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Analysis of Pedagogic Competence of Elementary School Teachers Based on Regional Characteristics

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Abstract

The ability of elementary school teachers to understand pedagogical competencies is absolutely necessary to carry out their duties as professional educators. The purpose of this study was to determine the pedagogical competence of elementary school teachers in understanding creative thinking assessment based on the characteristics of the city. This study involved 14 teachers who served in public elementary schools in the downtown, semi-urban, and suburban areas. The test and non-test instruments used to determine the pedagogical abilities of elementary school teachers are questions of creative thinking in the form of multiple choice and interviews. Data are analyzed qualitatively and quantitatively. The results of the study indicate that the ability of elementary school teachers is very different from the characteristics of the region, namely; Teachers who work in public elementary schools in the downtown area have an average capability of 63,2%, which is in the category of "Good", semi-urban areas at 71,6%, and suburban area at 70,0%. The main factors that can influence these differences are teaching practice and academic qualifications, while regional factors have less influence on the ability of teachers to understand the concept of science creative thinking assessment. This can be seen from the results above, teachers who work in public elementary schools in semi-urban and suburban areas that have good knowledge compared to those in the downtown area.

Keywords: pedagogic competence, regional characteristics of public elementary school

1. INTRODUCTION

The quality of the learning process and the quality of students can be determined by improving the quality of the teacher. While the quality of teachers is determined based on competencies related to the profession. The teacher, as an agent of learning, must have pedagogical competence, personal competence, professional competence, and social competence. Therefore, qualified teachers are teachers who have these competencies in order to become professional teachers (Depdiknas, 2005; Depdiknas, 2007).

Teachers who carry out their duties in a professional manner have the ability to plan, implement, and evaluate the learning process well (Pifarré & Li, 2018). To evaluate the learning process well, teachers must have the ability to plan and develop quality instruments in order to measure students' abilities based on the development of the level of thinking of elementary school students. (Amolloh, Wanjiru, & Lilian 2018; Michel, 2018).

The thinking skills needed at the elementary school level have entered the Higher Order Thinking Skills (HOTS). HOTS consist of three components namely critical thinking skills, systematic thinking skills, and creative thinking skills. (Ibrahim, 2014; Afian, Ibrahim, & Agustini, 2017; Massa, 2014; Sedanayasa, 2015; Sumantri, 2015). The ability to think creatively and the independence of elementary school students will improve as they age. Therefore, teachers must have good creative thinking skills, so that in the implementation of science learning, teachers can develop higher order thinking skills according to the level of development of thinking of elementary school students (Slavin, 2011; Gajda, Beghetto, & Karwowski, 2017).

Creative thinking skills are not just talents possessed by certain people, but are skills that can be trained and developed (Nggermanto, 2015). Therefore, creative thinking skills can be trained and developed continuously by involving students actively in learning without distinguishing students' abilities (De Bono, 2007; Doron, 2017; Lucchiari, Sala, & Vanutelli, 2019). On that basis, developing the ability to think creatively in students is not an impossible thing, but a very rational thing to be done by educators in each lesson. Therefore, teachers must have good creative thinking skills, so they can develop students' creative thinking skills. The teacher's creative thinking ability is the teacher's ability to use new ideas and then actualize them in science teaching and learning activities in the classroom (Mujakir, 2017; Henriksen, 2016; Soh, 2016).

Many researchers have carried out research on teacher competence, specifically pedagogic competence. With findings including; Pedagogic competence can improve teacher performance (Hakim, 2015); the teachers need to

improve their competence to apply authentic and integrative assessments (Adnan, Suwandi, Nurkamto, & Setiawan, 2019); good teachers have competencies that are centered on three main elements namely academic, professional, and personal (Alqiawi & Ezzeldin, 2015); pedagogic competence must be possessed by every teacher in order to be successful in the learning process (Rahman, 2014). These studies are studies of teacher pedagogical competencies by measuring different variables. Mostly in general, the research is located only in one school or in one area, so there has not been found a study to find out the teacher's pedagogical competencies in different regions. Therefore, this research was carried out to determine the pedagogic competencies of elementary school teachers who served in different regions, namely public elementary schools located in downtown, semi-urban, and suburban areas.

2. RESEARCH METHOD

This study uses a descriptive method with a qualitative approach, which is to describe and analyze the pedagogical competence of the teacher in understanding the assessment of creative thinking in science. Sampling is done by using purposive sampling technique. Purposive sampling technique is a technique of determining samples with certain considerations (Sugiyono, 2015). Samples taken with consideration of cluster regions with regional characteristics (downtown, semi-urban, and suburban areas). The characteristics of this study sample were teachers who were qualified undergraduate education, the sample consisted of female and male teachers, the sample had more than five years teaching experience, and the sample consisted of certified teachers and teachers who were active in the Teacher Working Group (KKG) activities, the subjects in the study were 14 public elementary school teachers who actively taught in elementary schools with characteristics of the downtown, semi-urban, and suburban areas. Mapping of urban areas and public elementary schools was obtained from the City Planning Office, Ternate City, and North Maluku. The data sources used in this study are primary data, namely questions of creative thinking tests and interviews.

3. RESULTS AND DISCUSSION

The analysis results of the increase in teacher knowledge about creative thinking assessments based on regional characteristics (downtown, semi-urban and suburban areas) can be explained as follows:

3.1 Downtown Area

The increase of knowledge about creative thinking assessments in the downtown area involves 5 teachers, and results are obtained as shown in table 1 below.

