The Effect of Teacher's Professional Competence on Teacher Creativity in Elementary School

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Abstract: This study aims to determine and examine empirical data related to the influence of teacher professional competence on teacher creativity in elementary schools. This research is a correlational study with sample confidence of 90% or an error rate of 10%, the number of samples obtained was 24 people. Data was taken using 2 methods, namely questionnaires and documentation. Testing the instrument validation with expert judgment and then testing the validity and reliability using the Cronbach Alpha formula. The data analysis technique uses simple correlation analysis (product-moment). Test requirements analysis consists of normality test and linearity test. This study's results indicate a positive and significant influence between Teacher Professional Competence and Teacher Creativity, with the correlation of the independent variable with the dependent variable being 1.01 at a significance level of 10%. This means that every unit increase in the teacher's professional competence score will simultaneously affect the increase in the teacher's creativity score.

Keywords: Professional Competence, Teacher Creativity, Professional Teacher, Elementary School.

1. Introduction

As professional teaching staff, teachers must be able to demonstrate competence in the fields of knowledge, skills, mastering learning components, such as mastery of the curriculum, learning materials and materials, learning methods, evaluation techniques and learning strategies in various learning styles and commitment to the tasks that are their responsibility (Widodo Widodo, Gustari, & Chandrawaty, 2022). In its development to carry out these tasks, teachers must always have high dedication and discipline so that the process runs synergistically with learning objectives. Being a teacher based on the demands of work is easy, but being a teacher based on the call of the soul or the demands of conscience is not easy (Moltudal, Krumsvik, Jones, Eikeland, & Johnson, 2019). Teachers who base devotion on conscience feel their souls are closer to students. Based on this, improving the competence and quality of human resources is an absolute necessity, especially in the face of such rapid changes and developments in science and technology (Hartiwi, Kozlova, & Masitoh, 2020).

1.1. Problem Statement

Education has a role in determining the development and self-realization of individuals, especially for the development of the nation and state (Rahman, 2014). The purpose of education, in general, is to provide an environment that allows students to develop their talents and abilities optimally according to personal needs and community needs (W Widodo, 2021). Education is an institution organized to pass on and develop knowledge, experience, skills and expertise from the older generation to the next generation. Education can be obtained from several sources, including family, the surrounding environment, and schools. Education carried out through schools is formal education. In connection with the implementation of education in schools, the implementation of education cannot be separated from the existence of someone who educates, namely teachers and people who are educated, namely students or students (Abykanova, Tashkeyeva, Idrissov, Bilyalova, & Sadirbekova, 2016). Education carried out in schools is obtained through a learning process between teachers and students.
Teachers are required to take responsibility and initiative in delivering lessons, while the role of students is as people who are directly involved in teaching; therefore, their activity is required (Makhashova et al., 2016).

Quantitatively it can be said that education in Indonesia has progressed. Indicators of the success of this education can be seen in the literacy ability of the community, reaching 67.24%, due to the emergence of educational equity programs, primarily through the Presidential Instruction on elementary schools built under the New Order regime (Borodina, Sibgatullina, & Gizatullina, 2019). However, success in terms of qualitative education in Indonesia has not succeeded in building a nation's character that is intelligent and creative, let alone superior (Mirza, 2013). Many graduates from formal educational institutions, both from high school and college levels, seem to have been unable to develop creativity in their lives. High school graduates find it challenging to work in the formal sector because they do not have special skills (Sodirzoda, 2021). External factors strongly influence the complexity of educational products. Teachers are a very strategic component in the educational process. The teacher is a human resource figure who occupies a position and plays an essential role in education (Aliyyah et al., 2020). When everyone questions the issue of the world of education, the teacher's figure will be seen in the discussion agenda, especially regarding the issue of formal education in schools (Backfisch, Lachner, Hische, Loose, & Scheiter, 2020). It cannot be denied because formal educational institutions are the world of teachers' lives.

Creativity in learning is developing potential beyond the limits of intelligence and finding new and better ways to solve educational problems (Hardiansyah & AR, 2022). Therefore, the educative ability to express new and unique things by combining something that already exists with things that look new is increasingly attractive and can be described as a teacher who has creativity (Hardiansyah & Mas'odi, 2022). Creativity is closely related to a professional teacher because professional educators can develop learning in the classroom quickly and smoothly. In addition, professional teachers master the material and understand learning methods and technology adapted to student characteristics with the help of existing facilities and infrastructure that can be used as learning tools (Çetin, 2021).

