The Role of Teacher in Science Learning through Multiple Intelligences in Sekolah Peradaban Cilegon

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Abstract

This study aims to see the role of teacher in science learning through Multiple Intelligences in Sekolah Peradaban Cilegon. This study describes the implementation of learning in Sekolah Peradaban Cilegon from the planning of learning, the implementation of learning and the assessment of learning. The method in this research is quantitative descriptive method. The research was carried out in Sekolah Peradaban Cilegon, with the subject of research is the 4th grade student and the amount are 14 students. The instrument used in this study is the observation sheet. The results of the study showed that the implementation of learning planning showed an average score of 4.66 or 93.33% which was in very suitable criteria, the implementation of learning showed an average score of 4.76 or 95.29% which was in very suitable criteria, and for the assesment of learning showed average scores of 4.5 or 90% is very suitable criteria. Based on the results of the study, it can be concluded that the role of teacher in science learning through Multiple Intelligences in Sekolah Peradaban Cilegon is in accordance with the criteria for learning that encourages Multiple Intelligences in Sekolah Peradaban Cilegon

Keywords: Role of Teacher, Science Learning, Multiple Intelligences, Sekolah Peradaban Cilegon

INTRODUCTION

Science learning is the learning by defining a collection of knowledge that is arranged in a guided manner. This is in line with the curriculum of 2013 that the science learning is connected with how to find out about the nature systematically, so that not only the mastery of a collection of knowledge in the form of facts, concepts or principles but also a process of discovery (Wisudawati, 2014). This shows that science as a process is needed to create empirical and factual learning, so science learning is realized by implementing learning that trains process skills in how science products are found.

Natural Science is the science of the universe as its object. The nature of natural science can be found in the philosophy of science, which obtains its truth empirically. The learning of science can be conducted through processes and scientific attitudes, namely: through the process of observation and experimentation by strengthening the objective and honest nature (Assidiq, 2012). Through scientific processes can be found in the form of facts or theories called science products. In addition, science can be interpreted as three components: scientific attitudes, scientific products and scientific processes. Based on the the description, it can be concluded that the characteristics of science learning are part of the change in behavior which includes three domains namely: cognitive, affective and psychomotor as well as changes in behavior that occur because students already have abilities as expected in educational goals.

The implementation of good education goals is a tough challenge for the teachers because through good education can produce the quality future generations. The 21st century education is more oriented to the development of human potential, not only focusing on technical abilities merely in exploitation, but oriented towards students' abilities (Basuki, 2014). Good learning is the learning that makes each student has cognitive, affective and psychomotor abilities (Hamalik, 2010). One of the challenges in the world of education lies in ways to make students accustomed to thinking critically and creatively in solving problems, thus teachers are required to play an active role in the learning process especially for Multiple Intelligences-based learning.

The Multiple Intelligences based science learning is the learning where students learn actively, active learning is a learning process that involves students in learning activities to think, interact, try, find new concepts, or produce a work. Active learning is in accordance with Multiple Intelligences because it

performs a learning process that is in accordance with how the brain works (Armstrong, 2009).

The Multiple Intelligences-based science learning is based on Multiple Intelligences, teachers must be able to provide knowledge to students about the concepts contained in the material of the science. In addition to the concept, the teacher should be able to embeded a scientific attitude through the models of learning. Science learning is not only useful in terms of the material but also useful for the embeding of values contained in the learning process takes place (Hamiyah, 2014).

The Multiple Intelligences-based science learning includes basic skills and integrated skills. Both of these skills can train students to find and solve problems scientifically to produce science products, namely facts, concepts, generalizations, laws and new theories (Ibrahim, 2013). Furthermore, the Multiple Intelligences-based science learning needs to implement students-oriented science learning, namely the four pillars of education starting from learning to know, learning to do, learning to live together and learning to be.

The process of learning is easier to understand and longer remembered by students, if students are actively involved both mentally, physically, and socially. Teachers can use a choice of strategies or teaching methods that are in accordance with Multiple Intelligences, student learning styles, and student learning modalities (Huda, 2013). The planning of learning made by the teacher is designed according to the learning style of students who are consulted to get efficient results to achieve basic competencies. Teaching methods using Multiple Intelligences can increase student activity and students' pleasure in learning which conducted in Sekolah Peradaban Cilegon.

Sekolah Peradaban Cilegon is one of the schools that is oriented towards developing Multiple Intelligences that are owned by students. Learning is emphasized in children's learning styles, and is developed on the belief that every child is a unique person, who has intelegence and has a different learning style. The learning takes place in an atmosphere that is pleasant, exciting, without pressure and coercion. Thus the learning process can take place more quickly and with the better results.

