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Thematic–democratic–exploration (TED) learning to improve the cognitive and affective aspects on a small land

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Abstract
The purpose of this research is to prove the increasing Thematic – Exploration – Democratic Learning toward increased cognitive conclusion aspects with qualitative research method. And the conclusion based on the research Thematic – Democratic – Exploration (TED) Learning To Improve The Cognitive And Affective Aspects which identifies elementary students from the result of phenomenon identification and democratic interaction got that Thematic – Exploration – Democratic (TED) Learning can increase the cognitive and affective aspects depends on a good democratic interaction.

Keywords: Thematic, democratic, exploration, small land, cognitive, learning

Introduction

School is a place where we can obtain an education. Education is a process of a permanent change of behavior as the result of the experience. A sign that is shown if someone has learned something can be seen from their change of behavior [1]. A change of behavior or personality covers the knowledge aspect (cognitive), skills (psychomotor), and attitude (affective). To develop the overall personality of the students in cognitive aspect, affective, and psychomotor through the learning process therefore the educator is required to have a plan or a pattern that is used as guidelines in implementing the learning process known as Learning Model. Joyce claims that a learning model can help students to achieve their learning objectives [2]. The objective of learning is to achieve the three competence aspect that is, cognitive aspect (knowledge), affective aspect (attitude), and psychomotor aspect (skills) the students obtain in the learning process.

Schools in urban areas which are known as cities have the facilities that support the learning process, have a proper education chance, and have a certain quality and also an adequate educator with the result that generally students in the cities have a cognitive achievement that is relatively sufficient and stable. Whereas the school in the rural or the village doesn't get a quality chance of learning, having limited facilities and minimal support from the environment, so the cognitive aspect of the students from the village becomes less satisfactory and therefore will have barriers to development in intelligence, interest, and the student's talent. It can be found in one of the elementary schools located on Para island, the less amount of quality education, limited facilities, and the shortcoming support from the environment make the students in that school less enthusiastic in the learning process, and that affects the cognitive and affective aspect of the students less satisfactory [3].

As written by Edith M. Selberg in her book "Discovering science in the elementary school" Kids have a curiosity that makes them look for something they don't know and tries to understand it with natural tendencies that they have that are seeing, touching, hearing, and asking about things around them. This becomes an advantage for the kids that live in remote areas where there are many learning sources from the environment around them or the kids, even more, the environment has already become a part of their experience. Curiosity and the natural tendencies of the students can be used in the learning process, therefore the educator must build a learning atmosphere that triggers the student, one of them is to do exploration as a learning activity in improving the cognitive aspect. However, every person has a certain or different comprehension and experience so it is necessary to have a discussion that is democratic so there will be an exchange of thoughts and increased insight of the students that will develop or improve the affective aspect of the students [4].

One of the learning models that can be used to trigger the natural tendencies of the students and their curiosity so there will be an improvement in cognitive aspect and affective aspects that can be researched on Thematic – Explorative – Democratic at Elementary School in Sangihe, Para Island. Where Thematic Learning shows that there will be learning materials that come from the environment around, either a fact or a natural phenomenon, or a social issue [4]. Explorative Learning is used to show that there will be a high-order thinking activity from the students in studying or analyzing the natural phenomenon that occurs, and Democratic Learning as a learning activity designed in a grouping so that the difference of opinion and initial knowledge can be communicated democratically to produce a conclusion [5]. This TED is designed to build a process of learning high-order thinking through exploration and interact democratically in learning about an object that occurs in the surrounding environment which indirectly leads to improvement of the cognitive aspect and affective aspects from the students [6].

Method

The research method that is used is qualitative method with the population of students in elementary school in Sangihe District, Para Village, and the samples are the 6th-grade elementary school students with a total of 5 people, the data collection technique used is interview and observation sheet. The data analyzing technique that we do is interactive data analysis techniques (Miles and Huberman model) where 3 plots are data reduction, data display, and conclusion drawing/verification in the form of interaction in gathering data process when in the field known as cycle process [7].

