Efectivity of sea turtle watch program to increase student’s knowledge about sea turtle conservation in Pramuka Island

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Abstract. Sea turtles are endangered creatures. Organization around the world are trying to have conservation activities for these creatures. The success of these activities need public knowledge about sea turtle conservation. Students as the element of society can get this knowledge through Sea Turtle Watch Program. This program implemented on September 2018 with 34 students from SMA Negeri 69 Jakarta. Students attended classroom activity, discussion, and turtle observation practice. Program evaluation data collected by pre-post test about students’ sea turtle conservation knowledge and perception of the program. Data were analyzed with t-test. The results showed that the data of students’ pre-test and post-test value have significant difference. This study conclude that Sea Turtle Watch Program increase students’ knowledge about sea turtle conservation and they have good perceptions about this program.

1. Introduction

Sea turtle are poikilotherm reptiles that belong to the Cheloniidae family [6]. Characteristic of this animal is having dorsal shell (carapace) and ventral shell (plastron) [7]. Of the seven species of sea turtles in the world, six species that live in the Indonesia are hawksbill turtle (Eretmochelys imbricata), green turtle (Chelonia mydas), flatback turtle (Natator depressus), leatherback turtle (Dermochelys coriacea), loggerhead turtle (Caretta caretta), and olive ridley (Lepidochelys olivacea) [4]. The decline in sea turtle populations can be caused by illegal hunting, environmental pollution, climate change, predator threats, and diseases that have an impact on the ability of turtles to survive [4]. Since 1996, hawksbill turtle has been categorized as critical endangered based on the IUCN red list due to over exploitation [8]. Meanwhile, green turtle is on endangered category [11] and leatherback turtle, loggerhead turtle, and olive ridley is on vulnerable category [14]; [3]; [1].

Sea turtle conservation efforts are being pursued by government organizations or NGOs around the world. Local community knowledge and participation are an important factors which improve biodiversity conservation [2]. These factors can be obtain through Sea Turtle Watch Program. This program was attended by students of SMA Negeri 69 Jakarta as the element of community in Pramuka Island, Kepulauan Seribu. In this island, there is national park management section (SPTN 1, Kepulauan Seribu National Park Hall) that has turtle breeding sites. Aim of this program was increasing students’ knowledge about sea turtle conservation. This knowledge is expected to assist students in making decisions in turtle conservation efforts.
2. Materials and Method

Sea Turtle Watch Program was implemented on September 2018 with 34 students from SMA Negeri 69 Jakarta. This program included three sessions with 120 minutes in every session (Table 1). Materials transfer used interactive lecture method that allow high level of interaction between speakers and students. The media used in this program include powerpoint slides with a few words and more pictures, video, and observation booklet.

Data were collected through filling an instrument test that was given before and after the program to evaluate students’ knowledge and perception about the program. The instrument test contained 13 question with 1 score each point. Data were tested using the t-test after normality and homogenity test.

Table 1. List of topics in every sessions.

| No | Sessions       | Topics                                                                 |
|----|---------------|------------------------------------------------------------------------|
| 1  | Materials     | Sea turtle characteristics                                             |
|    | transfer      | Sea turtle life cycle                                                  |
|    |               | Sea turtle species in Indonesia                                        |
|    |               | Sea turtle on IUCN redlist                                             |
|    |               | Sea turtle on CITES Appendix                                           |
|    |               | The role of sea turtle in ecosystem                                    |
|    |               | Threat of turtle conservation                                          |
| 2  | Discussion    | Sea turtle conservation efforts                                        |
| 3  | Observation   | Hawksbill turtle morphology and morphometry                           |

3. Results and Discussion

Data analysis obtained a significance value was 0.732> 0.05 which means that there is a significant difference between students’ pre-test and post-test average value. This means that Sea Turtle Watch Program had an effect on students’ knowledge about sea turtle conservation. Students also had good perceptions about this program and they want to join another sea turtle conservation program. They truly enjoyed this program and asked for another program with different concept, such as observing all of sea turtle species in Indonesia, practicing sea turtle care and rescue, and releasing sea turtle.

![Figure 1. Students’ pre-test results.](image-url)
The effectivity of Turtle Watch Program also caused by the use of proper method, proper media, and good and interesting concept of the program. The ability of the speaker to deliver the material and facilitate the students during the program also helps students to better understand and participate. The use of media to promote conservation project has to be accurate to make it easier for students to receive information properly and appropriately [9]. Learning activities that provide opportunities for student activity can improve student learning outcomes [5].

Figure 2. Students’ post-test results.

During the program, students have received informations about sea turtle. These informations can be used to understand and analyze sea turtle conservation problems and solutions. This is how students process informations into knowledge. This will help students’ to make decisions about environment. Knowledge can be obtained by processing informations, values, comprehensions, and experiences [10]. Students' knowledge of the environment influences the performance and behavior of these students [13].

This program has facilitated students participation in sea turtle conservation efforts. Effective community participation through conservation program leads to higher community understanding and ownership, so it will increased conservation effectiveness [12]. People with higher level of knowledge about shark have higher support on shark conservation [9]. It is better if some students are involved in turtle breeding activities. When they are established, they have been oriented towards supporting conservation activities in their hometowns. This can be a great strategy in turtle conservation efforts.
4. Conclusions
This study concluded that Sea Turtle Watch Program increased students’ knowledge about sea turtle conservation and they have good perceptions about this program. This study can be a suggestion for designing conservation programs for students.

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