The Influence of Pedagogic and Professional Ability of the Teachers Competency Exam Results

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Abstract—The research aims to describe and analyze in depth about testing and analyzing the influence of; (1) pedagogic competence, (2) professional competence, (3) pedagogic and professional competences on results of the teachers competency test in Senior High School number one Payaraman. This research used a causality method. The types of data used were quantitative and qualitative. The findings of this research indicate that; (1) Pedagogic competence has a significant effect on the results of the teachers competency test; (2) Professional competence has a significant effect on the results of the teachers competency test; (3) Pedagogic and professional competences have a significant effect on the results of the teachers competency test in Ogan Ilir Sub-district, Payaraman. This study recommends an effort to boost teachers’ competency and school should really pay attention and continue to improve the supporting factors by engaging the teachers training, workshop and internships.

Keywords—pedagogic competency and professional ability; teachers competency exam results

I. INTRODUCTION

The quality of teaching competency plays an important role to make and establish the quality of learning process for the students. Teaching competency is the role of teacher to act in the classroom, therefore directly linked with the craft of teaching [1,2]. A teacher carries a big responsibility in his/her classroom. One reason is that all students depend on teacher. Everything the teacher says will have an effect on the students. If the teacher feels joy of feels anger, it will be spread among students. The attitudes of the teacher gets contagious. Teacher’s competency can be defined as the combination of knowledge, skills, attitude, values and personal characteristics, empowering the teacher to act professionally and appropriately in a situation, deploying them in a coherent way [3]. While others stated that, teacher competency is a qualitative description of teachers’ meaningful behavior [4].

More clearly stated in the Indonesian Government Regulation No. 19 article 28 in 2005, the National Education Standards defines the competence is an agent of learning in primary education, secondary and early childhood education includes: (1) Pedagogic competence (2) Professional competence. (3) Personal competence and, (4) Social competence [5]. In the explanation of the chapter mentioned that pedagogical competence is the ability to manage learners’ learning process that includes students understanding, planning and learning process, evaluation of learning outcomes and development of students to actualize various potentials. In other words, the pedagogical competence of teachers is the competences that must be owned by teachers in implementing the learning activities (KBM). Competences include the ability to draw up programs intended learning, to implement learning programs, and to evaluate the results of the learning process. In this study, the researchers focused on knowing whether the teachers have a well pedagogical competence and professional competences or not.

Professional competence is the ability of mastering the material or subject matter which is broad and deep that a teacher has to have. Mastery of the material in the fields of study includes; (1) mastery of materials, structural concepts and thought patterns that support the science of teaching subjects; (2) development of the profession through the reflective acts; and (3) consistency mastery of teachers between content with the performance (text, context, and reality, facts, principles, concepts and procedures, completeness of the philosophical, the origin and application of science [5]. In carrying out the duties and obligations of professionalism, the teachers should own and control a number of competences that include, pedagogical, professional, social, and personality. Therefore, teachers’ performance assessment mechanism is needed to evaluate the teachers’ performance of the duties and obligations resulting from the professional, pedagogical, social and personality. Thus, the professional teachers are expected to participate actively in national development to train teachers to be intelligent, religious, mastering science, technology, and communications, having ethical personality, and having virtuous personality. In addition to the teacher as educators must be able to meet the standards of academic qualifications and competence which are measurable and adequate.

In fact, the matter is not so, even after the standard academic qualifications working lives long enough and / high does not guarantee teachers as educators can become a professional teacher and master of science and master of appropriate technology which is expected by the Government and the public. This is evident from the results of the implementation of teacher competency test across Indonesia on November 9, 2015 up to November 27, 2015 [6]. Nationally teacher competency test results largely below the standard, set
by the government through the Ministry of Education and Culture. A minimum standard limit to pass teacher competency test is 55 (fifty-five), while the test execution in Ogan Ilir, South Sumatra province, especially in Payaraman and surrounding district region where competency test (TUK) was conducted in which followed as many as 457 elementary school, high school and senior high school teachers showed that the average of teacher competency test results was only 51.

The list of participants and the results teacher competency test of Senior High School Number 1 Payaraman can be seen in the following table 1.

