

Qualitative Analysis of Secondary Students' and Teachers' Attitudes Towards a Web-based Environmental Education Program

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ABSTRACT This study explored high school students' and teachers' perceptions about a web-based environmental educational program titled 'The River.' This program aims to the improvement of environmental attitudes and includes different methods and areas of study, from scientific data collection to arts and policy concerning the rivers. In addition, it supports learning through the Internet by traditional and new media, and stresses the importance and necessity of interdisciplinary approach in the teaching / learning process. The qualitative data that were collected from 36 participating students as well as their teachers are presented, and suggestions for improving e-learning courses are discussed.

KEY WORDS: Environmental education, e-learning, qualitative research.

Introduction

There is a basic need for easily accessible information on the presence and biological impact of environmental pollutants (Beaumont, Hamilton, Machin, Perks, & Williams, 1999). Water pollution is one of the most common environmental topics covered by schools (Blum, 1979) and, according to a research paper concerning teachers (Simmons, 1998), the river is, from various aspects, one of the most appropriate natural setting for environmental education (EE). Moreover, biological monitoring is a powerful tool for understanding the link between the causes and effects of environmental pollutants, as bio-indication agents can be used to assess the cumulative effects of pollution (Lorenzini & Nali, 2004). Evaluation of water quality is easily accessible to schoolchildren, because of the availability of simple methods for monitoring the biology, physics and chemistry of running water (Spellerberg, Ward, & Smith, 2004). Additionally, the Internet is spread rapidly throughout the educational community and is currently being utilized for a variety of instructional purposes (Pirez-Prado & Thirunarayanam, 2002). For these reasons, a web-based water quality monitoring program was developed to increase knowledge and raise awareness of environmental issues, and provide skills of scientific investigation. This program was evaluated with both quantitative (questionnaires) and qualitative methods (interviews and focus groups).

“The River”

“The River” is a web-based EE program for secondary level (teachers and stu-

