

# Teacher Development in Mastering the Teaching Materials and Understanding Student Characteristics before and after Receiving Certification Allowance

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**Abstract.** This paper argues that teacher certification does not fully enable teachers to either develop their teaching competence or comprehend their understanding of student characteristics. They both are the basic competence for a professional teacher. The authors argue that to master teaching strategies is paramount than to make a lesson plan and evaluate teaching performance. Understanding student characteristic means that teachers understand the unique and different potential possessed by each student. This can be conducted by involving parents in solving student problems. In fact, parents are often not involved in their children issues at school. The authors also highlight that the professionalism of certified teachers is often blurred by how they were occupied with administration job completion as the compulsory requirement of the allowance. As a result, some teachers are not well-prepared and do not know their student parents.

**Keywords:** teacher certification, teaching materials, student characteristic

## INTRODUCTION

One of the reasons for the low-quality education in Indonesia is teacher quality. The low professionalism of teachers in Indonesia is shown by the low level of teachers' teaching competency. According to the Research and Development Agency of Indonesia's Ministry of Education, there are only 28.94% of elementary school teachers who have the competence of teaching, combining all number of teachers in both public and private schools. For junior high school, it is only 54.12% and 60.99% for private and public school respectively. The number is increasing in senior high school level, 65.29% for public schools and 64.73% for private schools. However, for vocational schools, there are only 55.91% and 58.26% for teachers of public and private school respectively. To overcome this problem, the government has introduced a teacher certification

program. This program is aimed to increase teacher quality and, in the long-term goal, to improve the quality of Indonesia national education.

To be a certified teacher, a teacher is required to take teacher training, known as specialized training for professional school teachers (PPG). The teacher who passes the training is qualified to take a competency test. Only teachers who pass the training and the competency test are eligible to get teacher certification. Those certified teachers are expected to improve their knowledge and skills, related to teaching performance and students characteristics related learning issues.

Blanchett found that competency related to teaching management skill and involving parent for students academic improvement plays a significant role in a transition program[1]. Soysal and Radmard who examined pedagogical content knowledge of 211 prospective teachers in Turkey found that even though most of them were moderately competent in documenting their knowledge of taught content and instructional strategies and representations, they have limited knowledge regarding their students' understanding[2].

## METHOD

This research was conducted in Madura Island. From the total population of 538, subjects of this research were 58 school principals, school supervisors, and teachers from 27 different sub-districts. After quantitative data were gathered, quantitative analysis was performed. The data was analyzed using inferential statistics, two-sided t-test with one sample, using SPSS ver. 15. To obtain qualitative data, certification receivers were interviewed.

## RESULT

### Teaching Material Mastery

The data of teaching material mastery were collected using a questionnaire which consisted of 18 indicators. Those indicators are (1) creating a learning unit for each

topic or subject, (2) making lesson plans for each meeting (3) designing syllabus (4) formulating clear and realistic learning objectives (5) making lesson material (6) starting the lesson by exploring students' abilities (7) linking learning topics with everyday situations or relevant problems (8) integrating life skills in learning (9) delivering interesting and easy-to-understand learning material (10) answering students' questions clearly (11) giving a positive response and relevant explanations for students' comments (12) using reference books for teaching material (13) using other supporting sources (14) actively looking for other sources (15) having high motivation and curiosity towards the development of knowledge that relevant to their teaching subject (16) encouraging students to utilize various sources of information when learning (17) devising their own student worksheets (18) writing a handbook or module for their subject.

Table 1. The development of teaching material mastery of the certified teachers before and after the certification.

