

Chemistry Games with Kitchen Resources and Students' Academic Performance in Electronic Configuration

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Abstract: Chemistry games with kitchen resources and students' academic achievement in electronic configuration. Kitchen resources such as green, brown red, white and multi coloured beans were used to play electronic configuration games. The sample comprised of 100 students drawn from two secondary schools in Calabar Education Zone of Cross River State. The sample was made up of 60 females and 40 males. Chemistry achievement test (Cat) was used to collect data for the research. Richardson formula 21 was used to establish reliability for Cat, it was 0.79. The research used quasi experimental design. Analysis of covariance (ANCOVA) and descriptive statistics were used in the analysis of data. It was observed that teaching electronic configuration using kitchen resources to play games enhanced the academic performance of Chemistry students. The null hypothesis which stated that there is no significant relationship between students' academic achievement when taught electronic configuration with kitchen games and without was rejected. The second hypothesis with respect to gender was retained as the result was not significant. Teachers are encouraged to play games using kitchen resources in the teaching of electronic configuration to make the learning environment relax which will make learning effective.

Keywords: Beans, games, kitchen resources, teachers, and students.

1. Introduction

Education, particularly Science and Technical education, is the 'factory' for the production of the needed technologists, technicians and craftsmen as well as skilled artisans who are required to turn the nation's economy around and usher in the desired technological advancement which is very much required for the elevation of Nigeria from a 'consumer nation' to a 'producer nation'; from a 'developing nation' to a 'developed nation'. Science subjects taught in secondary school consist of Chemistry, Physics, Biology, Mathematics, Agriculture, Home Economics, Physical and Health Education. Chemistry is vigorously described as the queen of science. Chemistry occupies an enviable position in the senior Science national curriculum. Chemistry education is a veritable tool for national development. Realizing the role science plays in achieving self-reliance and intellectual development, one tries to find the place of Chemistry in Science (Emendu, 2014).

Chemistry is the study of matter and energy and the interaction between them. Chemistry is everywhere in the world around you! It is in the food you eat, clothes you wear, water you drink medicines, air cleaners, you name it (Helmenstine, 2016). Chemistry sometimes is called the "central science" because it connects other sciences to each other such as Biology, Physics, Geology and Environmental Science.

Emendu's (2014) study on 'The Role of Chemistry Education in National Development' observed that the means scores of ; Chemistry education plays a major role in technological product of chemical industries, all manufacturing industries made use of chemical in their production, knowledge of Chemistry education fasten technology productivity of an industry, Chemistry education helps in the invention of many products in the industries, raw materials used in chemical industries are Chemically based, improvement in chemical education enhances improvement in technology, skills learnt in Chemistry education are needed in chemical industry were

