

Classroom Interaction Patterns as Correlates of Senior Secondary School Achievement in Chemistry in Awka Education Zone

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Abstract : The technique of teaching chemistry to students is one of the determining factors towards their achievement. Thus, the study investigated the relationship between classroom interaction patterns and students' achievement in Chemistry. The purpose of this study was to identify patterns of interaction in an observed chemistry classroom, determine the amount of teacher talk, student talk and period of silence and to find out the relationship between them and the mean achievement scores of students. Five research questions and three hypotheses guided the study. The study was a correlational survey. The sample consisted of 450 (212 males and 238 females) senior secondary one students and 12 (5 males and 7 females) chemistry teachers drawn from 12 selected secondary schools in Awka Education Zone of Anambra state. In each of the 12 selected schools, an intact class was used. Science Interaction Category (SIC) and Chemistry Achievement Test (CAT) were developed, validated and used for data collection. Each teacher was observed three times and the interaction patterns coded using a coding sheet containing the Science Interaction Category. At the end of the observational period, the Chemistry Achievement Test (for collection of data on students' achievement in chemistry) was administered on the students. Frequencies, percentage, mean, standard deviation and Pearson product moment correlation were used for data analysis. The result showed that the percentages of teacher talk, student talk and silence were 59.6%, 37.6% and 2.8% respectively. The Pearson correlation coefficient (r) for teacher talk, student talk and silence were -0.61, 0.76 and -0.18 respectively. The result showed negative and significant relationship between teacher talk and mean achievement scores of students; positive and significant relationship between student talk and mean achievement scores of students but there is no relationship between period of silence and mean achievement scores of students at 0.05 significant levels. The following recommendations were made based on the findings: teachers should establish high level of student talk through initiation and response as it promotes involvement and enhances achievement.

Keywords : academic achievement, chemistry, classroom, interactions patterns

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