This study assessed the acquisition of five integrated science process skills, by a sample of grades 9 and 10 Jamaican students. The students' performance in the integrated science process skills was linked to six variables (gender, grade level, student type, school type, school location, and socio-economic background). The sample consisted of 133 grade 9 students and 172 grade 10 students (146 boys and 159 girls), randomly selected from four traditional and comprehensive high schools, including both ROSE and non-ROSE schools. A Test of Integrated Science Process Skills (TISPS) developed by the researcher was used for data collection.

The main findings were that (1) the students' performance on the TISPS was only "average"; (2) the students' performance on the skills of recording data, interpreting data and generalising was significantly better than their performance on identifying variables and formulating hypotheses; (3) the ROSE students performed statistically significantly better on TISPS and on the individual skills, than their non-ROSE counterparts; (4) the traditional high school students outscored their comprehensive high school counterparts; (5) the grade 10 students performed significantly better than their grade 9 peers; and (6) there were no statistically significant links among the students' gender and school location and their performance on TISPS.