Survey on Integration of Expertise Competency Test Into Teacher Certification Program of Productive Vocational Teachers

Hartoyo¹, D Laras² and Soenarto³

¹,²,³ Technology Vocational Education, Graduate School, Yogyakarta State University, Indonesia.

E-mail: hartoyo@uny.ac.id

Abstract. Productive vocational teachers who are professionals are required to master the learning material both theory and expertise or vocational practice in accordance with what is needed in the world of work. Meanwhile, so far the certification model and competency test of productive vocational teachers through portfolio assessment, the Teacher Professional Education and Training (PLPG) model, and the Teacher Professional Education (PPG) model have not tested the mastery of skills or expertise competency possessed by the teacher. To overcome this, a study is needed to integrate skills competency tests into productive vocational teacher certification programs. In this article we will discuss the results of a survey on the integration of expertise competency tests into productive vocational teacher certification programs, which include: (1) How many teachers have an educator certificate and a certificate of expertise? (2) How big are productive vocational teachers who assess the importance and desire to have a certificate of expertise? (3) What is the teacher's opinion about the validity period of educator certificates and expertise certificates? (4) What is the teacher's opinion about the integration of skills or expertise competency tests into the teacher certification program? This research is a survey research with quantitative descriptive approach. Data collection was carried out on 7-8 September 2016. Data sources or respondents in this study included 98 productive teachers of Public and Private Vocational High Schools in Yogyakarta. Data collection methods carried out in this study used instruments in the form of questionnaires and list of entries. Data analysis techniques used are quantitative descriptive analysis techniques in the form of percentages. The results showed that: (1) Teachers who had an educator certificate were 61.22 % and teachers who had a certificate of expertise were 38.78 %; (2) Teachers who are of the opinion that an important certificate of expertise for productive vocational teachers is 91.84 % and teachers who wish to have a certificate of expertise are 87.76 %; (3) Teachers who argue to integrate the expertise competency test into the teacher certification program are 51.02 %, while teachers who argue between the teacher certification program and expertise certification separated are 38.78 %; (4) Teachers who think the validity period of the educator's certificate and expertise certificate forever are 28.57 % and 16.33 % respectively, teachers who think the validity period of the educator's certificate and expertise certificate for 5-10 years are consecutive 22.45 % and 34.69 %, and teachers who argue that teacher certification and expertise certification are carried out in stages and sustainably are 30.61 % and 36.74 %.
1. Introduction

Vocational High School (SMK) is a school that aims to prepare skilled middle-class workers to meet the needs of the world of work, national development, and face global competition. To produce skilled graduates, a skilled and professional teacher is needed because the teacher plays a central role in the learning process in vocational schools. Teachers face and deal directly with various problems that occur with students both academic and non-academic. Teachers teach in classrooms, laboratories, and workshops to transfer knowledge, attitudes and skills to students.

The success of students in mastering knowledge and honing their attitudes and skills depends on the teacher in giving direction, guidance, and good example. Thus, the teacher becomes the spearhead of the success of education in schools. Therefore, there is no doubt that the availability of qualified and professional teachers is an absolute demand that is believed to be able to contribute significantly to the achievement of educational success.

According to Government Regulation No. 74/2008 Article 1 paragraph (1) concerning Teachers, states that teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing, and evaluating students in early childhood education through formal education, basic education, and middle education. In line with this statement, vocational teachers must have competencies that are expected to carry out their roles, duties and functions as professional teachers, namely pedagogic competencies, professional competencies, personality competencies, and social competencies.

To fulfill these expectations various efforts have been made by the government, including through Law Number 14 of 2005 concerning Teachers and Lecturers, and Government Regulation Number 74 of 2008 concerning Teachers which requires teachers to have academic qualifications, competencies and educator certificates. Educator certificates for teachers are obtained through a certification program that is by examining teacher competencies both through portfolios, Teacher Professional Education and Training (PLPG), and Teacher Professional Education (PPG) organized by universities that have accredited teacher training programs, both organized by the government and the community. The education is carried out after the degree program (Bachelor).

Government efforts to improve the quality and professionalism of teachers and the quality of education through the certification program have not met expectations. As the World Bank publication was launched on March 14, 2013: "Spending More or Spending Better: Improving Education Financing in Indonesia". The publication shows that teachers who have obtained certification and who have not turned out to show relatively similar achievements. The teacher certification program held by the Ministry of Education and Culture over the past few years did not have an impact on improving the quality of national education (Abbas, 2013).