**TABLE 1. LIST AND RESULTS OF TEACHER COMPETENCY TEST OF SENIOR HIGH SCHOOL NUMBER 1 PAYARAMAN 2015**

| No | NUPTK | Name              | Point Tasks | Field of Study | No. Participant | Pedagogic | Professional | Σ Problem | Value UKG |
|----|-------|------------------|-------------|---------------|----------------|-----------|--------------|-----------|-----------|
| 1  | 0235155565820806 | Swadisa         | SMAN 1 Payaraman | Mathemat ics | 201500399012 | 18 | 10 | 8 | 55.56 | 42 | 16 | 26 | 38.095 | 60 | 43.33 |
| 2  | 0223673666820806 | Tufik Poetry    | SMAN 1 Payaraman | Civics      | 201510182603 | 24 | 12 | 12 | 50 | 56 | 19 | 37 | 33.929 | 80 | 38.75 |
| 3  | 0248706296330002 | Wastini          | SMAN 1 Payaraman | Geograph y   | 2015012226732 | 24 | 14 | 10 | 58.33 | 56 | 29 | 27 | 51.786 | 80 | 53.75 |
| 4  | 0246758658920806 | Kautuddin        | SMAN 1 Payaraman | Physics    | 2013015151853 | 24 | 16 | 17 | 61.11 | 42 | 8 | 24 | 19.048 | 60 | 31.67 |
| 5  | 0245263664300005 | Omi Yunnurini    | SMAN 1 Payaraman | Chemistry   | 2015016551111 | 24 | 18 | 12 | 50 | 56 | 25 | 31 | 44.643 | 80 | 46.25 |
| 6  | 0257359658120805 | Akhmad Basori    | SMAN 1 Payaraman | Physics    | 201501883388 | 18 | 10 | 8 | 55.56 | 42 | 33 | 9 | 78.571 | 60 | 71.61 |
| 7  | 0246158658920806 | AhmadAyupayaya   | SMAN 1 Payaraman | ICT        | 2015021486666 | 30 | 19 | 11 | 63.33 | 70 | 53 | 17 | 75.714 | 100 | 72 |
| 8  | 0233704656300005 | Sunandah, S.Pd. | SMAN 1 Payaraman | Indonesia  | 201502243408 | 30 | 15 | 15 | 50 | 70 | 39 | 31 | 55.714 | 100 | 54 |
| 9  | 0236166667220803 | Herisa A Hikdawati | SMAN 1 Payaraman | Cultural Arts | 2015026240484 | 30 | 17 | 13 | 56.67 | 70 | 48 | 22 | 68.571 | 100 | 65 |
| 10 | -     | Mohammad Abhari  | SMAN 1 Payaraman | Penjaskes   | 201502941518 | 30 | 17 | 13 | 56.67 | 70 | 40 | 30 | 57.143 | 100 | 57 |
| 11 | -     | Ahmad Rusdi      | SMAN 1 Payaraman | ICT        | 201502941549 | 30 | 9   | 21 | 30 | 70 | 46 | 24 | 65.714 | 100 | 55 |
| 12 | -     | Ika Septemberia  | SMAN 1 Payaraman | English    | 201502941550 | 18 | 8   | 10 | 44.44 | 42 | 20 | 22 | 47.619 | 60 | 46.67 |
| 13 | -     | Nur ami          | SMAN 1 Payaraman | Economy    | 201502941551 | 24 | 9   | 15 | 37.5 | 56 | 18 | 38 | 32.143 | 80 | 33.75 |
| 14 | -     | Raduan           | SMAN 1 Payaraman | Mathemat ics | 2015010261934 | 24 | 12 | 6  | 50 | 42 | 28 | 14 | 66.667 | 60 | 60.61 |
| 15 | -     | Anantarilah     | SMAN 1 Payaraman | Mathemat ics | 2015018454900 | 24 | 15 | 9  | 62.5 | 56 | 45 | 17 | 78.75 | 80 | 71.25 |
| 16 | -     | Zubadah         | SMAN 1 Payaraman | Indonesia  | 201511112524 | 24 | 7   | 11 | 29.17 | 56 | 26 | 16 | 46.429 | 80 | 41.25 |
| 17 | -     | Ska Lala         | SMAN 1 Payaraman | Bk        | 201511301676 | 21 | 8   | 13 | 38.1 | 79 | 30 | 49 | 37.975 | 100 | 38 |
| 18 | -     | Salsamii        | SMAN 1 Payaraman | Bk        | 201511367398 | 18 | 11 | 7 | 61.11 | 42 | 28 | 14 | 66.667 | 60 | 65 |
| 19 | -     | Saidah         | SMAN 1 Payaraman | Biology    | 201511965670 | 18 | 3   | 15 | 16.67 | 42 | 16 | 26 | 38.095 | 60 | 31.67 |
| 20 | -     | Edi Gumuntur    | SMAN 1 Payaraman | Geograph y | 201500564939 | 24 | 16 | 8  | 66.67 | 56 | 32 | 24 | 57.143 | 80 | 60 |

| AMOUNT | 595.4 | 1065.7 | 1036.62 |
| Σ AVERAGE | 49.67 | 52.833 | 51.831 |

Source: List Teachers Competency Exam (UKG) 2015 [7]