Indicator	N	Average score	
		Before	After
x1.1	58	2.90	3.10
x1.2	58	3.05	3.09
x1.3	58	3.10	3.19
x1.4	58	2.93	3.03
x1.5	58	2.84	2.98
x1.6	58	3.19	3.28
x1.7	58	3.12	3.24
x1.8	58	2.98	3.02
x1.9	58	3.22	3.28
x1.10	58	3.36	3.40
x1.11	58	3.22	3.29
x1.12	58	3.24	3.28
x1.13	58	2.91	3.02
x1.14	58	2.78	2.78
x1.15	58	3.03	3.09
x1.16	58	2.97	3.02
x1.17	58	2.74	2.76
x1.18	58	2.79	2.79

### Student Characteristics Understanding

The data of teachers' understanding of student characteristics were collected using a questionnaire which consisted of 12 indicators. Those indicator are (1) to understand the uniqueness of each student potential (2) to recognize student learning styles (3) to treat each student as a unique and whole person (4) to treat students fairly, regardless of ethnicity, race and social status (5) to develop empathy by paying attention to the problems faced by students (6) to train collaboration in class by group work (7) to memorize student names (8) to build close relationship with students (9) to direct students to be independent learners and be deeply involved in any activities in accordance with their potential (10) to monitor student progress (11) to discuss student problems and learning progress with parents or guardians, and (12) to cooperate with parents or other competent parties in solving student problems.

Table 2. Improvement in the teacher's understanding of student characteristics.

Indicator	N	Average score	
		Before	After
x2.1	58	3.09	3.12
x2.2	58	3.10	3.16
x2.3	58	3.07	3.09
x2.4	58	3.24	3.40
x2.5	58	3.17	3.24
x2.6	58	3.14	3.21
x2.7	58	3.36	3.47
x2.8	58	3.24	3.47
x2.9	58	3.38	3.43
x2.10	58	3.12	3.17
x2.11	58	2.81	2.98
x2.12	58	2.95	3.00

The obtained data was analyzed separately based on the competencies that are used as the indicators to assess teacher performance before and after getting teacher allowances.

**Teaching Material Mastery.** The result from the analysis process using SPSS is shown in table 3 and 4. Table 3 shows that the average score of teacher teaching material mastery before the certification is 3.02, and after certification is 3.09.

Table 3. Data Analysis of Teaching Material Mastery

	N	Mean	Std. Deviation	Std. Error Mean
x1	58	3.0224	.38542	.05061

Table 4. One Sample Test Result

t	df	Sig. (2-tailed)	95% Confidence Interval of the Difference	
			Mean Difference	Difference
-1.335	57	.187	-.06759	-.1689 .0338

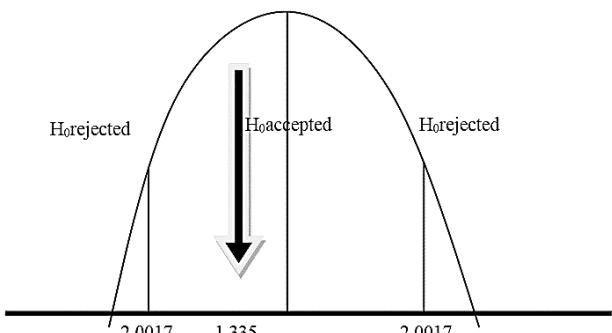
The hypothesis that was tested is:

$H_0$  = teacher teaching material mastery before and after certification is not different

$H_1$  = teacher teaching material mastery before and after certification is different.

Table 4 shows that t-calculated value is -1.335. With the Degree of Freedom (df) of 57, t table value is 2.0017. As t-calculated value is less than t table value (-1.335 < 2.0017), so the null hypothesis is rejected.

Graphic1 shows that the t calculated value falls in the area where the null hypothesis is rejected. It shows that teaching material mastery after certification is different from the one before certification.



Graphic 1.Hypothesis Testing

Also, table 4 shows that the Confidence Interval of the Difference falls between -0.1689 and 0.0338. The

negative value shows that teacher teaching material mastery before the certification is lower than the one after the certification.

**Understanding of Student Characteristic.** The result from the analysis process using SPSS is shown in table 5 and 6. Table 5 shows that the average score of teacher understanding of student characteristic before the certification is 3.14 and after certification is 3.23.