One of the problems faced in the field of education is the low creativity of teachers. Research on the above statement is a research conducted by (Kartini, Kristiawan, & Fitria, 2020), which shows that the level of creativity of teachers in managing learning and learning resources is still low and needs to be improved; teachers still have not innovated in the learning process. Lack of teacher creativity can be seen in the low participation of teachers in creativity competitions. For example, according to information on the participation of Indonesian language teachers, only about 200 teachers participate in the Literary Criticism Competition and Short Story Writing Competition held by the primary and secondary education council every year. However, the number of Indonesian language teachers teaching in public and private schools in Indonesia has reached thousands. A creative teacher must be present in today's world of education (Bafadal, Nurabadi, Sobri, & Gunawan, 2019). Creative teachers are formed or created because of many things or factors. One of them is often attending training so that the ability to be creative as a teacher can be created with knowledge of various kinds of teaching, so schools are expected to invite often teachers in participating in various kinds of activities that aim to improve their abilities, both those initiated by the government, private sector as well as held by parties outside the educational institution (Orishev & Burkhanov, 2021). To present a creative teacher figure created because of the salary or take-home pay factor, or it could also be because of the comfort factor in working so that the comfortable working of a teacher makes teachers have many new ideas that can be applied in learning (Rusilowati & Wahyudi, 2020).

The teacher's role is vital in improving the quality of education (Rostini, Syam, & Achmad, 2022). Professional competence requires every teacher to master the material being taught, including the steps teachers, need to take to deepen mastery of the field of study they are teaching (Hardiansyah, 2022). Teachers must be experts in their fields; if teachers are not experts in their fields, teachers will face difficulties in carrying out their duties (Loughran, 2019). At the same time, the professional competence of teachers and creativity must continually develop so that students' learning process gets good and maximum learning outcomes and

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can realize a better and improved quality of teachers and education in Indonesia (Jafar et al., 2020). The role of teacher professionalism for the future will no longer be as a teacher but will switch to being a coach, mentor, and learning manager (Makhashova et al., 2016). As a coach, a teacher will act like a sports coach. Teachers encourage students to master learning tools, motivate students to work hard and achieve the highest achievement, and help students appreciate the value of learning and knowledge. As a mentor, the teacher will be a friend to students, being a personal role model that invites respect and intimacy from students (Mangkhang, 2021). As a learning manager, the teacher will guide students to learn, take the initiative, and issue good ideas that students have (Zakirova, 2016). With the three teacher roles, it is hoped that students will be able to develop their respective potentials, develop creativity and encourage innovative scientific and technological discoveries so that students can compete in a global society.

