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Impact of Teacher Certification on Teacher Motivation and Performance in State Senior High Schools in Ternate City, Indonesia

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Abstract

This study aims to analyze the impact of the teacher certification on teacher's motivation and performance in State High Schools in Ternate City, Indonesia. This study uses a quantitative approach with a survey method. The sample used in this study was 193 teachers who were selected by proportionate random sampling. The data was analyzed using path analysis supported by descriptive statistical analysis. The results indicate that the teacher certification has a direct effect on teacher's motivation and performance. Therefore, improving the application of teacher certification, and achievement motivation can improve performance.

1. Introduction

Indonesian Law No. 20 of 2003, which focuses on the National Education System (SISDIKNAS), defines education as a conscious and planned effort to create a learning atmosphere and learning process. This aims to enable students to proactively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills required for personal, societal, national, and state development. This provision is aligned with Article 31, Paragraph 1 of the 1945 Constitution of the Republic of Indonesia, which asserts the entitlement of every citizen to access education [1, 2].

To realize these ideals, the government enforces a 9-year compulsory education policy. Compulsory education is pursued through formal education from Elementary School (SD), Junior High School (SMP), and Senior High School (SMA) or Vocational High School (SMK). This education can be taken by all groups, both upper class, middle class, or lower class because education does not recognize the social strata of society. Therefore, it is hoped that Indonesian youth can pursue the highest education possible [3, 4].

In recent decades, the global education landscape has witnessed a growing emphasis on enhancing the quality of education through various interventions, one of which is the implementation of teacher certification programs [5]. Teacher certification is defined as a process of giving educator certificates to teachers. This policy is intended to improve the teaching profession by setting standards, enhancing teachers' pedagogical skills, and ultimately, positively influencing student learning outcomes [6]. These certification programs typically involve a

combination of rigorous coursework, classroom observations, and assessments that evaluate a teacher's subject knowledge and teaching abilities [7, 8]. By ensuring that educators meet established criteria, teacher certification programs aim to instill a sense of professionalism within the teaching community and provide students with competent instructors [9].

Research has shown that effective teacher certification can lead to increased student engagement, improved academic performance, and greater overall satisfaction with the educational experience [10–14]. However, the implementation of these programs also comes with challenges, such as finding a balance between standardized requirements and the individual needs of diverse classrooms. As education systems continue to evolve, striking this balance and refining teacher certification processes will remain critical in shaping the future of global education [15].

While the aspiration for optimal performance is universal, the reality reveals that certain teachers, particularly those at State Senior High Schools in Ternate City, Indonesia, have yet to achieve their full potential. Several indicators shed light on this situation: teachers have not fully leveraged the creation of educational tools and tend to mimic established methods; their instructional approaches remain rooted in tradition, failing to harness modern methodologies effectively; engagement is primarily confined to teaching moments; mastery over subject matter is not robust; disparities exist between the subjects teachers study and those they teach; instructional effectiveness and authoritative presence in front of students are diminished; motivation and commitment are lacking; a genuine dedication to the teaching profession is absent; emotional maturity, independent thinking, and resolute attitudes are wanting.

This study aims to investigate the influence of teacher certification on teacher motivation and performance within State Senior High Schools in Ternate City, Indonesia. By understanding how teacher certification impacts teacher motivation and performance, this research aspires to inform the design and refinement of certification programs that better align with the needs of educators and students, fostering a more conducive and effective learning environment.

2. Methods

The design used in this research is quantitative with a positivistic paradigm. The target population as the unit of analysis for this study were all high school teachers in Ternate City, North Maluku Province, while the population covered as a sample frame were 374 State High School teachers in Ternate City, Indonesia who had attended the teacher certification process and had status as civil servants (PNS). In the context of this study, the preparation of the instrument was carried out in the form of a questionnaire with a Likert scale format model. In this study using a questionnaire equipped with five alternative answers, namely: strongly agree (score 5), agree (score 4), hesitate (score 3), disagree (score 2) and strongly disagree (score 1). For research instruments related to performance there are 25 questions, for policy implementation instruments there are 24 questions, and for achievement motivation there are 24 questions. There were 73 total instruments used in this study.

The target population for this study were all high school teachers in Ternate City, North Maluku Province, while the population covered as a sample frame were 374 State High School teachers in Ternate City, North Maluku Province who had civil servant status (PNS). The research sample was calculated using the Slovin formula with an error margin of 5%, which presented in Equation 1.

$$n = \frac{N}{1 + N(e)^2} \quad (1)$$

By calculating using the Slovin formula, the number of samples was determined to be 193 people. The sampling technique was carried out by means of proportionate random sampling from 11 senior high schools.

Data processing was performed using the Linear Structural RELation (LISREL) version 8.7 to estimate structural coefficients and unknown parameters, test the accuracy of the model with empirical data and modify the model if necessary. In this study, the standardized scores were used. To test the significance of the path coefficient, the t test is used. If the tcount > ttable means it is significant, otherwise if the tcount < ttable means it is not significant.

