

ABSTRACT

A Case Study of How Two Teachers Epistemologies: [sic] Their Beliefs About Science and Science Teaching and Learning, are Enhanced or Changed by Exposure to Explicit Reflective Activities and a Series of Lessons Which Include a Consideration of the Nature of Science

Larrisa Mohammed

This study examined two teachers' beliefs about the nature of science and about teaching and learning science at a secondary school in Trinidad and Tobago. It further sought to assess the influence of explicit reflective activities on their beliefs about the nature of science, and how a consideration of the nature of science in lessons changed their beliefs about what makes a good science lesson. Data were collected through a questionnaire and interviews held with two physics teachers, as well as through observations and document analysis. It was concluded that teachers have positivistic beliefs about the nature of science and that they believe firmly in the traditional method of teaching. However, after the intervention one teacher changed her beliefs about most aspects of the nature of science, while the other changed her beliefs with regards to the tentative nature of scientific knowledge. Both teachers' beliefs about what makes a good science lesson remained unchanged, except that after the intervention they were willing to include the history of science in their science lessons.

Keywords: Teacher attitudes; Case studies; Science education; Science teachers; Secondary school teachers; Nature of Science; Secondary school science; Trinidad and Tobago