Results And Discussion

Assessment of thematic – exploratory – Democratic learning research on students in elementary school using observation sheet competence of students to assess aspects of attitudes and democratic interaction observation sheet used as a cognitive aspect assessor. Experiences that have been possessed by previous students, can be implemented into learning activities that allow students to connect with experiences and develop those experiences into meaningful learning with individual activities and group interactions. This democratic interaction increases learning productivity, critical thinking, and initiative to utilize various learning resources of students if there is sufficient democratic interaction between fellow group members [8].

- **Students competence assessment result sheet**

The students that be the samples from this research which is divided into 2 groups. From these 2 groups we will be assessing indicators:

1. Fact / Phenomenon
2. Special characterized
3. Factor that affect the phenomenon
4. The concept of natural science
5. The form of energy
6. The utilization of energy

These indicators are judged from every meeting and the result of this learning implementation is:

Table 1: The score and score average of 1st meeting

1st Meeting			
1	**2**	**3**	**Rerata**
4	2	2	**2,67**
4	2	2	**2,67**
4	2	3	**3,00**
4	2	3	**3,00**
4	2	3	**3,00**
Score average			**2,87**

Based on data from the learning, in Table 2. In the first meeting, learning in the classroom can be concluded that in the cognitive aspect there is a lack of use of the experience of the surrounding nature as a source of learning that causes students to identify quite a lot of natural phenomena but less in explaining the characteristics and concepts of science that exist in the phenomena that they have collected.

Table 2: The score and score average of 2nd meeting

2nd Meeting			
1	**2**	**3**	**Avg**
4	2	3	**3,00**
4	2	3	**3,00**
4	3	2	**3,00**
4	3	3	**3,33**
4	2	2	**2,67**
		Score average	**3,00**

At the second meeting, conducted learning in place of exploration which in this case is the beach which makes students limit the study of objects or phenomena to be more focused only on the phenomena that occur on the beach and the results of learning TED based on cognitive aspects can be concluded that at the second meeting of students can identify existing phenomena on the beach but still less clear in describing the concept of science and the characteristics of the phenomenon.

Table 3: The score and score average of 3rd meeting

3rd Meeting				
1	**2**	**3**	**4**	**Avg**
4	3	3	2	**3,00**
2	3	3	2	**2,50**
4	3	3	4	**3,50**
4	3	3	4	**3,50**
3	3	2	2	**2,50**
			Score average	**3,00**

At the third meeting, reconducted learning in the classroom accompanied by stimulation of students so that students better understand how to identify objects phenomena, characteristics, and concepts of Science in the exploration of the coast of this study based on a comparison between the meeting-1 with a score of 2.67 for Group 1 and a score of 3.00 for Group 2 – 2 with a score of 3.00 for Group 1 and a score of 3.00 for Group 2, it can be concluded that group 1 has improved cognitive aspects while Group 2 has neither increased nor decreased.

Table 4: The score and score average of 4th meeting

4th Meeting			
1	**5**	**6**	**Avg**
4	3	3	**3,33**
3	3	3	**3,00**
0	0	0	
4	4	4	**4,00**
4	4	4	**4,00**
		Score average	**3,58**

At the fourth meeting, TED learning was held at the exploration site, namely the beach. At this meeting, students have been given a theme, namely business and energy and asked to fill in the identification of phenomena, concepts of Science, and energy utilization. And based on the results of research data can be concluded that there is an increase in cognitive aspects of Group 1 with a final score of 3.17 and Group 2 score of 4.00. The cognitive scores of both groups were influenced by the Democratic interactions of each group member.