Several criticisms were also conveyed by several education prominent figures and experts related to various models and implementation of teacher certification programs both through portfolios, competency tests through PLPG and PPG so far. Teacher certification through portfolios is considered a number of weaknesses, among which are assessments that do not reflect the actual competence of teachers and are prone to document manipulation (Director General of Improving the Quality of Educators and Education Personnel (PMPTK): Tempo Daily June 3, 2008). Doubts about the in-
service teacher certification test with the portfolio model were also raised by Neolaka (2008) with reason: (1) By using portfolio assessments without face to face being unable to measure all competencies required; (2) The validity or accuracy of portfolio data cannot be guaranteed, (3) Portfolio assessment rubric is the same as an assessment of credit number for promotion of teachers and lecturers; (4) Portfolio is a simulation of expert competency test and is not suitable for technical teacher competency test.

Furthermore Muslim (2008) identified weaknesses and shortcomings of the Teacher Professional Education and Training (PLPG) which must be followed by teacher certification participants who did not pass portfolio assessments, among others: (1) cannot be done in bulk, (2) it takes a long time, (3) requires greater costs, and (4) the 90 hour PLPG implementation for vocational teachers was felt to be lacking because it emphasized theoretical learning despite there was teaching practice simulations, but there was no vocational practice (skill). Likewise, teacher certification through Teacher Professional Education (PPG) conducted today, especially for Productive Vocational Teachers, in the competency test is almost the same as the competency test used through PLPG, namely not using the vocational practice (skill) test. In fact, it is precisely this expertise/vocational practice test that is important for productive vocational teachers to find out whether the teacher is skilled in the area of expertise / vocational. This is what distinguishes productive vocational teachers from other teachers. If the vocational school teacher is incompetent and does not have skills in the area of expertise / vocational where it might be able to produce graduates who are skilled and ready to work in increasingly competitive employment.

Increasing the professionalism of vocational teachers is also emphasized through Presidential Instruction No. 9 of 2016 concerning Revitalization of Vocational Schools. The contents of the Presidential Instruction include increasing the number and competence of educators for vocational schools, accelerating the provision of vocational school teachers through education, equalization and recognition. One way to improve the competence and recognition of vocational school teachers is through teacher competency testing, both the teaching profession competency test, and the expertise/vocational competency test (Irianti, 2016: 1023). Thus to improve professionalism, productive vocational teachers should have an educator certificate and also have a certificate of expertise.

Based on the description above, it is necessary for the efforts of the government and all components of this nation to always review the teacher certification program by refining its competency test models, especially the more appropriate Productive Vocational Teacher competency tests. For this reason, this study tries to survey productive vocational school teachers about the condition of teachers who already have an educator certificate and expertise certificate, the importance and desire of the teacher to have a certificate of expertise, and the possibility of integrating the competency test into the teacher certification program. This information is very important for education experts and stakeholders in the education sector to develop a better productive vocational teacher competency test model in the future.

Based on the background above, the problems that will be discussed in this study are formulated as follows: (1) How many teachers have educator certificates and expertise certificates? (2) How big are productive vocational teachers who assess the importance and desire to have a certificate of expertise? (3) What is the teacher's opinion about the validity period of educator certificates and expertise
(4) What is the teacher's opinion about the integration of skills competency tests into the teacher certification program?

In accordance with the formulation of the above problem, the purpose of this study is to: (1) Describe the percentage of the number of teachers who have an educator certificate and a certificate of expertise; (2) Describe the percentage of the number of productive vocational school teachers who assess the importance and desire to have a certificate of expertise; (3) Describe the percentage of teachers who think about the validity period of an educator's certificate and a certificate of expertise; and (4) Describe the percentage of the number of teachers who think about the integration of expertise/vocational competency testing into the teacher certification program.

Vocational teachers are grouped into three, namely normative teachers, adaptive teachers, and productive teachers (Minister of Education and Culture Regulation No. 22 of Year 2006). The normative group is a group of subjects that are allocated permanently which includes Religious Education, Citizenship Education, Indonesian Language, Sports Physical Education and Health, and Cultural Arts. The adaptive group consists of subjects in English, Mathematics, Science, Social Sciences, Computer Skills and Information Management, and Entrepreneurship. The productive group consists of a number of subjects that are grouped in the Basic Competencies of Skills and Skills Competencies. Vocational High Schools have specificities. The specialty lies in productive subjects, namely vocational subjects which are special abilities given to students in accordance with the chosen expertise/vocational program.

In general, there are three main tasks of the teacher as a profession, namely: educating, teaching and training (Suyanto, 2012). Productive vocational teachers in addition to having the above competencies, must also have an understanding and insight into employment, business, and industry. According to the vocational education arguments delivered by Prosser, teachers are demanded, among others: (1) able to carry out education and training using methods, tools, machines such as at work; (2) able to educate and train students directly in certain areas of expertise; and (3) able to provide tasks in the form of real work, foster the habit of thinking and working effectively (Djojonegoro, 1998). Thus, productive vocational teachers must have the competence of educators in addition to having expertise or vocational competence in accordance with their fields.