Sekolah Peradaban Cilegon proves that the Multiple Intelligences strategies can be given and accepted by their students. The submission of Multiple Intelligences is different from other strategies, especially when applied to school age, of course, it requires a specific strategy so that the aims and objectives of this learning process can be achieved. The Multiple Intelligences

strategy in learning must adjust and pay attention to the state of the child's soul during the play period, free expression, and try something new according to the level of intelegence that they have and the diverse characteristics of the student.

The previous research related to the Multiple Intelligences is a study by Jung & Chang (2017) states that the Multiple Intelligences-based learning processes each student has a different intelegence, intelegence can be understood by observing their behavior such as the ability to understand an object, collect data, how to memorize, and the learning process. In addition, the research by Diaz-Posada (2017) states that learning by using the Multiple Intelligences is a combination of curriculum that are integrated with the learning and evaluation process that is built on Multiple Intelligences, resulting in a meaningful learning process. The study by Beceren (2010) states that the Multiple Intelligences learning processes by showing the differences that each student can be used to develop their abilities, interests, and talents in learning. The research by Akkuzu & Akcay (2011) states that the 21st century learning, the students must have problem solving skills, critical thinking, which can be explored by looking at students' Multiple Intelligences. The research by Coban & Dubaz (2011) states that the Multiple Intelligences learning provides meaningful learning experiences in the process of learning outcomes.

Based on the previous studies, there is no study relating to the Multiple Intelligences learning in the Sekolah Peradaban Cilegon, so the researchers are interested in conducting research with the aim of describing the role of teacher in the Multiple Intelligences-based learning programs in Sekolah Peradaban Cilegon

METHOD

The method used in this study is descriptive quantitative. The study was carried out in Sekolah Peradaban Cilegon with the subject is the fourth grade students and the amount are 14 students. The instruments used in this study were observation sheets for the planning of the implementation learning (RPP), observation sheets for the learning implementation, the learning assessment observation sheets, each of which were validated by three experts consisting of one linguist, and two learning experts.

RESULTS AND DISCUSSION

a. The Planning of Learning

The planning of learning in the Sekolah Peradaban Cilegon is conducted by contextual learning and involves many students in their learning. This planning activity by referring to the learning plan that has been made by the teacher. The assessment of planning is

carried out through the study of documentation from the RPP made by the teacher used to carry out the learning process.

The results of the assessment of learning planning made by teachers that has been observed, it can be seen at Figure 1.

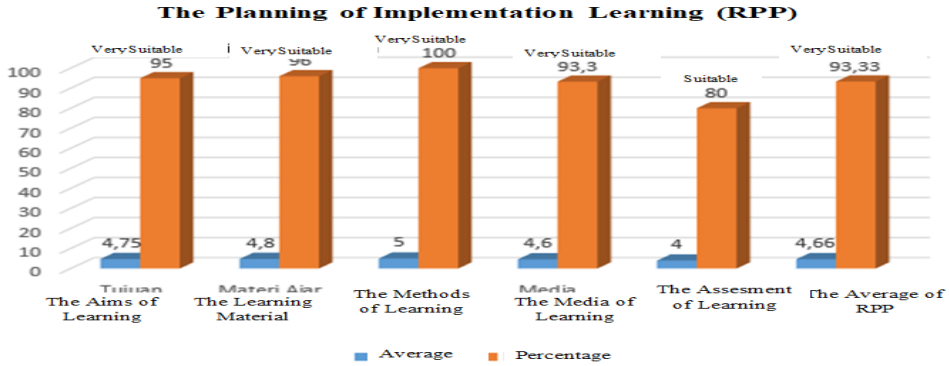

Figure 1. Graph of Planning of Implementation Learning

Based on the results of the analysis of Figure 1 using a scale of 5 on learning planning observations using criteria 1 for inappropriate choices (TS), 2 for inappropriate choices (KS), 3 for quite appropriate choices (CS), 4 for suitable choices (S), 5 for a very suitable choice (SK) can be found an average score of 4.66 or 93.33% with very suitable criteria.

The planning of learning is the first step taken by teachers before doing classroom learning. At this stage the teacher prepares a The Learning Implementation Plan (RPP) in accordance with the material to be delivered to students, with the aim that the learning to be delivered by teachers becomes more planned and organized.

The results of the assessment of observations about the planning of the learning process can be known to score an average of 4.66 or 93.33% with very suitable criteria, meaning that the preparation of RPP by teachers is in accordance state with Permendiknas No. 41 year 2007 (Republic of Indonesia, 2007), this shows that teachers have been able to understand the principles of RPP preparation.

