



## Influence of Out-School Factor in Basic Science and Students' Performance among Upper Basic Schools in Kano State, Nigeria.

Okereke, Chinyere Emily  
Government Secondary School Wailare,  
Kano State Senior Secondary School Management Board,  
Kano State.

### ABSTRACT

The main purpose of this study is to determine the influence of out-school factor in basic science and students' performance among upper basic schools in Kano State, Nigeria. Ex-post facto/causal comparative research design was employed in the study. Population of the study consists of all the students that offered Basic Science in Kano State Nigeria. A simple random procedure was used to select the sample population for the study. The target population of the study will be students of Basic Science students in Upper Basic 3, in Kano State, Nigeria. The instrument used for data collection was the students' results in Basic Science Examination and Out-School Factor Questionnaire. Descriptive statistics such as mean was used for research questions the mean indicate the average score of the sample size and the standard deviation. The inferential statistics of ANOVA will be used to test the research hypothesis 1 at 0.05 levels of significances. revealed that Out-School Factor and Academic Performance has the mean of 45.88 and 61.04 respectively with a standard deviation of 4.516 and 9.425; this therefore shows that academic performance has mean was higher than the e mean of out-school factor. There is significant difference on influence of out-school factor in basic science and students' performance among upper basic schools in Kano State, Nigeria with ( $F = .679, p > .05$ ).

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### INTRODUCTION

Basic science formally known as Integrated Science is a subject taught at both public and private schools at Junior Secondary School level. The main reason for teaching basic science is that it widens the knowledge of the students which enables them to appreciate the unity among science subjects such as biology, physic and chemistry. Furthermore, the students may gain the commonality of approach to solve problems of scientific nature (Bajah, 1993). According to the Science Teachers Association of Nigeria (1970) Nigeria

Integrated Science, now Basic Science should enable students to be able to:

1. Observe carefully and thoroughly
2. Report completely and accurately
3. Organize information acquired
4. Generalize on the basis of acquired information
5. Predict as a result of the generalization
6. Design experiments (including controls, where necessary to check the prediction).
7. Use models to explain phenomena, where appropriate and

Corresponding author: Okereke, C. E. ✉ [chichimily31@gmail.com](mailto:chichimily31@gmail.com) ✉ Government Secondary School Wailare, Kano State Senior Secondary School Management Board. © 2021 Faculty of Tech. Education, ATBU Bauchi. All rights reserved



8. Continue the process of inquiry when new data do not conform to predictions.

To achieve these objectives, it is suggested that the teaching and learning of Basic Science should involve the use of innovative methods in teaching; methods like discovery, problem-solving, open ended field trip and laboratory method among others.

Academic performance is the extent to which a student, teacher or institution has attained their short or long-term educational goals. Completion of educational benchmarks such as secondary school, diplomas and bachelor's degrees represent academic achievement. Academic performance is commonly measured through examinations or continuous assessments but there is no general agreement on how it is best evaluated or which aspects are most important procedural knowledge such as skills or declarative knowledge such as facts (Ward, Stoker and Murray-Ward, 1996).

Academic performance it is commonly measured by examinations or other means of evaluation of teaching and learning outcome. In another development, Sati (2014) described performance as a complex students' behavior that underlies several abilities. Deary, Whiteman and Whalley (2004) stated that performance can either be low or high. Adamu (2008) explained that the causes of low performance are diverse and cannot be associated with a single factor. Yoloye (2009) reported that performance in any form of activity is based upon study interpretation and application and that study has a purpose, so it depends on the individual to decide why he or she wants to study.

There are number of out-school factor that successfully predict academic performance, elements such as test anxiety,

environment, motivation, and emotions require consideration when developing models of school achievement. A school with more academic achievements would receive more money than a school with less achievements (Egbunonu, and Ugbaja, 2011).

From birth to age eighteen, children spend just a fraction of their lives in school. Thus it is not surprising that many factors outside the school environment can significantly influence students' prospects for academic success in school. These factors are in play both during the years before children begin formal schooling and while they are actually enrolled in elementary and secondary school (Egbunonu, and Ugbaja, 2011).

A diverse array of issues, including parents' beliefs and expectations about education; the availability and quality of child care; family economic status; the persistence, or absence, of violence in a child's life; access to social services; physical and mental health issues; opportunities for constructive, healthy activities outside of school; and the nature and strength of school-community connections, can make a difference in a child's opportunities to do well in school (Egbunonu, and Ugbaja, 2011).

The first interactions of a child with people takes place within his home among members of his family who include parents, siblings and relatives (Okafor, 2010). A child is affected by a number of family-related factors such as the marital relationship of the parents, the socio-economic status of the family, the atmosphere of the home, the environmental condition, occupational status of the parents and the number of siblings in the family (Okafor, 2010).

