

Outdoor Learning to Improve the Wetland Ecological Literacy of Geography Education Students

Faisal Arif Setiawan*, Aswin Nur Saputra

Geography Education Study Program, Faculty of Teacher Training and Education, Universitas Lambung Mangkurat, Banjarmasin, 70123, Indonesia

*Corresponding author, E-mail address : faisal.setiawan@ulm.ac.id

ARTICLE INFO

Article history

Received :
10 November 2021

Revised :
29 March 2022

Accepted :
8 April 2022

Published :
23 April 2022

ABSTRACT

Some geography education students score poorly in wetlands ecological literacy. This study aimed to determine the effect of outdoor learning on wetlands ecological literacy using a pre-experimental design and a sample of 60 geography students. The wetlands ecological literacy instruments were adapted from Anderson's cognitive dimensions comprising factual, conceptual, strategic, and metacognitive indicators. Data were analyzed using percentages and non-parametric Wilcoxon ranked statistical sign tests. The result showed that 2-tailed Asymp. Sig. was 0.000, smaller than 0.05. The conceptual and metacognitive indicators had the highest and lowest improvement of 21.11% and 13.33%, respectively. Furthermore, students' wetlands ecological literacy improved through outdoor learning. Outdoor learning increases students' attention to their environment through closer interactions, complementing the learning experience. Therefore, outdoor learning improves students' wetland ecological literacy.

Keywords : Outdoor learning; ecological literacy; teacher candidate; wetlands

1. Introduction

Ecological literacy is understanding the importance of preserving the environment. Capra (2007) stated that ecological or environmental literacy is being highly aware of using the environment wisely. To avoid confusion in the definition, Ha et al. (2021) stated that ecological literacy is a secondary concept and development of environmental literacy. Ecological literacy provides the necessary topics for environmental literacy (Ha et al., 2021; Loubser et al., 2001) and an understanding of relating to nature for sustainability (Hartono, 2020). It contains knowledge, attitudes, and behavior toward ecology (Bruyere, 2008; Huang & Zhao, 2019). Therefore, wetland ecological literacy implies knowledge related to wetlands and their sustainability. According to delegates in Ramsar 1971, wetlands are areas of swamps, bogs, peatlands, or fresh, brackish, or salty water 6 m or 20 feet deep (Moore & Garratt, 2006). An example of wetlands is South Kalimantan because it is dominated by swamps (Soendjoto & Dharmono, 2016) and needs good ecological literacy.

Universitas Lambung Mangkurat (ULM) geography students are prospective teachers who may reside in Kalimantan, meaning they need sufficient knowledge regarding wetland ecology. However, the initial test showed that not all students have sufficient knowledge. Teachers candidates should be aware of their ecological environment by teaching utility values from the concepts studied (moral knowing), fostering attitudes (feeling), and good behavior (acting). The goal is for teachers to