The arranging of RPP with a good arrangement shows that teachers are able to develop learning plans by identifying and describing competencies into indicators to be able to predict or project what will be done, thus, teaching preparation is an effort to estimate actions to be taken in learning activities (Darmadi, 2012).

The arranging of RPP is one form of necessity for teachers who are freely given the authority to analyze syllabi in accordance with the characteristics of students and school conditions, and the ability of teachers to describe it into teaching preparation that is ready to become a guideline for the formation of competencies for educated participants. For that, teachers must be able to prepare effective and efficient teaching in classroom learning.

Based on the results of the evaluation in Sekolah Peradaban Cilegon about the learning planning, teachers have been able to make the lesson plans well, it is expected that teachers are able to carry out effective and efficient learning activities so that the implementation of learning is more directed.

b. The Implementation of Learning

The implementation of learning activities in Sekolah Peradaban Cilegon adapts to active time in general by considering the adequacy of time for students to rest, both in a daily or weekly scale. The implementation of the learning process begins with gathering all the teachers in the field to discuss the agenda today, and equating the perception of learning by providing a report on the activities of each teacher for each class. Furthermore, the teacher interacted with the students to do ice breaking/ gymnastics with all the teachers and students in the field together. After that, the students enter the class and do the Dhuha prayer together in each class with the front row of men and women in the back row.

The next learning process is the teacher provides motivation by providing reinforcement of learning that will be done today, then the teacher invites students to enter the tilawah class according to their abilities and readings. For the tilawah class, all classes conduct tilawah learning from grades 1-6 with the number of students varying according to the ability and reading of the students. After completing the class, tilawah is continued with a break and returned to their respective classes to carry out the learning process. The results of the assessment of the implementation of learning are can be seen at Figure 2.

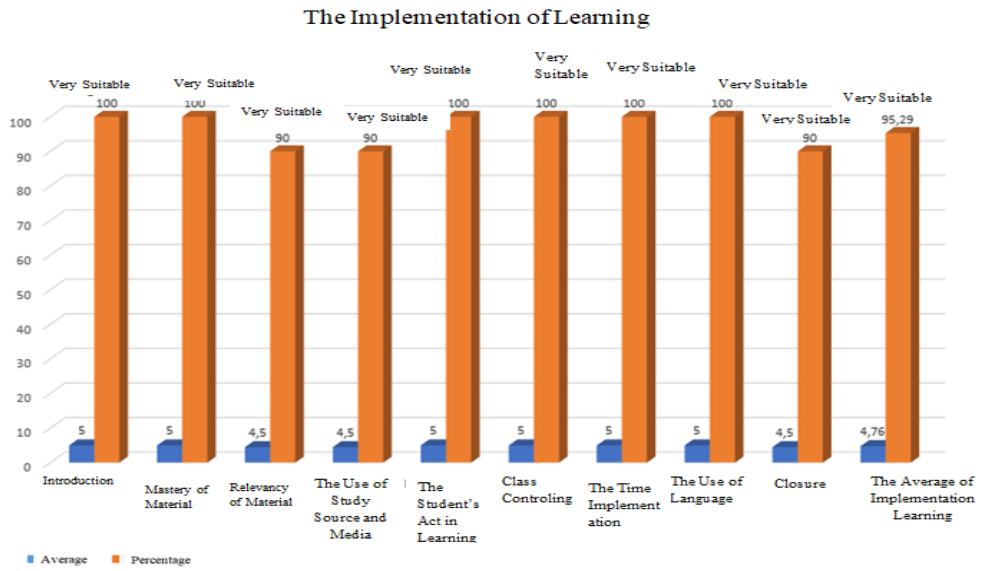

Figure 2. Graph of Learning Implementation

Based on the analysis of the Figure 2 by using a scale of 5 on observing the implementation of learning using criteria 1 for choices not suitable (TS), 2 for inappropriate choices (KS), 3 for choices quite appropriate (CS), 4 for suitable choices (S), 5 for a very suitable choice (SK) can be found an average score of 4.76 or 95.29% with very suitable criteria.

The implementation of learning is the core activity of the learning process in the classroom, the RPP that is made is a design of activities that will be carried out by teachers during learning in the classroom. The RPP made is only a plan, but the RPP is meaningful if applied in the implementation of learning. The implementation of learning requires teachers to be more careful and creative in front of the class, because they will deal with students with diverse characters.