According to the table 1 above, based on teacher competency test results of Senior High School Number 1 Payaraman, out of 20 teachers there were eight teachers who got teacher competency test results ≥ 55 while there were 12 teachers whose score results were ≤ 55 with an average value of 48.69.

Based on the description of the background and the identification of issues that have been raised, then the formulation of the problems which were studied in this study is formulated as follows:

- How much influence the pedagogical competence give to the teacher competency test results in Senior High School Number 1 Payaraman?
- How much influence the professional competence give to the teacher competency test results in Senior High School Number 1 Payaraman?
- How much influence the pedagogic and professional competences simultaneously give to the teacher competency test results in Senior High School Number 1 Payaraman? Prepare Your Paper Before Styling

II. FRAMEWORK

A good frame of mind will be able to explain theoretically; which in turn is encapsulated in the research paradigm [8]. It aims to comprehensively outline the variables of what will be studied and how it will affect other variables and is based on
existing theories. Based on the above framework, framework used in this study can be seen in figure 1:

![Framework Diagram]

Based on the above framework (figure 1), this study is in order to look at the effect of independent variables, Pedagogy Competence (X1) and Teacher Competence (X2), towards teacher’s test results.

III. METHOD

This type of research can be grouped into Associative research which is being done to determine the relationship between two or more variables [9]. In this research, there are two independent variables and a dependent variable. Samples of this research were 20 teachers who had joint teachers competency test (UKG) organized by the Ministry of Education in collaboration with the Institute for Education Quality Assurance (LPMP) South Sumatra Province in November 2015. Therefore, the researchers only used samples taken from the population by simple random technique or simple random sampling.

In analyzing the data, method used in this study is multiple linear regression analysis. Sugiyono states that multiple linear regression analysis was used to analyze the influence of more than one independent variable on a dependent variable [10]. Multiple linear regression equation for these variables can be formulated as follows:

\[ Y = a + b_1 + b_2 X_2 + X_1 e \]

Where:
- \( Y \) = Competency Test Result
- \( a \) = constant
- \( X_1 \) = Pedagogical Competence
- \( X_2 \) = Professional Competence
- \( b_1, b_2 \) = coefficient of \( X_1, X_2 \)
- \( e \) = error

IV. RESULTS

A. Multiple Linear Regression Test

Multiple regression analysis is used to determine the effect of the tested primary data, which is derived from the two (2) independent variables which are pedagogical competence and professional competence of the teacher competency test results. In this test, the researchers used statistical software SPSS version 20.0. The test results are presented in the table 2.

![Table II: The Results of Multiple Linear Regressions]

The recapitulation of the results of multiple linear regression is as in table 2 while the regression equation estimate the dependent variable using all independent variables are as follows:

\[ Y = 0.151 + 0.341 X_1 + 0.678 X_2 \]

Where:
- \( Y \) = Teacher Competency Test Results
- \( X_1 \) = Pedagogical Competence
- \( X_2 \) = Professional Competence
- \( \beta_0 \) = constant
- \( \beta \) = Regression Coefficients
- \( r \) = Correlation coefficient
- \( R^2 \) = Coefficient of determination
- \( t \) = Partial assay results
- \( F_{count} \) = Concurrent test results
- \( \text{sig} \) = significance

The estimated value equation regression function above shows that the constant value obtained is equal to 0.151. This illustrates that without being influenced by the independent variable (X), the teacher competency test results (Y) is equal to 0.151.

Values represent the regression coefficient mutation variable positions obtained at 0.341 indicates that any changes in the competence of the test results of pedagogical competence of teachers will change proportionally, which amounted to 0.341 with the assumption that the other independent variables constant professional competence.

Variable regression coefficients represent professional competence obtained at 0.678 indicates that any changes to the professional competence of the teacher competency test results will change proportionally, which amounted to 0.678 assuming other independent variables constant pedagogical competence.

