ENVIRONMENTAL LITERACY, PRE-SERVICE TEACHERS, AND A SUSTAINABLE FUTURE

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ABSTRACT: The purpose of this study is to determine environmental literacy of pre-service teachers in 4 public universities in Ankara, to examine the relationships among the sub-dimensions of environmental literacy, and to investigate the effect of gender on these sub-dimensions. “Environmental Literacy Questionnaire” was administered in Education Faculties at 2007-2008 spring semester. The data were evaluated in 4 dimensions, as environmental knowledge, environmental attitudes, environmental uses, and environmental concerns. The results of descriptive statistics showed that environmental knowledge scores of the pre-service teachers were unacceptable. However, the responses showed that the participants had an ecocentric point of view and favorable environmental awareness. The results are promising to lead the studies related to environmental education at teacher education programs.

Keywords: environmental literacy, pre-service teachers, gender

Extended Abstract

The most effective precautions to prevent environmental problems comprise the society’s willingness to save the environment, more than the politics set by the governmental authorities. This is the major reason for discussing the environmental education at an increased rate. Environmental education is one of the most interested social and economical aspects of the environmental pollution. The main target of environmental education is environmental literacy. Environmental literacy is constituted from understanding, ability, attitude and patterns, and developing continuous attitudes between human and environment both for short and long terms. Environmental literacy in higher education has become one of the major issues to be dealt with in order to set up a sustainable future. Since, environmentally literate young generation who will take responsibilities in both business and family lives is the major concern while creating a sustainable future. Thus, under the light of these circumstances the purpose of this study is to develop the concept of environmental literacy and determine environmental literacy (EL) of the pre-service teachers in 4 public universities in Ankara, to examine the relationships among the dimensions of environmental literacy, and to investigate the effect of gender on the dimensions of environmental literacy for these pre-service teachers.

The responses of the pre-service teachers had been evaluated by taking into account 4 dimensions of environmental literacy which were named as environmental knowledge, environmental attitudes, environmental uses, and environmental concern. The data were obtained from totally 2311 pre-service teachers enrolled in one of the departments of early childhood education, elementary math education, elementary science education, classroom education at public universities of Ankara, the capital of Turkey. In this study, Environmental Literacy Questionnaire developed by National Environmental Education Training Foundation (NEETF, 2005) was administered. The results of descriptive statistics showed that the environmental knowledge scores of the pre-service teachers were unacceptable. Majority of the participants could not provide correct responses for the questions asking the main source of carbon monoxide, how to store nuclear wastes, and renewable energies. The responses obtained for the environmental attitudes dimension showed that the pre-service teachers of these universities had an ecocentric point of view. For instance, more than half the pre-service teachers stated that plants and animals have as much right as humans to exist, and when humans interfere with nature it often produces disastrous consequences. Moreover, when these pre-service teachers’
responses on environmental uses and concerns were examined, the results of frequency analysis showed that the participants held satisfactory awareness towards human-nature relationship, and personal responsibility towards resolution of environmental problems. In addition, it was found that the pre-service teachers had favorable feelings of concern towards environmental issues. For example, the participants declared that they were concerned about poor drinking water quality, global warming, indoor air pollution. Bivariate correlational analysis indicated that dimensions of environmental literacy were significantly related to each other. To be more specific, when pre-service teachers have satisfactory level of environmental knowledge, they also have higher tendency to hold favorable attitudes, environmental uses, and higher feelings of concern towards environmental issues. One-way Multivariate Analysis of Variance results showed that gender had a statistically significant effect on the linear combinations of four dimensions of environmental literacy for these pre-service teachers. Considering these dimensions of environmental literacy individually, there was a significant effect of gender on pre-service teachers’ environmental attitudes, environmental uses, and environmental concerns in favor of females. However, the effect of gender on environmental knowledge was significant in favor of males. This finding implied that female participants had more favorable emotional bonding and higher sensitiveness of environmental issues while male participants developed higher levels of environmental issues. In this aspect, the gender difference should be taken into account by educators while developing classroom activities for teacher education programs.

The results of the present study are meaningful and promising to lead the studies related to environmental education program development studies for the faculties of education. This is an important issue for both having environmentally literate teachers and environmentally literate future citizens and thus for a sustainable future. In this aspect, some research studies should be conducted in order to investigate university students’ environmental literacy nation-wide to clarify the social and cultural differences in seven geographical regions of Turkey. In addition, it is crucially important to conduct further research studies in order to explore the effect of innovative pedagogies on enhancement of their environmental literacy levels. With the light of these intended research studies, a variety of environmental education programs should be designed and implemented by cooperation of Higher Education Council and Ministry of Education in Turkey.

REFERENCES