3. Results and Discussions

Based on the results of the validity calculation, there are 25 items that are considered valid performance variable statement items. As a result, the theoretical score could range from 25 to 125. The lowest possible score of 25 is obtained by multiplying the score corresponding to the answer "never" (1) by the total number of statement items (25). Conversely, the highest possible score of 125 reflects the multiplication of the score associated with the answer "always" (5) by the total number of statement items (25).

The obtained results indicate that the lowest score achieved was 70, while the highest score reached was 114. This establishes a data range of 44 (calculated as 114

Table 1. Frequency distribution of performance scores.

No	Class Intervals	Frequency		Real Limits	
		Absolute	Relatively	Lower	On
1	70 – 75	9	4.6	69.5	75.5
2	76 – 81	19	9.8	75.5	81.5
3	82 – 87	14	7.2	81.5	87.5
4	88 – 93	35	18.1	87.5	93.5
5	94 – 99	64	33.3	93.5	99.5
6	100 – 105	34	17.7	99.5	105.5
7	106 – 111	15	7.8	105.5	111.5
8	112 – 117	3	1.5	111.5	117.5
	Amount	193	100	-	-

Table 2. Frequency distribution of certification policy implementation scores.

No	Class Intervals	Frequency		Real Limits	
		Absolute	Relatively	Lower	On
1	62 – 66	16	8.3	61.5	66.5
2	67 – 71	14	7.2	66.5	71.5
3	72 – 76	29	15	71.5	76.5
4	77 – 81	48	24.8	76.5	81.5
5	82 – 86	55	28.6	81.5	86.5
6	87 – 91	26	13.4	86.5	91.5
7	92 – 96	5	2.6	91.5	96.5
8	97 – 101	0	0	96.5	101.5
	Amount	193	100	-	-

Table 3. Frequency distribution of achievement motivation scores.

No	Class Intervals	Frequency		Real Limits	
		Absolute	Relatively	Lower	On
1	61 – 65	5	2.6	60.5	65.5
2	66 – 70	16	8.4	65.5	70.5
3	71 – 75	15	7.7	70.5	75.5
4	76 – 80	22	11.4	75.5	80.5
5	81 – 85	30	15.6	80.5	85.5
6	86 – 90	66	34.2	85.5	90.5
7	91 – 95	36	18.7	90.5	95.5
8	96 – 100	3	1.5	95.5	100.5
	Amount	193	100	-	-

- 70). The statistical measures derived from the data are as follows: the mean score is 93.75, the mode is 100, the median is 95, the standard deviation is 9.141, and the variance is 83.563.

In Table 1, the frequency distribution of performance variable scores, along with the associated processing steps, is presented. The distribution of performance scores is most significant within the range of 94 to 99, accounting for 33.3% of the distribution. The subsequent noteworthy data falls within the 88 to 93 range, comprising 18.1% of the distribution. Scores within the 100 to 105 range represent 17.7% of the distribution, while those within 76 to 81 account for 9.8%. Scores between 106 and 111 make up 7.8%, scores within 82 and 87 contribute 7.2%, and those within 70 to 75 constitute 4.6%. The least frequent scores are found in the 112 to 117 range, with a frequency of 1.5%. The more comprehensive understanding of the performance frequency distribution is visualized in Figure 1.

After calculating the validity of the statement items for the variable of valid certification policy implementation, a total of 22 items were deemed valid. Consequently, the theoretical score ranges from 22 to 110. The minimum score of 22 represents the product of strongly disagree answers (scored as 1) and the number of statement items (22), while the maximum score of 110 arises from the multiplication of strongly agree answers (scored as 5) with the number of statement items (22). Table 2 displays the frequency distribution of scores for the implementation of certification policies. Based on the research findings, the recorded scores range from a low of 62 to a high of 94, thereby establishing a data range of 32 (94 – 62 = 32). The computed statistics include a mean value of 79.30, a mode of 80, a median of 80, a standard deviation of 7.458, and a variance of 55.626.

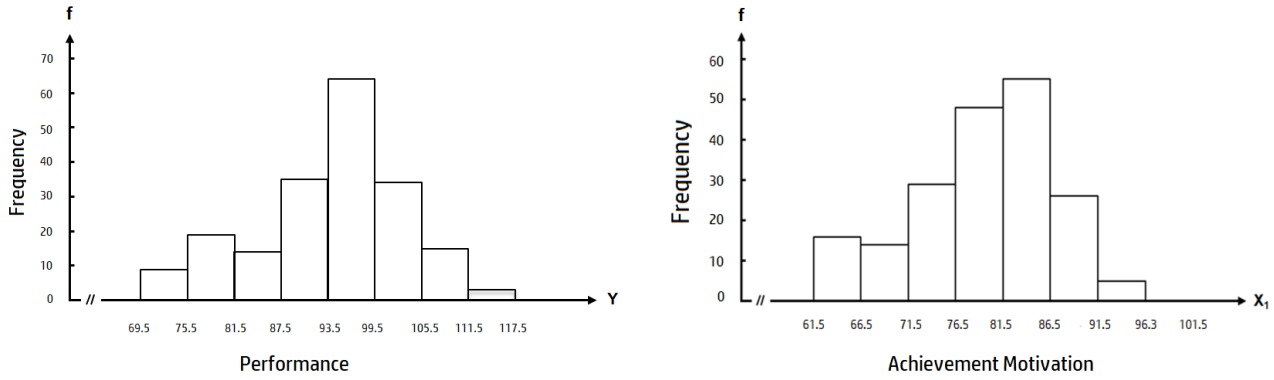

Figure 1. Histograms of frequency distribution scores for (a) performance and (b) achievement motivation.