The results of observations in the field about the implementation of learning can be seen as an average score of 4.76 or 95.29% with very suitable criteria. This is in line with Permendiknas number 41 year 2007 that implementation of learning includes activities: 1) preliminary activities, 2) core activities and 3) closing activities. Based on the results of observations on these three aspects, the stages carried out on the teachers are very suitable results. These results indicate the standard requirements that have been set in the learning process in the classroom run conducive, and involve students in learning.

The learning process is essentially the process of interaction between

students and teachers so that there is a change in behavior towards a better one. In this interaction, the teacher provides material, assessment to students. The existence of these components in a learning process is a very important thing because these components are very dependent on each other. For example about qualified teachers.

The qualified teachers play a role in realizing a good learning situation for students, in using the implementation of learning so that the process of learning that are received by students can be controlled, as well as being able to use learning media to improve student understanding related to the subject matter delivered (Sumantri, 2015).

Based on the results of the evaluation in Sekolah Peradaban Cilegon about the implementation of learning, teachers have been able to carry out the implementation of learning that has been made in the form of RPP well, so that the learning objectives that have been made can be achieved well.

In addition to evaluating learning with learning tools, researchers also discussed learning that was carried out by Sekolah Peradaban Cilegon namely the Multiple Intelligences learning. The Multiple Intelligences learning is the learning of diversity of abilities involving several fields. The intelegence learning is a modality to boost the abilities of each student and make them as champions, because basically every child is intelligent. If teacher knows the students' Multiple Intelligences, they will know the similarities and differences of each individual so that the teacher can make the appropriate learning plan and create a learning environment that supports the development of Multiple Intelligences owned by students (Aedemir, 2014)

c.The Assesment of Learning

The assesment of learning is a decision-making activity for achievement after the learning process. Learning assessment is carried out through written tests, practices and observations as well as assignments given by teachers. The results of observations about learning assessment can be seen at Figure 3

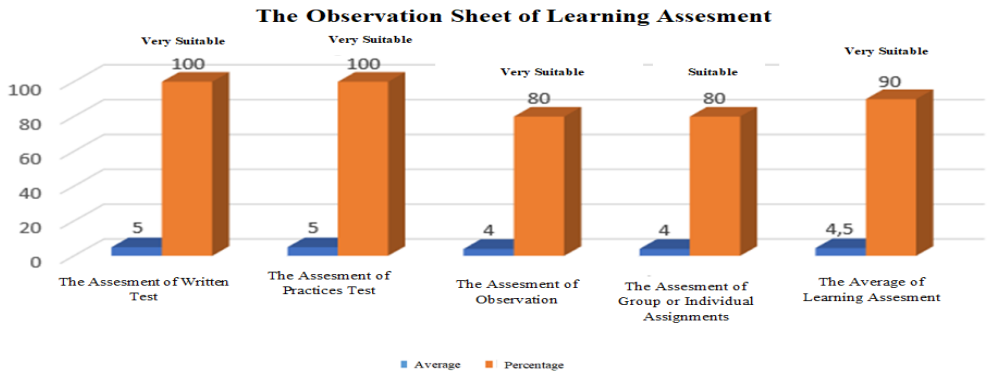

Figure 3. Graph of the Learning Assessment Observation Sheet

Based on the analysis of the above tables and graphs by using a scale of 5 in observation of learning assessment using criteria 1 for choices not suitable (TS), 2 for inappropriate choices (KS), 3 for choices quite appropriate (CS), 4 for suitable choices (S), 5 for a very suitable choice (SK) can be known to score an average of 4.5 or 90% with very suitable criteria.

Learning assessment is a series of activities to obtain, analyze, and interpret data about the process and learning outcomes of students conducted systematically and continuously so that it becomes meaningful information in decision making (Basuki, 2014).

The results of observations about the assessment of learning can be known to score an average of 4.5 or 90% with very suitable criteria. This means that after the learning process takes place the teachers always makes an assessment as stated in the standard process that the assessment of learning using various techniques can be in the form of written tests, observations, practice tests and assignments both individually and in groups (Republic of Indonesia, 2005).

Based on the results of the evaluation in Sekolah Peradaban Cilegon about the assessment of learning, teachers have been able to make good judgments, so that the abilities and development of students can be measured properly which can be a feedback for teachers to improve and improve the learning process further.

CONCLUSION

The role of teacher in science learning in Sekolah Peradaban Cilegon is in accordance with the criteria in learning, which is to make RPP in each lesson that encourages effective and efficient learning. For the implementation of learning, the teacher has carried out learning that encourages the Multiple Intelligences learning that can develop the potential of students in each of their learning. The stages of assessment are a daily, midterm and end of semester assessment of learning through the tests.

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