

THE EFFECTS OF THE NIGER DELTA CRISIS ON EDUCATIONAL RESOURCES, ATTITUDE TO SCHOOLING, AND ACADEMIC ACHIEVEMENT OF BASIC SCIENCE STUDENTS IN RIVERS STATE, NIGERIA

Tamunosisi Furo Pepple
Department of Chemistry

&

Gift A. Ogologo
Department of Integrated Science,
Ignatius Ajuru University of Education
Rumuolumeni Port Harcourt, Rivers State, Nigeria

Abstract: *This study investigated how the Niger Delta crisis affected students' access to educational resources, attitude to schooling, and academic achievement in basic science. An ex post facto design was used for the study. Participants included 400 students and 16 principals from 16 secondary schools drawn from four local government areas of Rivers State, two of which were affected by the crisis and two of which were unaffected. Purposive and random sampling techniques were used for participant selection. Three research instruments were used for data collection: Availability of Educational Resources Checklist (AERC), Students' Attitude to Schooling Questionnaire (SASQ), and the Basic Science Achievement Test (BSAT). The test-retested method was used to establish the reliability of the BSAT, with an estimated reliability coefficient of 0.86. Descriptive statistics and t-tests were used for data analysis. Four null hypotheses were formulated and tested at significant levels of 0.05. Although schools from the unaffected locations descriptively received higher scores than their counterparts in the affected locations for availability of educational resources, there were no significant differences between schools in affected and unaffected areas, $t(14) = -2.09$, $p = 0.05$. Basic Science I (Grade 7) and Basic Science II (Grade 8) students from the unaffected schools performed greater on the measures of basic science achievement than their peers from affected areas, $t(398) = -26.73$, $p < 0.05$. Students from affected and unaffected schools did not differ significantly in their attitude to schooling, $t(398) = -1.01$, $p = .125$. The findings indicated that there were no significant differences in educational resources and attitude to schooling within affected and unaffected schools, but significant differences in students' science achievement in Rivers State due to the Niger Delta crisis.*

Keywords: Niger Delta crisis, Basic Science I and II, school resources, science achievement, school attitude

Introduction

The Niger Delta region is made up of the nine States of the Nigerian Federation. These states collectively consist of a population of about 20 million people. The Niger Delta consists of diverse ethnic groups speaking about 250 dialects across approximately 5,000 communities. Given this ethnic diversity, the Niger Delta was often referred to as a minority region in Southern Nigeria. Although the Niger Delta has been marked by

underdevelopment, it has recently transformed because of oil production. It is now popularly known as the "oil producing states" (Olorode, 2000). The oil rich Niger Delta region has been embroiled in crisis between the government forces and some militant elements that are aggrieved over certain fundamental issues affecting the region. In the last few years, militants have fought with government forces, sabotaged oil installations, taken foreign oil workers hostage, and carried out lethal car

bombings amongst other acts of violence. At the root of the problem is a crisis of under-development. The crisis has been exacerbated by emergent issues of a gross distortion of Nigerian federalism in respect to resource control, citizenship rights, and environmental degradation (Ejibunu, 2007).

There is a growing body of evidence that violent political and military attacks on education have occurred in dozens of states over the past decade and have significantly intensified in many of the worst affected countries within recent years (Pepple & Ogologo, in press). The attacks are carried out against students, teachers, academics, and education personnel including support staff (e.g., transport drivers, caretakers, night-watchmen), education officials, trade unionists, and aid workers. The attacks include killing, injuring, abducting, kidnapping, forced military service and labour, illegal detention, torture, and sexual violence. They also include the damage or destruction of education buildings and facilities including transport, occupation of education buildings and facilities for military/security purposes, and violent attacks on the education process (e.g., convoys carrying examination papers).

Unlike major cities and towns like Port Harcourt, Warri, Yenagoa, Sapele, and Igbokoda, the Niger Delta consists of many villages situated along creeks and difficult waterways. In many riverine communities, there are no primary and secondary schools. The long distances along these waterways to schools make it difficult for the children in these rural communities to have access to the universal basic education, infringing on children's fundamental human right. While discussing the implication of crisis in Somalia, Liberia, and Sierra-Leone, Obanya (2011) posited that education will be negatively affected since there can be

no meaningful education in warring societies. Obanya recognized the topography of the Niger Delta as one obstacle to the realization of the Education for All (EFA) goal in the crisis ridden Niger Delta.

According to Ibukun (2006), Education for All is an integral objective of the Millennium Development Goals. The question arises as to whether Nigeria can meet the deadline of eradicating illiteracy by the year 2020 in the Niger Delta, if most rural communities in the riverine areas do not have access to education for their children. Another challenge is that youth in the area no longer value education due to the activities of those who are involved in the illegal bunkering and refining of crude oil locally known as "kpom fire". The lifestyles of their contemporaries in the oil and gas sectors have caused many youth to desire luxurious lives. Thus, the access to guns and ammunitions has resulted in criminal behaviour (Amaechi, 2008). Youth who benefit handsomely from the proceeds from ransom and other illegal activities do not value or see the "idea of beauty" (Amaechi, 2008, p. 18) in education.

