

# **Relationships between actual and preferred Science learning environment at tertiary level and attitudes towards science among pre-service Science teachers**

## **Abstract**

Over the last four decades, researchers in many countries have shown increasing interest in the conceptualization, assessment, and investigation of students perceptions of psychosocial dimensions of their classroom environment. Research conducted over the past 40 years has shown the quality of the classroom environment in schools to be a significant determinant of student learning. However, not many studies, especially in the state of Sabah, Malaysia, were conducted to examine the tertiary Science learning environment and its relationship with students attitudes towards Science. The purpose of this study was to investigate the relationships between the perceptions of actual and preferred Science learning environment at tertiary level and the attitudes towards Science among pre-service science teachers in Sabah, Malaysia. This study was also aimed to ascertain the difference in students perceptions of Science learning environment and the attitudes towards Science based on gender. This was a non-experimental quantitative research and survey method was used to collect data. Samples were selected by using a cluster random sampling technique. The College and University Classroom Environment Inventory (CUCEI) was adopted to measure pre-service Science teachers perceptions of Science learning environment. Seven subscales of the CUCEI measured were Personalization, Cooperation, Student Cohesiveness, Equity, Task Orientation, Innovation, and Individualization. Pre-service Science teachers attitudes towards science were measured using the 'Test of Science-Related Attitudes (TOSRA). The seven subscales measured in TOSRA were Social Implications of Science, Normality of Scientists, Attitude to Inquiry, Adoption of Scientific Attitudes, Enjoyment of Science Lessons, Leisure Interest in Science, and Career Interest in Science. Independent samples t-test, Pearson product-moment correlation, and multiple linear regression analysis were used to test the stated null hypotheses at a predetermined significance level,  $\alpha = .05$ . Correlation analysis results showed that there were low

to moderate, positive and significant correlations between the actual and preferred Science learning environment and the attitudes towards science. CUCEI subscales can be used to explain appreciable amounts of variance in pre-service Science teachers attitudes towards science.