

ABSTRACT

The main objective of this study was to find out if there were any significant differences in Jamaican 11th graders' performance on the "mole concept" based on differences in their gender, attitudes to chemistry, socioeconomic background and school location. The sample comprised 258 grade 11 students from eight randomly selected traditional high schools – four schools from rural area and four from the urban area in Jamaica. Of the sample, 156 were males and 102 were females. The instruments used were an Attitude to Chemistry Questionnaire (ATCQ) and an Achievement Test on the mole concept. Results indicated that, (a) the students showed unsatisfactory level of knowledge of the mole concept, (b) sixty-one percent (61%) of the students displayed highly positive attitudes to chemistry, 28% moderate attitudes and 11% poor attitudes to chemistry, (c) there were no significant differences in the students' performance on the mole concept based on their gender, socio-economic (SEB) and school location; but, students with highly positive attitudes to chemistry significantly outperformed their counterparts with moderate and low attitudes to chemistry and (d) there were no significant relationships among the students' gender, SEB, school location and their performance on the mole concept, while there was a positive statistically significant but weak relationship between students' attitudes to chemistry and their performance on the mole concept.