

## ABSTRACT

### **Investigating the Nature of Form Three Students' Traditional Practices and Beliefs Associated with Cleaning and a Secondary School Teacher and her Students' Perceptions of a Bridging Approach Used to Facilitate Students' Cultural Border Crossing Between Their Traditional Knowledge and Conventional Science**

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This study sought to investigate the nature of traditional practices and beliefs associated with the cleaning of the body and the external environment of a group of Form 3 students at an urban secondary school in Trinidad and Tobago. It further describes the processes involved in making explicit use of these beliefs and practices in order to design and execute a cross-cultural unit of work in chemistry, as well as the perceptions of the teachers and the three students on the bridging approach. Data were collected with questionnaires, journal entries, and interviews from three students with different aptitudes in science. The findings revealed that the views of students with high levels of traditional practices and beliefs varied depending on the degree of orientation towards conventional science. The study endorsed the use of the bridging approach, despite challenges encountered, since it was felt that it affords students opportunities to engage in higher-order thinking, work collaboratively, and ascribe value to their traditional way of knowing and those of others. The findings indicated that more of the students' "traditional" knowledge is aligned to conventional science, and therefore, students' border crossing experiences should not have been difficult to achieve. However, there was resistance to the bridging strategy from students who felt that inclusion of the traditional was unnecessary and who would have preferred a more direct approach to teaching conventional science.

**Keywords:** Science education; Secondary school students; Urban schools; Teaching methods; Action research; Student attitudes; Customs and traditions; Trinidad and Tobago