1.2. Related Research

Previous research conducted by Zakirova (2016) from Kazan (Volga region) Federal University, RUSSIA with The Structure of Primary School Teachers’ Professional Competence. The result of this study is a fundamental element in the structure of primary school teachers’ professional competence is a professional and personal component. Regarding this, scientists agree linking the preparation of the future teacher with the priority task of forming a unique image of personality of a professional teacher. Considered in the structure of personal, motivation, activity components bear the idea of concentration on requirements directly to the personality of the teacher Abilities are presented as ability to intelligent activity on the basis of theoretical knowledge (professional and informative component) and practical skills (professional-active components). For comparison, in M. G. Yanova’s research (2012) procedural component of teacher’s professional competence is presented by three elements, in the following sequence: skills – abilities – experience. Special attention requires the presence in the structure of such a component as a motivation, assuming aspiration to the professional growth and development. Motivational sphere is the basis and the logical center of the teacher’s personality model that defines its cognitive, vocational and educational orientation. Motivation induces to professional activity, forms the ability to pedagogical work, a positive attitude to the educational process, contributes to the manifestation of the best personal and professional qualities. Motivation is impossible without the orientation of the teacher to achieve a positive result. Values, ideals and goals that guide the teachers in the management of their teaching activities have a huge impact on the effectiveness of this activity. Therefore, it is strategically important in the process of training to ensure the future teacher readiness and need for self-education, self-development and self-management of their activities. Professional image that can be seen in the proposed structure, in essence, is a request for a professional teacher training. This means that the proposed structure of primary school teachers professional competence can be introduced in the process of preparing future teachers in order to increase its effectiveness. Further research was conducted by Tjabolo in SDIT Rahmaniayah Depok. The results showed that: First, according to Sig, the ability and achievement of SDIT Rahmaniayah teachers had a positive and significant effect. (1 tail) = 0.000 less than 0.05 (0.000 <0.05). The correlation coefficient (ry1) is 0.577, and the magnitude of the effect or the coefficient of determination (R2) = 33.3% = 37.108 + 0.696X1, meaning that for each unit, the teacher’s ability value increases, and the teacher’s achievement value will increase by 0.696. Second, work comfort positively and significantly affects teacher learning achievement. The effect of the correlation coefficient (ry1) is 0.665, and the magnitude of the effect or coefficient of determination (R2) = 44.3%, meaning that comfort positively affects teacher achievement. 54.7% positive impact. Regression = 34.241 + 0.715X2 means that for each unit of increasing work comfort score, the increase in teacher achievement scores will have an effect of 0.715. Third, it has a positive and significant effect on teachers’ ability, while working together or at the same time has an influence or correlation coefficient (ry123) on the comfort of teacher achievement of 0.692, and the coefficient of influence or determination (R2) = 47.8%. The direction of the regression equation = 18.977 + 0.301X1 + 0.541X2, which means that each increase in a teacher’s ability and work comfort score by one unit will increase the joint or
simultaneous teacher achievement score by 0.842 points. The research was conducted by (Huang, Lee, & Yang, 2019) under the title The Impact of Job Satisfaction and Organizational Climate on the Performance of the Banglehalan Office and the Burnet Office Staff. The results of this study indicate that based on the data analysis, it is known that the job satisfaction variable (X1) has a partial effect on employee performance (Y). The regional organizational climate variable (X2) affects the performance of Bangkalan Regency Office employees, Burnet Regency. The results of the analysis are 48.435. In addition, the value obtained is smaller than 0.05. Based on these two values, it can be concluded that the variable job satisfaction (X1) and organizational climate (X2) have a significant effect on the employee performance variable (Y) because the value of FC (48.435) > FTAB (3.24) and the value of p (0.000).

1.3. Research Objectives

This study aims to determine how the effect of teacher's professional competence on teacher creativity in elementary school.

2. Theoretical Framework

2.1. Teacher Professional Competence

Professional competence is the ability of teachers to master the material broadly and deeply, including mastery of scientific material, mastery of unique learning methods in the field of study, and development of moral insight based on professional knowledge and skills (Mirza, 2013). This professional ability is necessary for the success of learning and improving the quality of education through the teaching process in the classroom. Without professional competence, the learning and learning process will run, and there are no signs of improving the quality of education. The characteristics of a teacher who has professional abilities are that the teacher must have a healthy body and mind, have an excellent psychological personality, have broad knowledge and skills, and be able to teach. The characteristic of professional ability is that teachers must continuously deepen their knowledge, provide guidance to students, and evaluate student learning outcomes (Widodo, 2021).

Another way to improve the professional competence of teachers is through IHT education and training, apprenticeship programs, school partnerships, distance learning, tiered training, and special training, seminars, workshops, research, writing books/teaching materials, creating learning media, making technical works or works of art, short-term courses at universities, school instruction, continuing education, activities other than education and training discuss educational issues separately, such as participating in various forms of training and workshops, such as searching and in the process of researching science or teaching related to technology and methods, seek professional knowledge in the field of science being taught, and develop materials and methods according to teaching needs (Rahman, 2014).