A clearer visualization of the distribution of performance frequencies is depicted in Figure 2. The distribution of scores for the certification policy implementation variable is predominantly concentrated within the range of 82-86, constituting 28.8% of the total distribution. This is closely followed by data falling within the 77-81 range, accounting for 24.8%. Scores within the interval of 72-76 represent 15% of the distribution, while those within 87-91 make up 13.4%. Additionally, scores ranging from 62 to 66 encompass 8.3% of the distribution, scores within 67 to 71 account for 7.2%, and the final range of 92 to 96 represents 2.6% of the distribution.

The validity calculation yields that the statement items related to the achievement motivation variable are valid, comprising a total of 22 items. Consequently, the theoretical score range lies between 22 and 110. The lowest attainable score is 22, derived from the multiplication of the number of statement items by the score of "never," which is 22 x 1 = 22. Conversely, the highest possible score is 110, resulting from the multiplication of the number of statement items (22) by the maximum answer score of 5, which is 22 x 5.

In terms of descriptive statistical computations, the lowest or minimum score recorded is 61, while the highest (maximum) score is 97, thus establishing a data range of 36 (97 - 61 = 36). The average value is 83.67, the mode is 88, and the median is 86. The standard deviation is calculated to be 8.512, and the variance is 72.452.

In the Table 3, scores within the range of 86-90 predominate, accounting for 34.2% of the respondents. Following this, scores within the interval of 91-95 constitute 18.7%, while scores within 81-85 make up 15.6%. Scores falling within the interval of 76-80 represent 11.4%, scores within 66-70 account for 8.4%, scores within 71-75 comprise 7.7%, scores within 61-65 contribute 2.6%, and the smallest percentage, 1.5%, is attributed to scores within the 96-100 interval.

Based on the calculation results, the direct path coefficient reflecting the influence of certification policy implementation on performance is 0.34. This positive path coefficient signifies a directly proportional impact, indicating that a well-implemented certification policy will enhance performance. The calculated t-value (tcount) is 5.14, whereas the critical t-value (ttable) for degrees of freedom (dk) equal to 193 and significance level (α) of 0.05 is 1.972. Given that tcount > ttable, the null hypothesis (Ho) is rejected in favor of the alternative hypothesis (H1). This signifies that the implementation of certification policies has a positive and significant direct effect on performance.

Similarly, the direct path coefficient representing the influence of achievement motivation on performance is 0.30. This positive path coefficient implies that an increase in achievement motivation corresponds to an increase in performance. The computed tcount value is 4.52, surpassing the ttable value of 1.972 for dk = 193 and α = 0.05. As a result, Ho is rejected in favor of H1, indicating a positive and significant direct effect of achievement motivation on performance.

Furthermore, the calculation outcomes demonstrate a path coefficient of 0.33 for the effect of implementing certification policies on achievement motivation. The positive path coefficient underscores that enhancing certification policy implementation leads to an increase in achievement motivation. The computed tcount value of 4.78 exceeds the ttable value of 1.972 for dk = 193 and α = 0.05. Consequently, Ho is rejected and H1 is accepted, indicating a positive and significant direct effect of certification policy implementation on achievement motivation.

The results of our study align with the findings of various research studies, consistently highlighting the positive influence of teacher certification on performance and student outcomes. Azwar et al. [16] revealed that teacher certification impacts both teacher performance and

student learning outcomes. Similarly, Budiman [17] found that adhering to teacher roles and regulations within certification policies significantly enhances performance. These outcomes resonate with our study, which focuses on high school teachers in Ternate City, North Maluku Province.

The implementation of teacher certification policies embodies the enactment of regulations encompassing substantial and fundamental objectives. These objectives delineate the collaborative process of awarding certificates to teachers, aiming to realize educational goals. This is evident in various attributes: factual precision, complementary alignment, harmonized coordination, assured definiteness, adaptable flexibility, enduring stability, and comprehensive scope [18]. Consequently, under favorable circumstances, the implementation of teacher certification policies plays a pivotal role in fostering improved teacher performance. Basically, improved teacher performance is a mix of how teachers act, their attitudes, what they know, and how they think. These things show up when teachers do their tasks, putting in a lot of effort to reach the highest goals set by the school. This kind of good performance includes things like doing excellent work, being on time, taking the lead in taking action, being good at communicating, and being able to change and come up with new ideas [19].

4. Conclusions

The study's findings can be summarized as follows: The introduction of certification policies yields a notable and constructive immediate impact on performance. This implies that improving the implementation of certification policies could boost the performance of educators at State High School in Ternate City. Furthermore, the drive for achievement demonstrates a favorable and considerable direct influence on performance. These outcomes imply that by enhancing achievement motivation, the performance of teachers at SMAN in Ternate City, Indonesia.

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