

Abstract

The purpose of the study is to investigate the relationship among the learner variable of gender, school location, school type, science ability and language ability and grade 9 students' performance on the science critical thinking skills tasks of generalization, assumptions, deductions, evaluation of sources and making predictions. The student sample was comprised 303 students from a total of 9 coeducational junior high, high, and traditional high schools selected from across urban, semi-urban and rural areas of 5 parishes in Jamaica. The teacher sample was made up of 20 teachers who taught the ROSE integrated science syllabus to students in grades 7-9 of the selected schools.

A science critical thinking skills test and an attitude to student-centred teaching questionnaire were the instruments developed and validated by the researcher and used in collecting the research data. The results of the research indicated that:

1. Generally students' performance on the science critical thinking skills test was less than satisfactory.
2.
 - (a) There were statistically significant differences in the students' performance on all five of the critical thinking skills based on their school type in favour of traditional high schools.
 - (b) There were statistically significant differences on generalization based on students' school location in favour of semi-urban schools and;
 - (c) There were statistically significant differences on prediction based on students' gender favouring females, and science and language abilities favouring students with high ability levels in both critical thinking skills.

3. There were varied statistically significant but weak positive relationships between students' performance and the variables tested. Statistically significant but weak positive relationships were found to exist between: (a) deduction, evaluating sources and making predictions and students' school type, science ability and language ability (b) making assumptions and students' school type, school location and science ability and (c) generalization and students' school type, school location and language ability.
4. (a) Students had moderately favourable attitudes towards the student-centred teaching approaches used by their teachers.
- (b) There were statistically significant differences in the students' attitudes towards student-centred teaching based on their gender and school location in favour of females and students in urban schools.
- (c) There were no significant relationships among the students' gender, school type, school location, science ability and language ability and their attitudes to the student-centred teaching approaches used by their teachers.
5. (a) Teachers had moderately favourable attitudes towards the student-centred teaching approaches recommended in the ROSE Integrated Science Teachers' Guide.
- (b) There were no statistically significant differences in the teachers' attitudes to the student-centred teaching approaches based on their gender, school type and ROSE training.