2.2. Teacher Creativity

Creativity is a person’s ability to find and create new things, ideas, ways, and models that are useful for oneself and society. This kind of novelty is unnecessary and will never be something that has not been seen before, it may have existed before, but people will find new combinations, relationships, and structures, the qualities of which are different (W Widodo, 2021). Teachers can adapt to various educational development situations and challenges, affecting their ability to prepare for rapid and accurate adaptation to expectations. In this case, it is necessary for the teacher always to have the ability to think creatively to encourage and foster student learning motivation; if certain things interfere with it, it will often disappear. Teacher creativity in the learning process includes how teachers plan the teaching and learning process, how teachers carry out the teaching and learning process, and how teachers conduct learning assessments (Rusilowati & Wahyudi, 2020).
3. Method

3.1. Research Design

This research uses correlational research, which is designed to determine the level of relationship between different variables in a research subject to know how much influence/relationship is between variables where there are independent variables (teacher professional competence) and dependent variables (teacher creativity). The population, as well as the sample used in this research, were 24 teachers, 12 classes which; each is parallel, and each class has 2 teachers, namely the class teacher and the accompanying teacher.

\[ X \text{ (teacher's professional competence)} \rightarrow Y \text{ (teacher creativity)} \]

![Figure 1. type of research variables X and Y](image)

3.2. Data Collection

Data collection techniques used in this study include; (1) questionnaire; this instrument is used to collect data on the professional competence and creativity of teachers in the form of a questionnaire using a Likert scale consisting of 5 categories, namely, strongly agree = 5, agree = 4, disagree = 3, disagree = 2 and strongly disagree = 1. (2) observation, conducted to obtain data about the condition of the research location conducted at MI Alhidayah 2 Betak Kalidawir Tulungagung.

<table>
<thead>
<tr>
<th>Table 1. Teacher’s Professional Competence Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2. Teacher Creativity Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
</tbody>
</table>

3.4. Data Analysis

This research uses an instrument validation test and a reliable test. The instrument validation test consists of a teacher’s professional competence instrument with as many as 30 questions and a teacher creativity instrument with as many as 30. They tested the validity of each item and used item analysis with correlation techniques, which correlated the score of each item with the total score, which was the sum of each item’s score. Items in the instrument are valid if the correlation between items with a total score is greater than 0.3. The reliable test used for this research is Cronbach’s Alpha technique.
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\[ r_{11} = \left[ \frac{k}{k-1} \right] \left[ 1 - \frac{\sum \sigma b^2}{\sigma_1^2} \right] \]

**Formula 1. Cronbach’s Alpha**

**Description:**
- \( r_{11} \): instrument reliability
- \( k \): number of questions
- \( \sum \sigma b^2 \): Number of item variances
- \( \sigma_1^2 \): total variance

The instrument is declared reliable if \( r_{11} > 0.70 \). The data analysis technique used in this study uses simple correlation analysis. Correlation analysis in this study is used to find the magnitude of the relationship between the independent and dependent variables and is used to test the hypothesis that has been proposed. The correlation technique used is product-moment correlation.

\[ r_{xy} = \frac{N \sum X Y - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}} \]

**Formula 2. Product-Moment**

**Description:**
- \( N \): number of test subjects
- \( \Sigma X \): number of item scores (teacher's professional competence)
- \( \Sigma Y \): number of item scores (teacher creativity)

### 4. Findings

After calculating the reliable test using the Cronbach Alpha coefficient formula:

**Table 3. Reliable Test Results**

<table>
<thead>
<tr>
<th>Variable</th>
<th>( \Sigma \sigma b^2 )</th>
<th>( k )</th>
<th>( \sigma_1^2 )</th>
<th>Cronbach's Alpha</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>teacher's professional competence (X)</td>
<td>5</td>
<td>30</td>
<td>30</td>
<td>0.869</td>
<td>very reliable</td>
</tr>
<tr>
<td>teacher creativity (Y)</td>
<td>6</td>
<td>30</td>
<td>30</td>
<td>0.827</td>
<td>very reliable</td>
</tr>
</tbody>
</table>

Independent variable (X)

The data obtained presented in tabular form and analyzed to prove the truth of a hypothesis formulated as follows:

a. Determining the largest and smallest scores
   - Highest Score = 172
   - Lowest Score = 97
b. Determining the Range (R)
   \[ R = n_{max} - n_{min} + 1 \]
   \[ = 172 - 97 + 1 \]
   \[ = 76 \]
c. Determining the Class Interval (k)
   \[ k = 1 + 3.3 \log n \]
   \[ = 1 + 3.3 \log 24 \]
   \[ = 1 + 3.3 (1.38) \]
   \[ = 1 + 4.55 \]
   \[ = 5.55 = 6 \text{ (result is rounded)} \]
d. Determining the Length of the Interval (p)
\[ p = \frac{\sum}{k} = \frac{76}{6} = 12.6 = 13 \text{ (result is rounded)} \]
e. Creating distribution table

