

Teacher Pedagogic Competency Contribution on Understanding of Basic School Students in Era of Disruptive Innovation

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Abstract—The focus of this research is to find out about the pedagogical competencies of teachers, as well as how they contribute to the formation of students' understanding of learning materials. This research is a qualitative approach through RPP (The design of learning) data analysis, the results of PAT (end of year assessment) 5th grade students and the results of interviews with teachers related to the suitability of PAT results with the learning design made by the teacher. The results showed that the contribution of the teacher's pedagogic competence in the design of learning implementation can be seen from the way the teacher controls student characteristics, control of the learning process, utilization of technology, ways of communicating with students, up to learning evaluation and evaluation processes. Students' understanding is reflected in the results of learning evaluation called PAT (End of Year Assessment), which shows students' understanding is not in accordance with indicators of achievement in the design of learning implementation or referred to as RPP. Thus, the contribution of teacher's pedagogic competence is not fully responsible for students' understanding. This means that there are various aspects to measure students' level of understanding.

Keywords—*pedagogic competence; teachers; students; understanding of students*

I. INTRODUCTION

Globalization is unstoppable to change various aspects of human life. Accompanied by the development of increasingly sophisticated technology, the world is now entering a new revolution known as Industry 4.0 where countless elements comprising industrial systems are being interfaced with internet communication technologies to form the smart factories and manufacturing organizations of the future [1]. This revolution implements smart and integrated technology not only in the company, but also in everyday life. Many physical and digital technologies are combined through analytic, artificial intelligence, cognitive technology and the internet of things to create digital companies that are interrelated and capable of producing more appropriate.

Seeing the changing times of Indonesia's increasingly challenging challenges with the entry of the industrial revolution era 4.0 which emphasizes the digital economy

pattern, artificial intelligence, big data, robotic and so on or known as the disruptive innovation phenomenon demands for change and innovation in learning. As stated by McKinsey some technologies do in fact have the potential to disrupt the status quo, alter the way people live and work, rearrange value pools, and lead to entirely new products and services. Therefore, education requires educators who have certain competencies, so that what is the goal of education can be conveyed well to students. Through education is expected to be able to produce quality students and be able to deal with the flow of technological development.

Experts claim that competence is the basis of personal characteristics which is a determining factor in the success or failure of a person doing work or in certain situations [2]. While Moehariono states that many international management consulting firms define competence as a basic characteristic consisting of skills, knowledge and personal attributes that are able to distinguish someone through something and someone who does not [3].

In addition, according to Spencer competence is an underlying characteristic of a person that is related to the effectivity of individual performance on the job or the basic characteristics of individuals who have a causal or causal relationship with the referenced criteria [4]. Competence is always related to the ability of a teacher with the level of understanding of students, the process of learning and self-actualization. As explained by Mulyasa pedagogical competence is the ability to manage students' learning including students' understanding, instructional design and implementation, evaluation of learning outcomes and students' development to actualize their potential [5].

In line with the above understanding in the Ministry of National Education Regulation (PERMENDIKNAS) No.16 of 2007 described components included in pedagogical competencies, namely: (1) control the characteristics of students from the physical, moral, social, cultural, emotional and intellectual aspects; (2) control of learning theory and learning principles that educate; (3) developing curriculum related to the subject matter; (4) learning education; (5) utilizing information and communication technology for

learning purposes; (6) facilitating the development of potential students to actualize their potential; (7) effective communication, empathy, and attitude with students; (8) carrying out the assessment and evaluation process and learning outcomes; (9) utilizing assessment and evaluation for the benefit of learning; (10) take action to improve the quality of reflective learning. So, in essence that competence is a decisive tool for predicting the success of someone who works at a particular position. For the purposes of analyzing pedagogical concepts using measurement indicators, among others; level of understanding of students, instructional design, and implementation of educational learning, evaluation of learning and development of students actualizing their potential [6].