Law Number 14 of 2005 Article 1 point 1 concerning Teachers and Lecturers (UUGD) states that teachers are professional educators who have the main task of educating, teaching, guiding, directing, training, assessing, and evaluating students in early childhood education formal education, basic education and secondary education. In point 4 it is explained that professionals are jobs or activities carried out by a person and become a source of life income that requires expertise, skills, or skills that meet certain quality standards or norms and require professional education. According to this understanding, the teacher is a profession that requires special skills and these skills can be demonstrated by their skills in teaching.

Article 8 of the Teachers and Lectures Law states that teachers are required to have academic qualifications, competencies, educator certificates, physically and mentally healthy, and have the ability to realize national education goals. Subsequently, Article 9 of the Teachers and Lectures Law states that the academic qualifications are obtained through higher education undergraduate programs or four diploma programs. Article 10 paragraph (1) states that teacher competencies as referred to in
Article 8 include pedagogic competencies, personality competencies, social competencies, and professional competencies obtained through professional education.

The policy direction stated in the Teachers and Lectures Law (UUGD) is clear enough that each teacher must have educator competencies that will be rewarded with an educator certificate. Various difficulties arise when the trial of teacher competency tests is carried out. These difficulties include, among others, starting from the determination of the target of competency testing, the quality of competency testing tools, the accuracy of the results of the assessment of teacher competency tests and so on. Competency tests demanding examination equipment that vary greatly according to the number of professions in the study field of teacher.

Teacher competency tests that are tracked from teacher certification policies in various countries have differences in the material tested and how to test them. In general, competency testing differs according to the level and type of education. At the primary education level, teacher competency requirements are simpler. The Michigan Test for Teacher Certification (MTTC) establishes a teacher certification program through the Basic Skill Test designed by the government to ensure that teachers have basic skills and knowledge for effective teaching in schools. Basic skills tests include sub tests of reading, writing, and math. If someone fails to take one of the subtests, the test can be repeated.

The Assessment of Teaching Assistant Skills (ATAS) held by the New York State Assessment of Teaching Assistant Skills (NYSATAS) tests a person who wants to join teacher training at Level I, Level II, Level III, or teacher assistant certificates to achieve a qualified score on the test. The purpose of this test is to help ensure that teacher assistants have the necessary knowledge and skills to teach at school. ATAS is multiple choice tests containing reading, writing, math, and learning support material. Literature review supports the use of exams as one of the determinant for teacher proficiency in teaching. Although there are opportunities for errors that can occur in all tests because there is no single test that can measure perfectly. Interstate New Teacher Assessment and Support Consortium (INTASC) created a standard model for measuring and assessing beginner teachers in order to license. The consortium has developed 10 indicators to measure teacher competence.

2. Method

This research is a survey research with quantitative descriptive approach. Data collection was held on 7-8 September 2016 in Yogyakarta. Data sources or respondents in this study include productive teachers of Public and Private Vocational Schools in Yogyakarta Special Region as many as 98 people from various expertise competencies.

Data collection methods conducted in this study using instruments in the form of questionnaires and a list of entries. Data analysis techniques used are quantitative descriptive analysis techniques in the form of percentages.

3. Result and discussion

3.1 Teacher Certified Educator and Expertise Certified

Based on data obtained from respondents as many as 98 productive teachers of Public and Private Vocational Schools in Yogyakarta Special Region can be summarized in the following figure 1.
Figure 1. Percentage of the number of certified teachers

From the figure 1 above it turns out that the percentage of teachers who have certificates of educators and teachers who have expertise certificates is the opposite number. The percentage of teachers who have had an educator certificate is 61% greater than teachers who do not have an educator certificate (39%). The teacher certification program that has been going on since Year 2006 has not been able to complete all the teachers who are participating in the teacher certification program.

On the other hand teachers who have possessed expertise certificates that are relevant to the area of expertise are still relatively few, namely only 39%, while teachers who do not have an expertise certificate are still large, namely 61%. Whereas the competence of the expertise field that is owned by the teacher is very important in shaping the professionality of a productive vocational teacher.

3.2 The Desire and Importance of Certificate Ownership for Productive Vocational Teachers

The following is a summary of the teacher's desire to take the skills competency test and the teacher's opinion on the importance of having a certificate of expertise for productive vocational teachers summarized in figure 2.

Figure 2. Desires and importance of ownership of expertise certificates

The figure 2 above shows that the teacher's desire to take the expertise competency test that is relevant to his area of expertise is very large, namely 88%, no one does not want to take the expertise
competency test (0%). However, there were few teachers who did not give answers, namely 12%. This is in line with his opinion that agreed that a productive vocational school teacher must have a certificate of expertise with a very large percentage of 92%, none of whom argued disagree (0%), while those who did not give answers were 8%. This shows that teachers' high awareness of the importance of having a certificate of expertise in carrying out their duties is more professional. Based on this, the government needs to respond to the teacher's wishes regarding the high level of expertise competency test and the importance of productive vocational school teachers having a certificate of expertise to support their professionalism by making relevant policies and programs.