The importance of Basic Science as the basics to other science disciplines cannot be over stated. It lays the foundation to other science subjects. However, a look at the Basic Education Certificate Examination (BECE) results of some schools in Kano State



reveals that students' performance in Basic Science shows unimpressive performance of students in Basic Science. Adamu (2008) explained that the causes of low performance are diverse and cannot be associated with a single factor. Usman (2007) reported that science taught at the Junior Secondary School is faced with the problem of inadequate instructional materials and lack of competent teachers both in method and content of teaching.

#### **Research Objective**

Specifically, the study would determine the

1. influence of out-school factor in basic science and students' performance among upper basic schools in Kano State, Nigeria:

#### **Research Question**

The following research questions guided the study:

1. What is the influence of out-school factor in basic science and students' performance among upper basic schools in Kano State, Nigeria?

#### **Research Hypothesis**

The following null hypothesis have been formulated to guide the study. The null hypothesis tested at 0.05 level of significance

1. There is no significant difference on influence of out-school factor in basic science and students' performance among upper basic schools in Kano State, Nigeria.

#### **METHODOLOGY**

The ex-post facto/causal comparative research design was employed in the study. According to Nworgu (1991), ex-post facto research design is defined as a

kind of research in which the researcher predicts the possible cause behind an effect that has already occurred. The population of the study consists of all the students that offered Basic Science in Kano State Nigeria

Target population is a group of individuals with some common defining characteristic that the researcher can identify and study (Creswell, 2012). The target population of the study will be students of Basic Science in Upper Basic 3, in Kano State, Nigeria. Sample size is a subgroup of the target population that the researcher plans to study for generalizing about the target population (Creswell, 2012).

Simple random procedure was used to select 220 JSS III students drawn from five public upper basic schools in Kano Central Senatorial District, Kano State, Nigeria. The sample size for the study was determined by using Krejcie and Morgan table of 1970 and 140 students are used for the study.

The instrument used for data collection was the students results in Basic Science Examination and Out-School Factor Questionnaire Adopt from Olufemi, Adediran and Oyediran (2018) and it has the reliability index of ( $r = 0.71$ ).

Descriptive statistics such as mean was used for research questions the mean indicate the average score of the sample size and the standard deviation displayed the dispersion of the set of data from the mean. The inferential statistics of ANOVA was used to test the research hypothesis at 0.05 levels of significances.

#### **RESULT**

**Research Question 1:** What is the influence of out-school factor in basic science and students' performance among upper basic schools in Kano State, Nigeria?



**Table 1:** Influence of out-school factor in basic science and students' performance among upper basic schools in Kano State, Nigeria.

Variables	N	Mean	Standard Deviation
Out-School Factor	140	45.88	4.516
Academic Performance	140	61.04	9.425

*Source: Field Work, 2020.*

In Table 1 above it was revealed that Out-School Factor and Academic Performance has the mean of 45.88 and 61.04 respectively with a standard deviation of 4.516 and 9.425; this therefore shows that academic performance mean was higher than the mean of out-school factor.

**Research Hypothesis 1:** There is no significant difference on influence of out-school factor in basic science and students' performance among upper basic schools in Kano State, Nigeria.

**Table 2:** There is no significant difference on influence of out-school factor in basic science and students' performance among upper basic schools in Kano State, Nigeria.

	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Between Groups	576.992	39	15.184	.679	.911	Not significant
Within Groups	2237.167	100	22.372			
Total	2814.158	139				

*Source: Field Work, 2020.*

The result of the study in the table 2 above show there is significant difference on influence of out-school factor in basic science and students' performance among upper basic schools in Kano State, Nigeria with ( $F = .679, p > .05$ ). Therefore, reject the null hypothesis that say there is no significant difference on influence of out-school factor in basic science and students' performance among upper basic schools in Kano State, Nigeria and to accept the alternative hypothesis that says there is significant difference on influence of out-school factor in basic science and students' performance among upper basic schools in Kano State, Nigeria.

#### DISCUSSION OF FINDINGS

The result of study revealed there is significant difference on influence of out-

school factor in basic science and students' performance among upper basic schools in Kano State, Nigeria. The result of this is in support with the finding of Hansen and Joe (2000). External classroom factors include extracurricular activities, family problems, work and financial, social and other problems. Furthermore, students' performance depends on many factors such as learning facilities, gender and age differences, etc. that can affect student performance. Also the result of this study is in agreement with the finding of Noble (2006), students' academic accomplishments and activities, perceptions of their coping strategies and positive attributions, and background characteristics (i.e., family income, parents' level of education, guidance from parents and



number of negative situations in the home) were indirectly related to their composite scores, through academic achievement in high school.

### CONCLUSION

The result of the study clearly showed that there was significant difference on influence of out-school factor in basic science and students' performance among upper basic schools in Kano State, Nigeria.

### RECOMMENDATION

Based on the findings of the study, the researcher recommends that:

1. Government should give adequate priority attention to the education industry, particularly, the public secondary schools to satisfy the minimum education establishment standards.

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