

## ABSTRACT

### **The Effect of a Multi-User Virtual Environment on Student Causal Reasoning Ability, Ecological Worldview and Conceptual Change**

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This study sought to determine the effect of a multi-user virtual environment (EcoMUVE) on the ecological worldviews and reasoning abilities of students at a secondary school in Trinidad and Tobago. Data were collected through a survey administered to 15 male Form 3 students, whose pre- and post- scores were analysed. Supplementary data were obtained through an anonymous questionnaire. Analysis of the data revealed that: 1) not only was the EcoMUVE strategy an effective teaching tool for enhancing student causal reasoning ability, but it was also effective in teaching the concept of changes over time; 2) the strategy had little impact on the students' ecological worldview; and 3) the strategy was effective in improving student learning and facilitating border crossing.

**Keywords:** Student attitudes; Action research; Secondary school students; Environmental education; Science education; Teaching techniques; Concept formation; Concept teaching; Case studies; Trinidad and Tobago.