**Table 4. Frequency Distribution of Teacher Professional Competence Data**

<table>
<thead>
<tr>
<th>No</th>
<th>Class Interval</th>
<th>Many Numbers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>97-109</td>
<td>3</td>
<td>12.5</td>
</tr>
<tr>
<td>2</td>
<td>110-122</td>
<td>3</td>
<td>12.5</td>
</tr>
<tr>
<td>3</td>
<td>123-135</td>
<td>8</td>
<td>33.3</td>
</tr>
<tr>
<td>4</td>
<td>136-148</td>
<td>4</td>
<td>16.7</td>
</tr>
<tr>
<td>5</td>
<td>149-161</td>
<td>4</td>
<td>16.7</td>
</tr>
<tr>
<td>6</td>
<td>162-174</td>
<td>2</td>
<td>8.3</td>
</tr>
<tr>
<td></td>
<td><strong>Amount ( \sum )</strong></td>
<td>24</td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**Dependent variable (Y)**

a. Determining the largest and smallest scores
Highest Score = 116
Lowest Score = 65

b. Determining the Range (R)
\[ R = \max - \min + 1 \]
\[ = 116 - 65 + 1 \]
\[ = 52 \]

c. Determining the Class Interval (k)
\[ k = 1 + 3.3 \log n \]
\[ = 1 + 3.3 \log 24 \]
\[ = 1 + 3.3 \times 1.38 \]
\[ = 5.55 = 6 \text{ (result is rounded)} \]

d. Determining the Length of the Interval (p)
\[ p = \frac{\sum}{k} = \frac{52}{6} = 8.6 = 8 \text{ (result is rounded)} \]
e. Creating distribution table

**Table 5. Frequency Distribution of teacher creativity Data**

<table>
<thead>
<tr>
<th>No</th>
<th>Class Interval</th>
<th>Many Numbers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>65 - 73</td>
<td>4</td>
<td>16.7</td>
</tr>
<tr>
<td>2</td>
<td>74 - 82</td>
<td>4</td>
<td>16.7</td>
</tr>
<tr>
<td>3</td>
<td>83 - 91</td>
<td>7</td>
<td>29.2</td>
</tr>
<tr>
<td>4</td>
<td>92 - 100</td>
<td>3</td>
<td>12.5</td>
</tr>
<tr>
<td>5</td>
<td>101 - 109</td>
<td>3</td>
<td>12.5</td>
</tr>
<tr>
<td>6</td>
<td>110 - 118</td>
<td>3</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td><strong>Amount ( \sum )</strong></td>
<td>24</td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Data Normality Test

To test for normality using the chi-square formula with a significant level of 10%. Based on calculations using the SPSS version 16.0 for the Windows program and the results can be seen in the following table:

<table>
<thead>
<tr>
<th>Variable</th>
<th>$X^2_{\text{Count}}$</th>
<th>$X^2_{\text{Table}}$</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>teacher's professional competence (X)</td>
<td>3.041</td>
<td>9.24</td>
<td>Normal</td>
</tr>
<tr>
<td>teacher creativity (Y)</td>
<td>3.686</td>
<td>9.24</td>
<td>Normal</td>
</tr>
</tbody>
</table>

From the results of the normality test, it can be concluded that the variables X and Y have a normal distribution of data, where the value of $X^2_{\text{Count}}$ is smaller than the value of $X^2_{\text{Table}}$ at a significance level of 10%.

Linearity Test

The linearity test can be determined using the F test. The data is processed using the SPSS version 16.0 for Windows computer program by looking at the significance of the deviation from linearity of the linear F test.

