

ABSTRACT

Effects of Using three sets of Instructional Strategies on Jamaica's Grade 9 students' understanding of Diffusion and Osmosis.

One of the main objectives of this study was to find out the effects of three sets of instructional strategies on the attitudes towards science and the understanding of diffusion and osmosis in relation to gender, SEB and school location of Jamaica's grade 9 students. Three hundred (300) students were engaged in the study; (119 males and 181 females) from urban and rural secondary schools. Two instruments, namely knowledge of diffusion and osmosis test (KDOT) developed by the researcher, and attitudes to science questionnaire (ATSQ) adopted from Soyibo and Pinnock (1998) were used for collecting data.

The results indicated that (a) there was no significant difference in the experimental and control group students pre-test and posttest attitudes to science; (b) the experimental group students significantly outscored the control group students in the KDOT posttest; (c) there was no significant gender difference in the students' KDOT posttest, but there was a significant difference based on their treatment in favour of the experimental students and (d) there was a positive, fairly strong relationship among students' gender treatment and their posttest diffusion and osmosis performance; but the relationship between their posttest attitudes to science and posttest osmosis performance was positive, but weak.