Increasing the Science Learning Outcomes Through the Outdoor Learning Method in Children with Special Needs grade IV at the Inclusive Primary School

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Increasing the Science Learning Outcomes Through the Outdoor Learning Method in Children with Special Needs grade IV at the Inclusive Primary School

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Abstract---The aim of this research is improving the learning outcomes of Natural Sciences in Grade IV Semin IV Primary School Gunung Kidul District through Outdoor Learning for student with special needs. This research is a class action research. Actions carried out two cycles. Data analysis techniques use techniques Qualitative and quantitative. In the first cycle using Outdoor Learning by visiting a direct object, the number of students complete with a percentage of learning is 55.56%. The Outdoor Learning in second cycle by involving elements of play, is 88.89%. The conclusion of this research is the use and the application of Outdoor Learning can improve science learning outcomes of students grade IV Semin IV Primary School Gunung Kidul District

Keyword---*learning outcome, special needs education, outdoor learning*

I. Introduction

The terms 'special education needs' (SEN) and 'special needs' commonly refer to students who require additional supports for learning and instruction (Villanueva et al., 2012:187). Inclusive education in Indonesia is an innovative and strategic educational approach to expand the access to education for all children with special needs. Children with disabilities in Inclusive education is interpreted as a form of educational reform that emphasizes anti-discrimination attitudes about the struggle for equal rights and opportunities, justice, and expansion of access to education. The basic principle of inclusive schools is that all children can learn together, regardless of the difficulties or differences that exist in themselves. Inclusion in mainstream schools may be a means to end, but should not end in itself for some children with SEN, segregated SEN placements may be the best means to the end of eventual inclusion in the community when they leave school (Hornby, 2011: 327)

Inclusive schools must recognize and respond to the different needs of their students, especially accommodating their learning ability. Depend on Regulation of the Minister of National Education Republic of Indonesia Number 70 Year 2009 Regarding Inclusive Education for Students with Disabilities and Potential for Special Intelligence and / or

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Talent describes the education system that provides opportunities for students who have disabilities but have special talents in the same formal education environment with students in general. One of the primary schools that organize inclusive education is Semin IV Primary School in Gunung Kidul Regency.

There are children with special needs at Semin IV Primary School, the existence of students with special needs creates a gap. Learning Natural Sciences (IPA) in a Primary School for grade IV for children with special needs, there are still gaps with other students. That is causing low learning outcomes. Based on the results of observations at the Semin IV Primary School IV Gunung Kidul District found that the science learning outcomes is still low. This is seen from the scores obtained by the students, there are still many who do not meet the Minimum Criteria at least is 70, that determined by the school. Of the 9 students, those who met the Minimum Criteria (at least 70 were only 3 students while 6 students had not achieved the grades expected by the teacher.

1.1 Natural Science learning

Natural science is a subject that discusses humans with the environment and the natural surroundings. The benefits of learn natural science are that students are able to think critically and be able to apply science products into real life. When studying science students must actively find themselves and be able to integrate with real life to make it easier to understand (Mottan, 2015). The science learning process emphasizes providing direct experience to students. Teachers and students must play an active role in the learning process. To explore the ideas of non-threatening environments in science, we examine notions of equity, socially just pedagogy and science learning within the current framework of science education. Given these perspectives, we hope to illustrate how current instructional practices in science education are lend success to all students (Taylor, 2012: 190)

According to Trianto (2015: 136) Natural Sciences (IPA) is a part of the Science of Science which originally came from the English" science ". Science is a systematic collection of theories, its application is generally limited to natural phenomena, born and developed through scientific methods such as observation and experimentation and requires scientific attitudes such as curiosity, openness, honesty and so on ". According to Dimyati and Mudjiono (2013: 3) learning outcomes are the result of an interaction of learning and teaching. This opinion emphasizes that learning outcomes come from an interaction. Interaction is communication between teachers and students. From the teacher's point of view, the act of teaching ends with a process of evaluating learning outcomes. From the student's side, the learning outcome is the end of the fragment and the top of the learning process. Science learning in elementary schools is only focused on basic science process skills which include observing, classifying, quantifying, predicting, inferring, and communicating skills (Hornby, 2011:324).