3.3 Teacher's Opinion on the Pattern of Expertise Certification Implementation
Respondents' opinions about the implementation of expertise certification are summarized in figure 3 below.

![Pattern of Expertice Competency Test Implementation](image)

**Figure 3. Implementation Pattern of expertise competence test**

From the figure 3 above, there are differences of opinion in looking at the implementation of expertise certification, namely: (1) separate from the implementation of teacher certification as much as 39%, 2) integrated with teacher certification as much as 51%, and 3) did not answer for 10%. Teachers who argue that the implementation of separate expertise certification with the implementation of teacher certification has several reasons, including: to be more focused, be able to prepare more mature, and expertise certification can be used as a requirement to take teacher certification. Meanwhile, teachers who argue that the implementation of expertise certification integrated in teacher certification have several reasons, namely: more practical and efficient in terms of implementation, time and cost; competence in the field of expertise is part of the competence of educators; and can get two certificates at once.
3.4 Teacher's opinion about the validity period of an educator and expertise certificates

The opinions of respondents who want expertise certification are integrated with the implementation of teacher certification more than those who argue that the implementation of the two certifications is separated. Therefore, it is necessary to start thinking about and reviewing the implementation of the two certifications integrated specifically for productive vocational school teachers. Respondents' opinions about the validity period of certification for both educator certification and expertise certification for productive vocational teachers are as summarized in figure 4 below.

![Figure 4](image)

**Figure 4.** Teacher's opinions about the validity period of educator and expertise certificates

Based on the figure 4 above, there are differences in opinions of productive Vocational Teachers about the validity period of the certificate both educator certificates and expertise certificates. For educator certificates the order is as follows: tiered and continuous according to level / position of 31%, done once and forever valid for 29%, validity period of 5-10 years is 22%, and does not answer for 18%.

Whereas, for the expertise certificate, the order is as follows: tiered and continuous in accordance with the level / position of 37%, validity period of 5-10 years of 35%, carried out once in effect forever at 16%, and does not answer as much 12%.

When compared to the respondent's opinion on the validity period of both types of certificates, the second and third order exchanged places between educator certification and expertise certification. For educator certification, the second order is enforced once in effect forever, and the third order is valid for 5-10 years. For expertise certification, the second and third place exchange. The opinion of respondents on the validity period of both types of certificates is the first order is the same, namely certification is carried out in stages and is sustainable in accordance with the level / position of the teacher.

Some of the reasons put forward by respondents if teacher certification and expertise certification are carried out in stages and sustainable are as follows: (1) always trying to update competencies that are increasingly developing, (2) can differentiate their level of professionalism, and 3) accelerate quality improvement. Therefore, it is necessary to begin to study and develop a teacher certification model that is integrated with expertise certification with tiered and sustainable in accordance with the level/position of the teacher.
4. Conclusion

Based on the results of the analysis and discussion it can be concluded as follows.

1. Teachers who have had an educator certificate are 61% and teachers who have possessed a certificate of expertise are 39%;
2. Teachers who are of the opinion that the certificate of expertise important for productive vocational school teachers is 92% and the teacher who wishes to have a certificate of expertise is 88%;
3. Teachers who argue to integrate the expertise competency test into the teacher certification program are 51%, while teachers who argue between the teacher certification program and the expertise certification program separated are 39%;
4. Teachers who think the validity period of the educator's certificate and expertise certificate forever are 29% and 16%, teachers who think the validity period of the educator's certificate and certificate of expertise for 5-10 years are respectively 22% and 35%, and teachers who argue that teacher certification and expertise certification are carried out in stages and sustainably are 31% and 37%.

5. Recommendation

Based on the results of this study it is suggested to stakeholders: experts, academics in education, business and industry, a consortium of teacher certification, universities, BNSP, professional associations, state-owned enterprises, regional governments, relevant ministries (Ministry of Education and Culture, Ministry of Research and Technology, Ministry of Manpower, and Ministry of Industry and Trade) to take the following steps.

1. Developing expertise competency test for productive vocational teachers with collaboration among relevant stakeholders.
2. The government must program the expertise competency test for productive vocational school teachers to obtain a certificate of expertise for teachers who have received an educator certificate.
3. Integrate the expertise competency test into the teacher certification program for productive vocational school teacher candidates for Teacher Professional Education (PPG) so that at the end of PPG, participants who pass the competency test will receive an educator certificate and expertise certificate at once.
4. Conduct studies to apply integrated competency tests in stages and sustainably according to the level/position of the teacher.

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