

ABSTRACT

Teacher Education and the Nature of Science: An Investigation Into Three In-Service Primary School Teachers' Beliefs About the Nature of Science and Their Pedagogical Competencies in Integrating the Nature of Science Through a Model for Professional Development

Sean K. Hosein

This study sought to investigate the perceptions of three in-service primary school teachers about their pedagogical competencies in integrating the nature of science through a model for professional development. The development model included perspectives on the nature of scientific knowledge, myths of science, science and culture, placing a history of science on the curriculum, and inquiry-based training. Data were collected through interviews, observations, and document analysis. All three teachers had some shift in their belief sets, from empiricist-oriented views to more constructivist-oriented views that were congruent with beliefs about the nature of science. The findings also revealed that the level of teacher autonomy, beliefs about what constitutes successful science learning, and beliefs about the purpose of inquiry impacted on both the acceptance of nature of science beliefs and the teachers' competencies to integrate nature of science beliefs into their inquiry-based lessons.

Keywords: Perceptions; Science education; Professional development; Primary school teachers; Teacher attitudes; Nature of science; Trinidad and Tobago