<table>
<thead>
<tr>
<th>Variable</th>
<th>F Value Analysis</th>
<th>significance</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>X With Y</td>
<td>0.504</td>
<td>0.907</td>
<td>Linear</td>
</tr>
</tbody>
</table>

Significance is set at 10% so that if $F_{\text{Count}}$ is less than $F_{\text{Table}}$, it is considered that the relationship between the dependent variable and the independent variable is linear. On the other hand, if $F_{\text{Count}}$ is greater than $F_{\text{Table}}$, it is not linear. The decision-making criteria are that the relationship between the independent and dependent variables is linear if the significance value of $F_{\text{Count}}$ is more significant than 0.1. Based on the table above, the significance value of the relationship between the variable (X) and the variable (Y) is greater than 10%, so it can be concluded that the relationship between the two independent variables and the dependent variable is linear.

Hypothesis Test

After the normality and linearity tests were carried out, the data in this study were declared normal and linear. The next step is to prove the truth of the hypothesis through the product moment with the help of the table below:

<table>
<thead>
<tr>
<th>N</th>
<th>$\Sigma X$</th>
<th>$\Sigma Y$</th>
<th>$\Sigma X^2$</th>
<th>$\Sigma Y^2$</th>
<th>$\Sigma XY$</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>3450</td>
<td>3500</td>
<td>525000</td>
<td>535000</td>
<td>530000</td>
</tr>
</tbody>
</table>

$$r_{xy} = \frac{N \Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{(N \Sigma X^2 - (\Sigma X)^2)(N \Sigma Y^2 - (\Sigma Y)^2)}}$$
$$= \frac{24 \times 530000 - 3450 \times 3500}{\sqrt{(24 \times 525000 - 3450^2)(24 \times 535000 - 3500^2)}}$$
$$= \frac{645000}{641272}$$
$$= 1.01$$

Based on the calculated value using the product-moment formula, the value was 1.01. Furthermore, in testing the hypothesis, it is determined by the following steps,

a. Determining the hypothesis to be tested,

$H_0 = 0$, there is an effect of teacher competence on teacher creativity in elementary schools ($r_{\text{Count}} > r_{\text{Table}}$) at an error rate of 10%.

$H_0 :$ there is no effect of teacher competence on teacher creativity in elementary schools ($r_{\text{Count}} < r_{\text{Table}}$) at an error rate of 10%.

b. Determining the value of $r_{\text{Count}}$ and $r_{\text{Table}}$
With a significant degree ($\alpha$) = 10% and $N = 24$, results obtained $r_{table} : 0.515$, so that the test criteria were obtained as follows: $r_{count} 1.01 > r_{table} 0.515$, then $H_0$ was accepted and $H_a$ was rejected.

5. Discussion

The research findings reveal that pedagogic competence has a direct positive effect on teacher appraisal performance. The results of this study imply that the teacher's pedagogical competence primarily determines the teacher's assessment performance or performance. The findings of this study are similar to research (Hardiansyah, Misbahudholam AR, & Hidayatillah, 2022) in that teacher competency plays a very significant role in student achievement. In contrast to the results above, (Hardiansyah & Zainuddin, 2022)Regarding the Impact of Certification on Teacher Pedagogic and Professional Competence, reports that teacher pedagogical competence is relatively good, although it does not automatically have a positive impact on mathematics learning outcomes. Pedagogic competence is related to the teacher's ability to manage student learning which includes an in-depth understanding of student characteristics, designing and implementing learning, evaluating learning outcomes, and developing students to actualize their various potentials. Regarding performance appraisal, teachers must carry out assessments of processes and learning outcomes on an ongoing basis, evaluate the effectiveness of strategies and learning outcomes and use the information from assessment and evaluation results to design remedial and enrichment programs. In teacher learning practices: (1) develop assessment tools that are by the learning objectives written in the lesson plan; (2) carry out an assessment using various techniques and types of assessment, (3) analyze the results of the assessment; (4) utilizing input from students and reflecting on it to improve further learning, (5) utilizing the results of the assessment as material for preparing different learning designs; (6) conducting classroom action research to improve the quality of learning.