Through the learning process students and teachers can interact, starting from a teacher who must be able to understand the characteristics of students to the assessment of the learning process of each student. Likewise, with students, there are several things that must be considered during the learning process, such as paying attention when the teacher explains, giving direction to learning up to the test given by the teacher. This means that there are separate achievements for students after participating in learning. The achievement of the teacher can do it through formative tests, where the teacher can find out how far students can master the learning objectives that have been set by the teacher beforehand. as in the RPP or syllabus.

Ali says that the level of understanding of students is divided into 3 types, namely: 1) Low Level, where the translation understanding starts from the translation in the real sense such as, foreign languages and Indonesian. 2) Crying level, where understanding has interpretation, which connects the previous parts with known parts of the graph with events or events. 3) High Level, where the understanding of extrapolation by extrapolation is expected by someone to be able to see behind, the written can predict the consequences or can expand the reception in the sense of time or problem [7]. In addition, according to Ustman factors that influence student understanding are: 1) Learning Objectives, 2) Teachers, 3) Students, 4) Teaching activities, 5) Materials and evaluation tools, 6) classroom atmosphere [8].

The quality of teaching competencies plays an important role in the creation and formation of quality learning processes for students, and also shows the level of professionalism of teachers in accordance with their fields and can contribute to improving students' understanding of learning. The competency must also immediately adjust to technological developments that affect the learning activities of this digital age. Because of the importance of the concept, this research aims to find out how far the contribution of pedagogic competence to students' understanding of learning in the innovative disruptive era, especially elementary school students.

II. METHODOLOGY

This study aims to determine the contribution of teacher's pedagogic competence in relation to the learning process that has been carried out on students' understanding. This research

was conducted by interviewing a teacher in grade 5 SDN 070 Pasirluyu and 5 students in grade 5 elementary school. The purpose of the interview with the teacher is to obtain information about how a teacher carries out things that are an indicator of pedagogic competence, while the purpose of student interviews is to obtain information about how the learning process goes through during one semester. In addition to interviewing, researchers conduct data collection through evaluation results or called PAT (End of Year Assessment) and one of the Learning Implementation Plans (RPP) that have been designed by the teacher.

After testing the feasibility of the instrument in this study for further analysis of the 6 respondents consisting of competency variables describe the ability of teachers to carry out professional learning tasks measured using 10 indicators. Furthermore, students' understanding variables are expressed as the level of success in the whole teaching and learning process in a certain period based on indicators of the final exam results or called PAT (End of Year Assessment).

III. RESULTS

A. Pedagogic Competence

According to PERMENDIKNAS NO. 16 of 2007 one of the conditions for becoming an elementary school teacher is a graduate degree (PGSD S1). As a formal education institution in the middle community SDN 070 Pasirluyu facilitates some old teachers who have not completed their tertiary education. Being in the middle of the community is a separate task for SDN 070 Pasirluyu to be able to teach students to be able to meet the goals of education. with various factors such as family, local habits that have a negative impact on the child, and other factors that become obstacles to schools to improve student achievement.

Since the enactment of the 2013 Curriculum, several learning activities and some supporting learning have been developed. Like qualifications to be a teacher, making learning plans, learning processes, and evaluating learning outcomes. In the learning process there are several things that must be done by the teacher, such as greeting students when entering the class, controlling the learning process of each student, grouping students into the learning process, in the sense that not only teachers explain the material to students, practice, and other activities that utilize several school facilities to be used as learning resources such as parks, laboratories, and libraries. As said by one of the informants:

"I learn the most I like when I become a dokcil (little doctor). The story in my class was told to make a group of 5 people. We were told to make a drama script with the theme of body love. My group made a story about the spicy child. The main character is really as hot as spicy, until finally when at school he likes stomach ache and I as a doccil help him so that his stomach ache can relieved"

As for statements from other informants:

"I like being told by the teacher to make a story in front of the class, sometimes told to be the host of the ceremony. So, I dare to talk in front of people"

Some of these statements reflect that things that become indicators in the teacher's pedagogical competence can be conveyed to students.