The correlation coefficient (R) obtained, is positive at 0.960. This implies that the relationship between the independent variables on the dependent variable together can be said to be strong in the amount of 96.0%. While a correlation can be said to be perfect if the value obtained reaches 1.

Value determinant coefficient (R^2) obtained, amounted to 0.922 means that the variation of the dependent variable value changes (teacher competency test results) can be explained by all independent variables (pedagogical and professional competence) together (simultaneously) amounted to 92.2% and the balance of 7.8% which is explained by other variables out of the research variables such as motivation, job satisfaction, discipline, leadership, and organizational culture.
V. DISCUSSIONS

A. Partial Test (t-test)

To find out the partial effect of each independent variable on the dependent variable can be explained by using the t test. Testing criteria:

- If \( t > t \) table, then Ho is rejected and \( H_1 \) is accepted.
- If \( t < t \) table, then Ho is received and \( H_1 \) is rejected.

The amount of \( t \) table at a significance level of 0.05 and degrees of freedom (df) = \( n-2 \), with \( t \) table of 2.040. T test results in detail presented in the table 3:

|     | Pedagogical competence (\( X_1 \)) | Professional competence (\( X_2 \)) |
|-----|----------------------------------|-----------------------------------|
| \( t \) | 8.227                            | 18.343                            |
| \( P \)  | 0.000                            | 0.000                             |

Sources: Primary data are processed

Based on the recapitulation of the t test above, it can be explained, that:

- Pedagogical competence variable (\( X_1 \)) of the teacher competency test results show that the value of \( t \) obtained = 8.227 is greater than \( t \) table (2.040) with a significance level sig. = 0.000, this means that in partial capability pedagogic has a significant influence on the results of the teacher competency test in Ogan Ilir district, Payaraman. These results prove that the first hypothesis of this study, which is "Pedagogical competence influences the test results of the teacher competency test in Ogan Ilir district, Payaraman" is proved to be true and acceptable.

- Professional competence variable (\( X_2 \)) of the teacher competency test results show that the value of \( t \) obtained = 18.343 is greater than \( t \) table (2.040) with a significance level sig. = 0.000, this means that in professional competence has a significant influence on the results of the teacher competency test in Ogan Ilir district, Payaraman. These results prove that the second hypothesis of this study, which is "Professional competence influences the test results of the teacher competency test in Ogan Ilir district, Payaraman" is proved to be true and acceptable.

- T test results showed that the \( t \) value of variable of professional competence is greater than the \( t \) value of variable of pedagogical competence. It means that the professional competence variable has a dominant influence on the test results of the teacher competency test in Ogan Ilir district, Payaraman.

Competence as one of the determinants of individual quality needed to achieve the expected performance of a job [11]. Teachers are the direct actors of their own professional development [12]. The professional teachers must have academic qualification and competencies.

Likewise discovered by Welsa that, the ability of businesses to have a significant impact on business performance [13]. Other studies have found pedagogical affect performance, and does not affect the professional competence of teacher performance [14] as well as personal competence has a significant influence on the performance of teachers [15].

B. Simultaneous Test (F Test)

Simultaneous test (F test) was conducted to find out the effect of independent variables on the dependent variable simultaneously. Based on the recapitulation of the multiple regression analysis, it is found that the F value obtained was 338.020> F table = 3.270, and simultaneously the significance level sig. F = 0.000. This shows that (simultaneously) the joint independent variables (pedagogical competence and professional competence) have a significant effect on the dependent variable (teacher competency test results).

F test results also prove that the third hypothesis of this study which is “Pedagogical competence and professional competence simultaneously affect the test results of the teacher competency test in Ogan Ilir district, Payaraman “ is proved to be true and acceptable”.

VI. CONCLUSIONS

Based on the analyses and discussions above, some conclusions can be drawn that pedagogical competence has a significant effect on teacher competency test results in Ogan Ilir district, Payaraman. Moreover, professional competence has a significant effect on teacher competency test results in Ogan Ilir district, Payaraman. Finally, pedagogical competence and professional competence together have a significant effect on the results of the teacher competency test in Ogan Ilir district, Payaraman.

ACKNOWLEDGMENT

The researchers would like to thank to the Rector of Universitas Tamansiswa Palembang and all teachers of Senior High School No. 1 Payaraman for the motivation and support for the implementation of this research. Researchers are also grateful to the parties who involved in the process of collecting and processing the data until this paper can be completed.

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