



Analysis of Pre-service Science Teachers' Biodiversity Images According to Sustainable Environmental Awareness Level

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Abstract

In recent years, there has been an increasing interest in the fields of education for sustainability and socioscientific issues that are at the basis of the science-society relationship in science education. Socioscientific issues such as global climate change, nuclear power plants, cloning and vaccines are both scientifically based issues that societies cannot reach consensus on and that concern societies locally or globally. Biodiversity is one of these issues [1]. Factors such as the destruction of habitats, increasing environmental pollution, genetic changes, global climate changes threaten biological diversity [2]. Turkey has a wide biological diversity with forest, steppe, mountain, wetland, coastal and marine ecosystems due to the change of its climate in short distances [3]. For this reason, biodiversity education is important in Turkey. On the other hand, although teachers advocate that they should teach socioscientific issues in their classrooms, they have limited knowledge and tend to media-promoted issues [4]. In this respect, sustainable environmental awareness, which can be considered as a citizenship skill, is very important. It is necessary to realize that Turkey has rich biodiversity and teachers who want to raise individuals with sustainable environmental awareness should have competence in these subjects. The aim of this study is to analyze the biodiversity images of pre-service science teachers according to their level of sustainable environmental awareness. In this study, preservice science teachers from Central Anatolia took part in a survey study. Data were collected using pictures drawn by pre-service teachers to identify biodiversity images. In order to determine the sustainable environmental awareness levels, the Sustainable Environmental Awareness Scale was used. The data were analyzed using descriptive and inferential statistics. The analysis process of the research continuous in line with the predetermined themes.

Keywords: *biodiversity image, sustainable environmental awareness, pre-service science teacher.*

References:

- [1] Tal, T., & Abramovitch, A. (2013). Activity and action: Bridging environmental sciences and environmental education. *Research in Science Education*, 43, 1665–1687. <https://doi.org/10.1007/s11165-012-9327-9>
- [2] Çakır, G., Başkaya, Ş., Sivrikaya, F., Yolasiğmazı, H. A., Başkent, E. Z., Terzioğlu, S. & Keleş, S. (2005, 8-10 September). Biodiversity and multiple use forest management planning (A case study of İğneada-Burgazada). *Protected Natural Areas Symposium, Isparta, Turkey.*
- [3] Republic of Turkey Ministry of Agriculture and Forestry (2019). *Biodiversity of Turkey: Contribution of genetic resources to sustainable agriculture and food systems.* United Nations Food and Agriculture Organization.
- [4] Macalalag, A. Z., Johnson, J. & Lai, M. (2020). How do we do this: Learning how to teach socioscientific issues. *Cultural Studies of Science Education*, 15, 389–413 <https://doi.org/10.1007/s11422-019-09944-9>