1.2 Outdoor Learning

Natural Science learning is carried out using the Outdoor Learning method, which is known by other terms such as Outdoor Study, Outdoor Activities, learning outside the classroom or learning in the field. Husamah (2013: 23) states the Outdoor Study method is a method in which the teacher invites students to study outside the classroom to see events directly in the field with the aim to familiarize students with their environment. The environment provides a concrete source of knowledge needed by students. Besides learning activities will be more active, creative,

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varied by utilizing the surrounding environment. Thus, whether the outdoor learning method can be expected as a solution to improve the student's science learning outcomes of Grade IV?

II. Research Method

This type of research is Classroom Action Research (CAR). Classroom Action Research (CAR) is research conducted to improve student learning outcomes through an action in the form of a cycle of problems that occur to get the best solution for students. Classroom action research is conducted in two cycles, first cycle and second cycle. Each cycle consists of four stages, namely: 1) Planning (2) Acting (3) Observing (4) Reflecting. TheResearch was conducted at Semin IV Primary School Gunung Kidul District. Semin IV Primary School Gunungkidul District Regency is an Inclusive Education Provider School (SPPI) where in the school always accepts all students without disabilities. The subjects of this study were the fourth-grade students of the 4th Seminary Elementary School and the object of the study was the low science learning outcomes. Datas collection was using tests, observations and interviews. Data analysis was performed with qualitative and quantitative analysis.

III. Result and Discussion

3.1 The First Cycle

The first cycle was held on Tuesday, May 15, 2018. At the first meeting the teacher carried out the learning in accordance with the Learning Plan that had been made. The first meeting of the first cycle discuss about structure and function of plant roots

Table 1: Recap of Observation of Activities Results of First Cycle

Classification	Students activities	
	Number of aspects	Percentages
Very good (4)	4	26,67%
Good (3)	8	53,3%
Fair (2)	3	20,00%
Less (1)	0	0%
total	15	100%

Table 2: The value of Natural Science Learning (IPA) of the First Cycle

No.	Interval Value	Frequency	Remarks
1.	40 - 49	2	Not completed
2.	50 - 59	1	Not completed
3.	60 - 69	2	Not completed
4.	70 - 79	1	Completed
5.	80 - 89	3	Completed

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6.	90 - 100	0	Completed
Amount	9		
Minimum Criteria	70		
Average	62.92		
The lowest score	46.67		
The highest score	86.67		

Table 3: Completeness of Science Learning Outcomes First Cycle

No.	Learning Outcomes	Amount	Percentage
1.	Completed	4	44.44%
2.	Not Completed	5	55.56%
Amount		9	100%

From the implementation of the first cycle, teachers and researchers reflect the learning. There are some improvements compared to before the action. The first is the teacher becomes more active in teaching. The second is students look more enthusiastic in learning Natural Science with Outdoor Learning. The Third is the teacher can increase the level of student understanding. The last is by working in groups outside the classroom, the teacher is able to guide students to be orderly and compact. In the implementation of the first cycle the percentage of completeness of science learning outcomes increased 11.11% while the percentage of social care in group activities was 74.53% better than before the action. This means that the first cycle of action has not yet reached the indicator of success (80%). This is because both students and teachers are not optimal in the implementation of the activities. Where there will be improvements in the second cycle.

3.2 The Second Cycle

The meeting was held on Tuesday, May 20, 2018. At the meeting the teacher carries out learning in accordance with the lesson plans that have been made. The first meeting of the second cycle uses the learning material of the structure and function of plant leaves. The planning stage carried out in this research is to follow the curriculum used by the school and set competency standards and basic competencies in subjects at grade IV in Semin IV Primaty School, the material used is the structure and function of plant leaves. Then compile a learning implementation plan that will be carried out in the second cycle that is by using Outdoor Learning learning by involving elements of play. Teacher observation was carried out with the subject of observation being the fourth-grade teacher of Public Elementary School IV. Observation results show that the teacher is better at carrying out learning outside the classroom with the concept of learning while playing.