- **Democratic Interaction Observation Sheet**

Table 5: The assessment of democratic interaction 1st meeting

1st Meeting								AVG
1	2	3	4	5	6	7	8	
2	3	2	3	3	2	4	4	2,88
3	3	3	3	3	3	4	4	3,25
3	4	2	3	2	2	4	4	3,00
3	2	3	2	3	3	4	4	3,00
3	3	3	3	3	3	4	4	3,25
Score Average								3,08

At the first meeting, research was conducted in the classroom. From the results of the study, Group-1 get a sufficient score because of the new situation that builds the spirit of students, and given a reward so that they become active in group discussions about the facts/natural phenomena that they assess from the experience they have and still on the phenomenon with a wide scope. This is what happened in Group-2. And they get a score with just a little gap. Group-1 got a score of 3.06 and group 3.08.

Table 6: The assessment of democratic interaction 2nd meeting

2nd Meeting								AVG
1	2	3	4	5	6	7	8	
4	2	3	3	3	4	4	3	3,25
2	3	2	3	2	2	3	3	2,50
4	4	2	4	3	4	3	3	3,38
4	3	2	3	3	4	2	3	3,00
4	3	2	4	2	3	3	3	3,00
Score Average								3,03

At the second meeting, research was conducted in the environment, namely the beach. group -1 began to decline due to differences of opinion that makes their democratic interaction decrease from a score of 3.06 to 2.92 and there is a possibility of a lack of direct reasoning that makes it difficult for students to observe objects around. while group - 2 has increased from a score of 3.08 to 3.12 this is because group - 2 members dare to express opinions, appreciate the criticism of opinions, and are active in Group learning activities.

Table 7: The assessment of democratic interaction 3rd meeting

3rd Meeting								AVG
1	2	3	4	5	6	7	8	
4	4	2	3	3	2	4	4	3,25
2	4	2	3	2	2	3	4	2,75
4	3	3	4	3	3	3	4	3,38
4	3	4	2	3	3	3	4	3,25
3	4	3	3	4	3	3	4	3,38
Score Average								3,20

At the third meeting, research was conducted in the classroom. Scores from Group-1 and Group-2 increased after the holding of exploration learning on the beach at second meeting and the content of natural phenomena studied was more focused on phenomena in the scope of the explored environment, namely the beach.

Table 8: The assessment of democratic interaction 4th meeting

4th Meeting								AVG
1	2	3	4	5	6	7	8	
3	3	2	3	2	2	3	4	2,75
2	3	2	3	2	2	2	4	2,50
0	0	0	0	0	0	0	0	-
4	4	4	4	3	4	4	4	3,88
3	3	2	4	4	3	3	4	3,25
Score Average								3,09

At the fourth meeting, research was conducted in the environment, namely the beach. The average score of the fourth meeting is very clearly seen in a decrease in the score in the group-1. This is due to the existence of problems, namely disputes between group members, which affect the score of their democratic interaction, and because it only consists of two students so there is no other democratic interaction. This is the chart of the democratic interaction score average of elementary students:

Based on the results of research conducted Democratic Interaction Group 2 get an average score higher and increased compared to Group 1. This is because Group 2 meets the indicators of democratic interaction assessment better than Group 1.

The experience gained by students at each meeting, through explorative experience becomes a reconstruction process that includes knowledge, skills, and values. The process of exploring the concepts and processes of science about facts and phenomena includes individual thinking models in terms of identifying objects and being able to explain the scientific processes that occur during the exploration so that students can think critically. In their application attraction makes students active in asking questions and freely expressing opinions between one another so that aspects of

democratic interaction between students are formed and students have a broader understanding of facts and phenomena that exist in the natural surroundings. In this case, democratic interactions affect cognitive aspects. TED learning can improve the cognitive aspects of students [9].

Conclusion

The responses from the 6th-grade students of Paralele Elementary School towards thematic learning – exploratory democratization were well interpreted because on the last day of learning a good score was obtained for the results of the lesson. So that it can be concluded based on the results of research on Thematic-Explorative-Democratic Learning to Improve the Cognitive and Affective Aspects of Students on Para Island in terms of the results of identification of phenomena and democratic interactions it is found that the results are not or whether the results are good or not Thematic - Explorative - Democratic learning results depend on whether or not the results are good on good democratic interactions.

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