Table 5. Data Analysis of Understanding of Student Characteristics

	N	Mean	Std. Deviation	Std. Error Mean
x2	58	3.1394	.38057	.04997

Table 6. One Sample Test Result

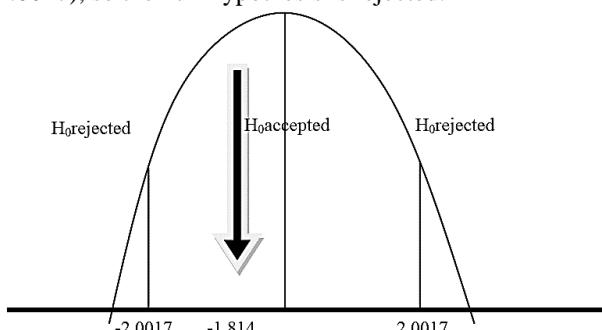
Test Value = 3.23					
t	df	Sig. (2-tailed)	95% Confidence Interval of the Difference		
			Mean Difference	Lower	Upper
x1	-1.814	.57	.075	-.09063	-.1907 .0094

The hypothesis that was tested is:

$H_0$  = teacher understanding of student characteristic before and after certification is not different,

$H_1$  = teacher understanding of student characteristic before and after certification is different.

Table 6 shows that t-calculated value is -1.814. With the Degree of Freedom (df) of 57, t table value is 2.0017. As t-calculated value is less than t table value (-1.335 < 2.0017), so the null hypothesis is rejected.



Graphic 2. Hypothesis Testing

Graphic 2 shows that the t calculated value falls in the area where the null hypothesis is rejected. It shows that teaching understanding of student characteristic after certification is different from the one before certification.

Besides, Table 6 shows that the Confidence Interval of the Difference falls between -0.1907 and 0.0094. The negative value shows that teacher understanding of student characteristic before the certification is lower than the one after the certification.

## DISCUSSION

This section discusses the findings and result. This study finds that there was an improvement of teachers performance in term of the teaching material mastery and the understanding of student characteristic after receiving the allowance, which they obtain after officially getting a teacher certification.

Both aspects (teaching material comprehension and the understanding of student characteristic are

challenging to perform as certified teachers are occupied many jobs related to the administration of certification. Ball and Forzani argued that current teacher education curriculum is often centered not on the tasks and activities of teaching but instead on beliefs and knowledge, on orientations and commitments, and policy issues related to recruitment and retention[3]. They also cautioned the bias of such a certification process that might impede teacher development in preparing for their work. Grossman et al. argued that this might be because teachers have fewer opportunities to engage in approximations that focus on the contingent, interactive practice as they were occupied with more with the administration to prove their professionalism[4].

The findings show improvement of teacher teaching material mastery and the understanding of student characteristic. The improvement is proven by the gap of average score obtained before and after receiving the allowance. Table 7 shows the difference.

Table 7. The gap of the average score before and after receiving the allowance.

No	Competency	Gap
1	Teaching material mastery	0.068
2	Understanding of student characteristic	0.091

From table 7, we can conclude that there was an improvement in teacher's performance after receiving the allowance. The highest increase is in personality competence (0.374), while the lowest one is in classroom management (0.320).

## CONCLUSION

In conclusion, there were differences between teaching material mastery and student characteristic understanding before and after receiving allowance given the teacher certification. The certified teachers improved their professional performance after receiving the allowance.

## REFERENCES

- [1] W. Blanchett, "Importance of Teacher Transition Competencies as Rated by Special Educators," *Teacher Educ. Spec. Educ.*, vol. 24, no. 1, pp. 3–12, 2001.
- [2] S. Y. and R. S., "An Exploration of Turkish Prospective Teachers' Teaching Competencies through the Analysis of Their Pedagogical Content Knowledge Documentations," *J. Educ.* 2018, vol. 198, no. 2, p. 165—180, 2018.
- [3] F. M. Ball, D. L., & Forzani, "The Work of Teaching and the Challenge for Teacher Education," *J. Teach. Educ.*, pp. 497–511, 2007.
- [4] P. Grossman, P., Compton, C., Igra, D., Ronfeldt, M., Shahan, E., & Williamson, "Teaching practice: A cross-professional perspective. Retrieved April 29, 2019 from," *Teach. Coll. Rec.* 111(9), 2009.