Table 1. The Increase of Teacher's Knowledge in Downtown Area

Regional Characteristics	Teacher's Initial	Pretest	Posttest	N-Gain
Semi-Urban	EST05	35	63	73,7
	EST09	34	62	71,8
	EST50	39	64	73,5
	EST52	33	60	67,5
Average				**71,6**

Note: EST (Elementary School Teacher)

Based on the results in table 1 above, then the average results of the increase in teacher knowledge about the assessment of creative thinking in science in the downtown area is 63,2% and is in the "good" category. This means that teachers who work in public elementary schools in the downtown area have a poor understanding of creative thinking assessment. This is because some of the 5 teachers recommended by the principal have not met the criteria set by the researcher, namely the teacher is still an honorary status, and has a final education in Diploma 2, has less than 5 years teaching experience, and has not been certified. This greatly influenced the results of this study, even though the teachers were assigned to primary schools which were located in the downtown area, but their knowledge and experience of teaching was still very insufficient to influence their duties as professional teachers. This also greatly influenced the results of this study. Criteria set by researchers include; teachers with civil servant status, final education at Bachelor level (S1), teaching experience of more than 5 years, certification, and actively involved in the activities of the Teacher Working Group (KKG).

3.2 Semi-Urban Area

The results of the analysis of teacher knowledge regarding the assessment of creative thinking of science subjects for teachers serving in the semi-urban areas are listed in table 2 below.

Table 2. The Increase of Teacher's Knowledge in Semi-Urban Area

Regional Characteristics	Teacher's Initial	Pretest	Posttest	N-Gain
Semi-Urban	EST05	35	63	73,7
	EST09	34	62	71,8
	EST50	39	64	73,5
	EST52	33	60	67,5
Average				**71,6**

Note: EST (Elementary School Teacher)

Based on the results of the teacher's knowledge analysis in table 2, the ability of teachers in public elementary schools in semi-urban areas has an average of 71,6% and is in the "very good" category. This means that the teacher's level of understanding of creative thinking assessment is good, but needs to be improved by participating in various professional development activities. Research subjects from semi-urban areas were 4 primary school teachers recommended by the school principal who met the criteria set by the researcher, namely teachers with civil servant status, final education at Bachelor level (S1), teaching experience of more than 5 years,

certification, and actively involved in the activities of the Teacher Working Group (KKG).

3.3 Suburban Area

The increase in teacher knowledge about assessment of creative science thinking in suburban areas was obtained as shown in Table 3 below.

Table 3. The Increase of Teacher's Knowledge in Suburban Area

Regional Characteristics	Teacher's Initial	Pretest	Posttest	N-Gain
Suburban	EST17	34	64	76,9
	EST18	40	56	48,5
	EST49	37	65	77,8
	EST56	43	63	66,7
	EST57	23	63	80,0
Average				**70,0**

Note: EST (Elementary School Teacher)

Based on the results of the analysis, it can be stated that 5 teachers recommended by the principal from the suburban area have met the criteria set by the researcher. The results of the analysis of the teacher's ability to understand creative thinking assessment is at 70,0% and is in the "very good" category. This means that teachers in the suburban area already have a good understanding of creative thinking assessment.

The results of the overall analysis of the increase in teacher knowledge about the creative thinking assessment on science subjects based on the characteristics of the downtown, semi-urban, and suburban areas were obtained with an average of 68,3% and in the category of "very good". Which means that the teacher's knowledge of the creative thinking assessment on science subjects cannot be determined based on the geographical location of the public elementary schools, but is adjusted to the extent to which teachers can develop themselves actively in participating in various professional development activities.

Criteria of teacher needed by researchers are teachers who are civil servants, have teaching certificates, teaching experience over ten years, are active in Teacher Working Groups (KKG), and have a minimum of a bachelor's degree (S1). Therefore, teachers who have met the criteria set by researchers have better knowledge than others. This is in line with Permendiknas No. 16 of 2007 concerning standards for academic qualifications and teacher competency, and *Peraturan Pemerintah* No. 19 of 2017 concerning teachers. (Depdiknas, 2007)

Based on the results of this study, it can be stated that the main factor that greatly determines the teacher's ability to understand creative thinking assessment is the teacher's teaching experience and academic qualifications. Teachers who have teaching experience over 10 years have a better level of understanding of pedagogical competencies compared to beginner teachers. The same is true for teachers who have high academic qualifications (S1), teachers who already have an educator and undergraduate certificate (S1) have a better understanding of creative thinking compared to teachers who do not have certification, and academic qualifications in Diploma level. Therefore, for teachers who have not met the criteria of *Peraturan Pemerintah* No. 19 of 2017 as mentioned above, must try to meet these criteria in order to compete with other teachers in the area even outside the area of duty.

4. CONCLUSION

With the research subject of teachers serving in public elementary schools under the Department of Education and Culture in the downtown, semi-urban, and suburban areas, the results of the analysis of teacher pedagogical competencies based on regional characteristics showed that these teachers have different levels of knowledge about the concept of creative thinking assessment. The main factors that can influence the ability of teachers to understand creative thinking assessment are the criteria for teaching experience and teacher academic qualifications. Therefore, elementary school teachers who have not met these criteria are expected to immediately fulfill them so that they can carry out their duties as teachers in a professional manner.

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