Table 4: Recap of Observation of Activities Results of Second Cycle

Classification	Students activities	
	Number of aspects	Percentages

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Very good (4)	7	41,18%
Good (3)	10	58,82%
Fair (2)	0	0
Less (1)	0	0
Total	17	100%

The learning outcomes of students in class IV second cycle was increased compared to first cycle. From the acquisition of science learning outcomes of Grade IV students of Semin IV Primary School, it can be analyzed as in the following table second Cycle Test Values

Table 5: The value of Natural Science Learning (IPA) of the Second Cycle

No.	Interval Value	Frequency	Remarks
1.	40 - 49	0	Not completed
2.	50 - 59	0	Not completed
3.	60 - 69	2	Not completed
4.	70 - 79	3	Completed
5.	80 - 89	4	Completed
6.	90 - 100	0	Completed
Amount	9		
Minimum Criteria	70		
Average	75,51		
The lowest score	60,00		
The highest score	86.67		

Based on the Minimum Criteria which score was 70 the data obtained from the value of the second cycle in table complete Science Learning Outcomes of second Cycle

Table 6: Completeness of Science Learning Outcomes First Cycle

No.	Learning Outcomes	Amount	Percentage
1.	Completed	7	77,78%
2.	Not Completed	2	22,22%
Amount		9	100%

In the implementation of the second cycle the percentage of completeness of science learning outcomes increased to 77.78% better than the first cycle has achieved indicators of success. The learning process can occur anywhere, in the classroom or outdoor. The learning process at outdoor has a broad meaning for student development,

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because in the learning process can provide direct experience to students and learning. It becomes more real and meaningful for students. Outdoor Learning is done at outdoors or done in the open space to provide direct and tangible experiences to students

One of the ways to make learning interesting is to do learning outside the classroom (Outdoor Learning). However, this activity should be well programmed to make it more on target. In the implementation of Outdoor Learning in first cycle, namely visiting objects directly there are some positive changes in learning:

a. The teacher becomes more active and creative in learning
b. Students become more excited about learning science
c. The level of understanding of students increases
d. Began to create a sense of togetherness in the group

But there are several obstacles in the implementation of Outdoor Learning Cycle I include:

a. The teacher has difficult to manage students
b. Learning time needs more allocation than the lesson plan
c. Students did not understand what was learned at that time.
d. There are students who pay less attention to the teacher's orders

Based on data from the results of research in the first cycle that has been done shows an increase in science learning outcomes in fourth grade students of Elementary School IV Semin. The number of students who completed the first cycle was 5 students out of 9 students. 81 In the first cycle there was an increase in completeness by 22.23% from the original 33.33% to 55.56%. This means that overall student completeness has not yet reached the indicator of success (80%). While the results of the research in the second cycle the number of students who reached completeness were 8 students. From students who finished there was an increase of 33.33% from 55.56% to 88.89%. In this case, it can be interpreted that students' learning completeness has been achieved because the percentage of learning completeness is more than 80%.

IV. Conclusion

Based on the results of research and discussion, the use and application of Outdoor Learning can improve science learning outcomes of Grade IV of Semin IV Primary School Gunung Kidul District. Increased student learning outcomes in pre-cycle reached completeness 33.33%. Furthermore, by using Outdoor Learning which involves teachers and students the percentage of learning increased 55.56% in first cycle. Then the teacher and researcher made improvements by involving elements of play as the basis for the approach in learning, so the percentage of learning outcomes increased to 88.89% in second cycle.

Based on the conclusions above, it can be stated that Outdoor Learning is proven to be able to improve student learning outcomes in natural science subjects and social care in fourth grade students of Elementary School IV Semin. In connection with this research, practical implications can be put forward. The practical implications of this research are that this research proves that the application of Outdoor Learning can improve student learning outcomes

in science subjects and social care for students. The results of this study can be used as input for teachers and prospective teachers in the selection of methods that can enhance a pleasant and not boring learning atmosphere.

V. Recommendation

The success of the application of Outdoor Learning as an effort to improve the learning outcomes of Natural Sciences and social care can be used as a basis for researchers to provide suggestions, among others, students must be able to work well with teachers and other students during science learning with outdoor learning. Teachers should be more active and innovative in learning science in the classroom, so students do not feel bored.

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