During the Niger Delta crisis, some youth who were prevented from going to school no longer valued school and became dropouts. Thus, the position of IRIN (2007) that the conflict in Northern Kenya "has prevented thousands of children from enrolling in school" is also true for some youth in the Niger Delta (p. 32). IRIN went further to report the sad consequences of such crisis on these school dropouts, explaining that non-enrolment in schools made youth "more likely to commit acts of violence" (p. 41). Thus, the state of militant youth's operation in the Niger Delta is a result of exposing youth to violence during the crisis. Even those youths who attained basic education were not prepared to be self-employed. Thus, many of them were

not qualified to work in oil and oil serving companies because they lacked the skills needed to enter such work. Yet, they desired what those working in such blue-chip companies (multinational oil companies) enjoyed. So, engaging in an armed militancy was the only way by which these youths could obtain money that could enable them to survive in life.

With the amnesty programme, the Niger Delta crisis has taken a new dimension from militancy to illegal bunkering and refining of crude oil. This is a dangerous trend which spells doom for the educational future of this region. The youth have found it very lucrative to engage in illegal bunkering and refining of crude oil, where they make quick money and live like their counterparts in the oil companies. Many youth are therefore not interested in going to school. This has negatively impacted on the value placed on education.

Attitude to Schooling

Attitude is a central part of human identity. Everyday people love, hate, like, dislike, favour, oppose, agree, disagree, argue, persuade etc. All of these are evaluative responses to an object. Hence attitudes can be defined as, “a summary evaluation of an object of thought” (Bohner & Wänke, 2002, p. 20). They are inclinations and predispositions that guide individuals’ behaviours (Rubinstein, 1985) and persuade them to actions that can be evaluated as either positive or negative (Fishbein & Ajzen, 1975). Attitudes develop and change with time (Rubinstein, 1985). According to the multicomponent model of attitude (Eagly & Chaiken, 1993), attitudes are influenced by three components: cognitions (e.g., beliefs, thoughts, attributes), affects (e.g., feelings, emotions), and behaviours (e.g., past events, experiences) (Maio, Maio, & Haddock, 2010).

Loftus (1982) viewed attitude as a relatively enduring organization of feelings, beliefs, behaviours, and tendencies towards persons, groups, ideas or objects. She implied that individuals are not born with attitudes but learn them. From early childhood, individuals begin forming their attitudes through direct experiences and indirect observations. Through social contacts, children acquire attitudes by watching and imitating parents, siblings, friends, teachers, and peers. Children also can develop attitudes through operant conditioning, where adults reward them for expressing certain views. It is on the basis of operant conditioning that the relationship between students’ attitude to school and academic achievement can be explained (Lassen, Steele, & Sailor, 2006). If students with positive attitudes towards school demonstrate significantly better academic achievement than their counterparts with negative attitudes towards school, then positive attitudes towards school are reinforced according to operant conditioning theory of learning (Shah, 2009). According to Candeias and Rebelo, (2010), attitudes toward schooling is a psychological construct that depicts individuals’ behaviours, feelings, expression of favourable or unfavourable affection, and judgments for school and school experiences.

Attitude towards school, like other constructs, is intrinsically related to a number of other psychological traits such as students’ interests, competencies (often seen as a result of previous academic achievement), and motivation. For instance, attitude towards school has been found to be influenced by gender among Portuguese students. While girls tended to have more positive school attitudes, boys were less motivated and held more negative attitudes toward school (Candeias & Rebelo, 2010; Houtte, 2004). Results of these investigations further showed that girls did not require more time to study,

engaged less often in misconduct and disruptive behaviours, had less absenteeism, held more expectations about the future, and were more enthusiastic about further studies than boys. On the contrary, boys were less committed to studies and school, and give up more readily, particularly when popular teen or peer role models did not necessarily require good grades and total dedication to school as preconditions for success. In relation to parental socio-economic level, male students from families with high socio-economic status were more satisfied with school and demonstrated better attitudes to schooling that tended to guarantee them significantly better academic achievement than their counterparts from families with low socio-economic status. Low socio-economic status was closely associated with less access to school resources, computers, and negative attitudes toward school, and consequently, with poor academic performance (Linnehan, 2008).

Availability of Education Resources

Availability of suitable and varied instructional resources is essential in education, and is especially crucial for the achievement of curriculum objectives. A solid foundation for integrated science depends upon adequate provision of instructional materials in the teaching-learning process. Maduabum (1998) suggested that teachers' teaching objectives may be influenced or limited in some instances by the teaching and learning resources available to them. Although many teachers are willing to be tutored in the use of instructional resources, they may be handicapped in integrating them in their lessons if resources are not readily provided to them for utilization in schools (Onasanya & Adegbija, 2007). Okebukola (2000) agreed that the lack of resources for effective practical and engaging work in science teaching and learning could result in poor

student achievement in science. Further, Mkpa (2002) reported that even when instructional materials (resources) are available in schools, most teachers still do not use them in teaching.

