

ABSTRACT

Investigating the Effects of Problem-Based Learning in Facilitating Critical Thinking, Scientific Literacy and Collegiality With a Fourth Form Biology Class

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This study sought to examine the extent to which problem-based learning may affect critical thinking and encourage scientific literacy and collegiality among a group of fourth form biology students at a secondary school in Trinidad and Tobago. The class comprised 18 students (3 boys and 15 girls). Prior to the 6-week intervention, the students were introduced to problem-based learning through a series of teacher-led seminars. The students, together with the teacher, developed the criteria on which the project was to be graded. Data were collected through teacher observations, student journal entries, and a questionnaire which was administered to the students. The findings revealed that 1) not all of the students responded positively to this approach to learning; and 2) this method can be successfully applied to specific topics in biology, but requires planning and patience.

Keywords: Biology education; Problem based learning; Secondary school students; Teaching methods; Secondary school science; Trinidad and Tobago