The results of research and hypothesis testing indicate a positive and significant effect of teacher professional competence on teacher creativity based on the results of hypothesis testing using product moment, which shows that the $r_{count}$ is 1.01. The $r_{table}$ is 0.515, and the significance value is 10%. The findings above reinforce the theory put forward by (Rahayu, Ulfatin, Wiyono, Imron, & Wajdi, 2018), which states that the competencies possessed by each teacher will indicate the quality of teachers in teaching. These competencies will be realized by mastering knowledge and professional knowledge to carry out their functions as a teacher. In the learning process in the classroom, teachers as academic staff must be able to play a role, especially in helping students form positive attitudes in the learning process, stimulate curiosity, encourage independence and accuracy of intellectual logic, and create good conditions for success in learning (Prasetyono, Abdillah, Djuhartono, Ramdayana, & Desnaranti, 2021). The competence of teachers bears the primary responsibility for the development of students from ignorance to knowledge, from dependence to independence, and from unskilled to proficient. Their learning methods and models no longer make students passive but can actively absorb and learn through thinking, asking, exploring, creating, and developing specific methods in solving problems related to their lives (Orazbayeva, 2016).

The research findings reveal that professional competence has a direct positive effect on teacher appraisal performance. This finding implies that the performance of the assessment shown by the teacher is primarily determined by the competence or mastery of the substance of the field of science that the teacher has. Professional competence is the teacher's ability to master knowledge in science, technology, and art which at least includes mastery of (1) subject matter in a comprehensive and in-depth manner according to the standard content of the education unit program, subjects and subject groups taught. (2) relevant scientific, technological, or artistic discipline concepts and methods that conceptually cover or are coherent with the academic unit programs, subjects, and subject groups taught. The findings above suggest that two types of activities can be carried out to ensure that each graduate produced meets the set quality standards, especially in terms of mastery of the academic fields (subjects) being taught, namely, quality assurance and quality control (W Widodo, 2021). Quality assurance implements a comprehensive learning system, a teaching and learning
process in which the teacher continues teaching the next subject only if all students in the class have mastered the subject matter. If this is applied, students who have completed all of their lessons are guaranteed to have learned everything that has been taught. Furthermore, quality control is by holding a final exam, which tests only essential subjects, because time is minimal. In addition to avoiding forgetfulness, the final exam checks whether those who have not entirely mastered the basic subjects have made additional (remedial) efforts to master them so they can be declared to have passed. This is because it is scarce that all students really master the lesson's content. Thus, teacher professional competence is shown in the form of mastery of standard material, including the ability to learn materials (fields of study), knowledge of in-depth material (enrichment), and elaboration of essential competencies according to the correct scientific structure also influences the performance or performance of the assessment displayed by the teacher. The teaching paradigm that has been going on for a long time focuses more on the teacher in transferring knowledge to students (Hardiansyah & Mulyadi, 2022). This paradigm shifts to a learning paradigm that gives more roles to students to develop an understanding based on their potential and creativity to form human beings who have religious and spiritual strength, noble character, noble personality, intelligence, aesthetics, are physically and spiritually healthy, and skills needed for himself, society, nation, and state. The teacher, as the spearhead of implementing school functions, is a professional person, meaning that a teacher is required to be able to carry out teaching and educational tasks. In carrying out teaching tasks, the teacher must master the substance of science material correctly and in-depth, which will be introduced to students.

6. Conclusion

Teachers' professional competence has a significant influence on teacher creativity. For this reason, madrasas/institutions/foundations should continuously improve the ability of teacher assistants through various training, so that teacher creativity can be improved and developed. Every one unit increase in the teacher's professional competence score will affect the increase in the teacher's creativity score.

Limitation

Limitations in this study occur due to the large number of questionnaire statement items consisting of two variables, namely the teacher's creativity and the teacher's professional ability. Each variable has many statement items (at least 30 statements) so that the number of statements that respondents must answer reaches 60 statement items so that the answers are less objective. The teachers in answering each item of the questionnaire statement were suspected of answering the statement that it was not to the actual situation due to several factors, causing the respondents' score to be subjective.

Recommendation

Principals/institutions/foundations must provide sufficient space so that teachers can develop their abilities and skills through formal education, seminars or training (on-the-job training) and other professional activities, especially in terms of learning abilities, so that teachers can effectively develop their role in according to the needs and circumstances of the teacher, as well as essential requirements in the practice of daily teaching and learning activities in the classroom.

Conflict of Interest

We confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome. We confirm that the manuscript has been read and approved by all named authors and that there are no other persons who satisfied the criteria for authorship but are not listed.
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