. The teacher's performance in question includes the quality of work, accuracy of work, initiative in work, workability, and communication. Teacher performance is the actualization of teacher competencies related to learning management, scientific mastery, attitude or personality, and social interaction. Scientific mastery, which is the giant picture of teacher competence, can impact teacher initiatives in providing learning to students. The ability of teachers to provide materials that are in accordance with the core competencies and basic competencies listed in the syllabus use interesting learning techniques in the learning process in the classroom, and mastery of the foundations and insights of education and teacher training has been able to grow the ability of teachers to teach with varied learning methods capable of providing an impact. The competence and performance of teachers who have followed professional certification are better than teachers who have not followed professional certification. Thus, teacher certification has a positive impact on improving teacher competence and performance. Indonesia faces a complicated problem with the lack of productive teachers in public and private vocational high schools, not to mention the uneven fulfilment of professional certification due to the vast area and limited funds. Therefore, it is necessary to accelerate these two sectors so that vocational high schools in Indonesia are strong, as the slogan "Strong Vocational-Strengthens Indonesia" is needed. The author's recommendation for policy direction in vocational education in Indonesia is to be preceded by fulfilling the teacher quota, not only centrally in Java but throughout the country, then accelerating competency tests for permanent and temporary productive teachers. To avoid a high financial burden in the education sector, the diversion of the financing sector may be a solution, for instance, postpone funding for constructing a new school, priorities the fulfilment of the teacher's number, the fulfilment of the number productive teachers, and also the teacher certification process.

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