B. Student Understanding

The learning process in general has been set by the teacher in the Learning Implementation Plan (RPP) starting from the goal, the material to be taught, the media to be used up to the learning assessment. The purpose and assessment of learning are related to each other, meaning that to measure the achievement of these objectives an assessment of the learning process must be carried out so that the results of learning can be seen.

Students' understanding of a subject or material presented by the teacher is not easy to measure. As the informant said:

"Being an elementary school teacher is not be easy, because in addition to having to be able to convey the subject matter in front of the class, a teacher must understand how the characteristics of each child in one class. Because basically every child has a different personality, there are those who are responsive and slow children. Things like what we have to handle and learning must keep going"

Some things have been done by the teacher in facilitating students to learn. A teacher's view of increasing student learning comprehension:

"Many people are assessing or comparing schools so that their children achieve or have a good education. No doubt I, as a parent, want the same thing. But this is not and schools or teachers have an important role in improving student development. One of them is the students' understanding in learning, besides the parent's teacher has an important role in the process. as well as helping children to learn material taught in school or getting children to learn. Unlike the case with the community in the community, what they think about when they enter their children into school means that students' achievements, understanding, and development are fully handed over to the teacher"

The form of professional pedagogical teaching can be seen from several significant things, one of which is the level of understanding of students. In performance, pedagogical competencies greatly influence the improvement of students, even though the 10 aspects in the competency are not fully run by the teacher. However, the impact cannot be seen without the intervention of other supporting factors that also have an important role for the personal learners. Family is an important factor for students. If all teacher efforts are supported by parents through familiarizing students with positive things, then at Pasirluyu Elementary School 070 can give birth to more outstanding students for each year. (discussion May 04, 2018).

IV. DISCUSSION

Findings from the study resulted in teacher pedagogic competency contribution on understanding of basic school students, because pedagogic competence is one of the competencies that must be possessed by an elementary school teacher. Starting from designing learning that must be adapted to the characteristics of students to the implementation of

evaluation of learning outcomes. In addition, teachers must also provide other extracurricular activities to support learning.

Learning evaluation is carried out like a school in general, it's just different names from the previous curriculum. There are currently several assessments conducted by teachers such as PTS (Middle Semester Assessment), PAT (End of Year Assessment) and several other practical activities. PTS and PAT are one form of evaluation that must be known by parents, in the sense that the division of student development reports is not only done at the end of the semester but mid-semester reporting is done to parents. This is so that parents can find out how the level of child development and help improve the learning process.

Basically, student learning comprehension is one of the things that is not easy to measure only through formative tests as done by the teacher, there are several factors that must be considered when wanting to know the level of understanding of students. If viewed in terms of language, understanding can be interpreted with responsiveness, views, teachings, and so forth. This means that students' understanding of learning can be seen from various aspects, because basically the character of each student is different.

This is in line with Hakim's research (2015) which states that general pedagogic competence contributes 83.5% or 96 respondents from 115 to the level of understanding of students from 25 elementary schools scattered in Konawe Southeast Sulawesi. This is what can then be used to provide understanding for the community, especially parents, regarding the competence of teachers in the learning process.

V. CONCLUSION

The implementation of the learning process well is required educators who have certain competencies so that what is the goal of education can be conveyed well to students. Pedagogic competence is one of 4 competencies that teachers must possess and become the most important competencies in the learning process. Pedagogic competence does not see what the condition of the school is and where the school is located, meaning that all teachers must master it. Hereinafter, Understanding student learning is one of the things that is not easy to measure only through formative tests as is done by the teacher, there are several factors that must be considered when wanting to know the level of student understanding. Because basically the character of each student is different. The social environment is a major factor, which includes Family environment, friend's environment, and other environments that are within the scope of students. If you look at technological developments that affect today's digital learning activities, surely the teacher must have quality ammunition and be a creative person.

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