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THE STUDY OF UTILIZATION OF THE EXPERIENTIAL NATURE ENVIRONMENT EXPLORATIONIN PROMOTING THE ENVIRONMENTAL AWARENESS INTO PRIMARY SCHOOL CURRICULUM AT PADANG CITY, INDONESIA

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ABSTRACT

The aim of this study was to evaluate the implementation of The Experiential Nature Environment Exploration on improvement of environmental awareness of primary students in Padang City West Sumatera Indonesia. The evaluation was conducted in a mixed-method research design that included questionnaires, document reviews and interviews. Questionnaires were administered to 30 teachers drawn from four primary schools in Padang City, as well as in-depth interviews with students. The study found that the experiential learning method provides an appropriate method by which the knowledge environmental awareness can be conveyed within the existing curriculum, as many teachers who have taken the innovative step of integrating the environmental awareness into their existing subjects are already implementing key components associated with the experiential learning model.

KEY WORDS : Case study, Curriculum, Environmental awareness, Environmental study, Knowledge

INTRODUCTION

The environmental protection can be achieved through raising public awareness (Herremans and Nazari, 2016). Environmental education is one effort for improving public awareness (Reid, 2019). Environmental education would be essential inrealizing to build sensitive people that having the proper knowledge, skills and values in environmental and contribute for reducing environmental problems (Madani, 2019). Public knowledge of the environmental situation through education is one of the most influential effects on society in solving problems recently (Mahat, 2017). Basic environmental education would be more effectively to ensure that awareness if it be conducted at the school level, mainly primary school.

The Department of Environmental Sciences, State University of Padang has developed efforts to increase environmental awareness using the Natural Environment Exploration approach. With this approach, student learning outcomes will be obtained based on fact findings in the field at that time. Recently, the teaching method for environment at the school level is still dominated by teacher as the main source of knowledge. This approach might not interest to the student especially in the correlation with in raising the awareness of the students on environmental situation (Rahman, 2018).

In this study, the application of Natural Environment Exploration approach on the improvement of environmental awareness of primary students at Padang city, West Sumatera was conducted. The topography of Padang City consists of the coastareas, lowlands, and highlands, surrounded by Bukit Barisan Mountains. South side the city is still largely an agricultural area, meanwhile the eastern part is a hilly area. Padang also hasmany rivers (Masrizal, 2020). Due to the

complex situation of the city and the increasingly dense population, it is possible that environmental damage will potentially occur in the city of Padang in the near future.

The aim of this research was to build the open-minded students and educational stakeholders and enable them to connect learning concepts in real life through direct interaction with the real world around them. In accordance with these objectives, the learning process activities designed by the teacher should be oriented towards constructivist learning. Thus, the learning environment situation is not just memorizing concepts but also observing phenomena that occur in nature through scientific activities.

RESEARCH METHODS

This study used a survey method where data collection was carried out by observation, documentation, questionnaires and interviews. Questionnaires as the primary data was triangulated by using structured interview, documentations, and observations to give the information be explored in more details that the research objectives achieved. Survey in this study is limited to the acquisition of data collected from a sample population or present the entire population. The populations in this study were teachers and fourth grade students from four primary schools at Padang City, West Sumatera Indonesia. Data obtained from interviews, observation, documentation, and questionnaires were analyzed descriptively for discussion.

RESULTS AND DISCUSSION

Natural Environment Exploration Approach for understanding environmental protection

The Experiential Nature Environment Exploration defines as a learning model that provides hands-on experience of students through directs exploration and interaction with the learning object to acquire the knowledge, skills, and attitudes through several phases including interaction, communication, reflection, and evaluation (Mutasa and Coetzee, 2019).

Table 1 showed the activity for Natural Environment Exploration Approach of educational stake holderson understanding the environmental protection. In this table, it was designed the study activity that would be improved the awareness on environmental protection. These activities were designed based of the eight learning principles including the principle of motivation, the principle of background, the principle of concentration of attention, the principle of problem solving, the principle of discovery, the principle of learning while working, the principle of social relations, and the principle of learning while playing (Susanto, 2013).

Table 1. The designed activities on the Experiential Nature Environment Exploration

No	Activity
1	Environmental observation
2	Problem identification
3	Impact prediction
4	Literature connection
5	Data collection
6	Data organizing
7	Data analyzing
8	Drawing conclusion
9	Sharing information
10	Team working
11	Contributing in team
12	Listening to others opinion
13	Speaking up in the team
14	Honesty
15	Thoroughness
16	Persistence

The understanding on environmental situation

Table 2 presents the percentage of agreement of respondents to the designed activities that has been developed. The score of respondents agreement was in average of 3.7 where the percentage level was on

Table 2. Percentage agreement of learning model

No	Activity	Score
1	Environmental observation	3.75
2	Problem identification	3.68
3	Impact prediction	3.75
4	Literature connection	3.87
5	Data collection	3.81
6	Data organizing	3.62
7	Data analyzing	4
8	Drawing conclusion	3.75
9	Sharing information	3.62
10	Team working	3.68
11	Contributing in team	3.68
12	Listening to others opinion	3.93
13	Speaking up in the team	3.75
14	Honesty	3.87
15	Thoroughness	3.81
16	Persistence	3,81
	Average	3.7 (84%)

Table 3. Respondent's responses before and after Natural Environment Exploration Approach.

Primary school	Number of respondents	Pre	Post	Increment (%)
PS 1PS 2	30	43	86	100
	30	40	65	62
PS 3PS 4	30	39	90	170
	30	41	66	61

84%. Based on the specified criteria, the learning model would be declared as an effective model if the student's activities score equal or greater than 3.1 (Watson and Petrie, 2010). Therefore, it can be suggested that the proposed learning model can be utilized further.

The evaluation stage is carried out before, during and after the learning process takes place. The evaluation stage of learning outcomes did not independent and would be integrated with the exploration, interaction, communication, and reflection. Table 3 indicates the respondents' knowledge about environmental protections before and after implementation of Natural Environment Exploration Approach.

The results of the survey activities showed that the respondents only understand about 40 % on environmental protection. The respondents stated that the process of understanding the environmental protection mightnot support their personal capability. However, after the implementation of Natural Environment Exploration Approach, the understanding of environmental protection has increased significantly. The data from the survey indicates that learning activities have not only focused on the cognitive abilities of students as the output from the learning process that has been done. This finding was in agreement with Joyce and Weil (2009) and Gentry (2012) which stated that the achievement of the result of learning process should be comprehensive include achiev in cognitive, affective and psychomotor.

CONCLUSION

Based on the description and discussion of the results of the study, it can be concluded that the implementation of The Experiential Nature Environment Exploration approach has improved the knowledge of educational practical including students and teacher on the knowledge of environmental protection. Increasing environmental protection is expected to have an impact on increasing environmental awareness. This effort is carried out early on at the primary school level because they are the ones who become the successor to protect the environment in the future. Thus, the expected implementation of the Experiential Nature Environment Exploration approach is suggested as an effective and efficient in learning and understand in environmental protection.

Conflict of interest

The authors declare that there is no conflict of interests regarding the publication of this paper.

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