

**Effective Use of Self-Learning Device-
Programmed Text in Teaching Nigerian
Secondary School Students
Mathematical Models in Chemistry.**

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Abstract:

The study was designed to determine the effectiveness of linear programmed text (LPT) when compared with that of conventional text (CT) on Nigerian secondary school students' performances when they used mathematical models in learning Chemistry. The instruments developed and used were (1) multiple choice test and (2) a work-assignment sheet. The two levels of treatment developed and used were LPT and CT based on selected sections of the pupils' textbook.

The two hundred and forty subjects involved were Form IV science students selected randomly from eight secondary schools in Oranmiyan Local Government area of Oyo state. Thirty students were randomly selected from each school and the subjects were divided into two groups of one hundred and twenty each which was assigned to a treatment. The class teachers involved were trained as to their roles in the research. But the researcher did the scoring of the answer sheets.

A pretest conducted to determine whether the sample was from homogeneous population showed no significant difference in the background of the subjects. The three hypotheses of the study were confirmed using t-test analysis. These hypotheses were one that the LPT group achieved better in posttest than CT; two, that the learning scores of the LPT group are higher than those of the CT; three that the LPT group performs better in retention test than CT. The chi-square analysis of the data about the time spent on the work per day relative to the thirty minutes meant for the work was insignificant. A similar analysis of data about help received was significant. The results revealed that LPT was a more effective self-learning technique than CT.

Keywords: linear programmed text (LPT)/ conventional text (CT)/ self-learning device-programme text

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