

ABSTRACT

Certain Variables Which Affect Science Achievement in Grade Nine Students

This study was designed to compare the science achievement of Grade Nine students in All-Age and New Secondary schools and the relationship between Reading Ability, Science Interest, Motivation and SES (Socio-economic Status) and Science Achievement.

A sample consisting of 166 students (104 All-Age and 62 New Secondary) drawn from eight schools in the Corporate Area of Kingston and St. Andrew was used in the study.

Science Achievement was measured by the score on a science test; Reading Ability by the score on a reading test; Science Interest by an interest inventory; Motivation by a motivation inventory; and SES by an occupational coding scheme.

The data were analysed using

1. Simple descriptive statistics
2. t-tests
3. Pearson Product-Moment Correlation
4. Stepwise multiple regression

The main findings reveal that:-

1. There is no significant difference in the performance of All-Age and New Secondary Ss (subjects) on the Science Achievement Test (t value = 0.70; $t_{.05} = 1.960$).

2. There is a significant difference in the performance of Ss of different SES on the same test (t value = -2.31; $t_{.05} = 1.960$)

3. For the Total Sample and the All-Age Subsample, the independent variables all have a significant positive relationship with Science Achievement.

4. For the New Secondary Subsample, all the variables except Motivation have a significant positive relationship with Science Achievement; Motivation has a positive relationship which is not significant at the .05 level.

5. Reading Ability is the best predictor of Science Achievement among the variables studied.

Implications arising from the study suggest the following:-

1. More importance should be placed on Reading at the Grade Nine level in schools.
2. There is need for upgrading of the libraries in All-Age and New Secondary schools.

3. Teachers should employ ingenuity and creativity in teaching science in order to get their students interested in the subject.
4. Schools should provide adequate social amenities to compensate for those lacking in the homes of students of low SES.