Okafor (2006, cited in Victoria, 2009) stated that one of the most cited problems of integrated science teaching has been the use of inadequate strategies for understanding difficult concepts. This challenge arises, in part, as a result of the inability of secondary school teachers to use appropriate resource materials for the meaningful understanding of difficult concepts in integrated science. Okafor added that this led to poor student performance in the Senior Secondary Certificate Examination (SSCE) and to limited scientific and technological advancement in the nation.

Ajaja and Kpanbagan (2004) commented that the availability and use of instructional materials had positive effects on students' achievement. They identified the absence of instructional materials as among the main factors mitigating students' performance. They argued that an adequate supply and effective use of educational resources would improve students' performance by raising the quality of learning activities. But when educational resources that are vital for academic achievement are not adequately available in schools, students' academic achievement is affected negatively. This is the case of the Niger Delta region where most of these educational resources that would have enhanced students' academic achievement were destroyed, vandalized, and looted by those involved in the bunkering and refining of crude oil and other illegal acts during the Niger Delta crisis, causing students not to have access to these resources and thereby negatively affecting their academic achievement.

Statement of the Problem

During the Niger Delta crisis (NDC), school buildings, facilities, and instructional materials were destroyed and the lives of teachers were lost. Some students and teachers were displaced and those who returned to school after the NDC did so with mixed feelings. After the crisis, youth were no longer interested in schooling. This change from positive to negative in students' attitude toward schooling brought about very poor academic performance in these schools (Pepple & Ogologo, in press). The aim of this study was to investigate the effect of the Niger Delta crisis on educational resources, attitude to schooling, and academic achievement of Junior Secondary School 2 students in Rivers State.

Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

H₀1: There is no significant difference in the educational resources between the affected and unaffected secondary schools in Rivers State.

H₀2: There is no significant difference in Basic Science II (Grade 8) students' academic achievement between the affected and unaffected secondary schools in Rivers State.

H₀3: There is no significant difference in Basic Science I (Grade 7) students' academic achievement between the affected and unaffected secondary schools in Rivers State.

H₀4: There is no significant difference in the students' attitude to schooling between the affected and unaffected secondary schools in Rivers State.

Method

An ex post facto research design was used here. In ex post facto designs, at least two different groups are compared on a

dependent variable or measure of performance (i.e., the effect, criterion variable, or outcome) as the independent variable (i.e., Niger Delta crisis) has already occurred or cannot be manipulated. The target population was all the students and principals of the Grades 7 and 8 (Junior Secondary School Students 2) classrooms in Rivers State. A sample size of 400 students and 16 principals was used for the study. Purposive sampling technique was used to select four local government areas (LGAs) out of the 23 LGAs in Rivers State. Two of the selected areas were affected by the Niger Delta crisis (NDC) and two were not affected by the crisis. Random sampling was used to select 2 junior and 2 secondary classes from each of the 4 LGAs, comprising a total of 16 junior secondary schools. Proportionate stratified random sampling technique was then used to select 400 students, 25 from each of the affected and unaffected secondary schools. Random sampling was used to select Basic Science I and Basic Science II teachers of each of the selected classes for participation in the study.

The instruments used for the study included:

Basic Science Achievement Test (BSAT). The BSAT is a 30-item multiple choice basic science test with four options per item prepared by the researcher. The instrument has a reliability estimate of 0.86.

Availability to Educational Resource Checklist (AERCL). The AERCL is a 25-item instrument used to measure principal ratings for adequacy of the availability of educational resources. The instrument was based on the 4-point Likert scale where 4 = Very Adequately Available (VA), 3 = Adequately Available (AA), 2 = Not Adequately Available (NAV), and 1 = Not Adequately Available (NA). The instrument has a reliability estimate of 0.81.

Student Attitude to Schooling

Questionnaire (SASQ). The SASQ is a 20-item instrument used to measure the student attitude towards schooling. The instrument is based on a 4-point Likert scale where 4 = Strongly Agree(SA), 3 = Agree(A), 2 = Disagree (D) and 1 = Strongly Disagree (SD). All the items are positively skewed and do not require any reversals during scoring. The instrument has a reliability estimate

of 0.74.

Findings and Discussion

Null Hypothesis 1

There is no significant difference in educational resources between the affected and unaffected schools.

Table 1
Means, Standard Deviations, and t-test for Educational Resources

Group	N	M	SD	Mean Difference	t-value	p
Affected	8	7.37	3.81			
Unaffected	8	11.25	3.57	-3.87	-2.09	.05

Schools from the affected location had a mean score of 7.37 on the *AERCL* while non-affected students had a mean score of 11.25 (Table 1). While schools in unaffected locations had descriptively higher resource ratings than schools in affected locations, the schools did not differ statistically, $t(14) = -2.09$, $p = 0.05$. Accordingly, the null hypothesis that there is no significant difference in the

educational resources between the affected and unaffected secondary schools in Rivers State was not rejected.

Null Hypothesis 2

There is no significant difference in Basic Science II students' academic achievement between the affected and unaffected secondary schools in Rivers State.

Table 2
Means, Standard Deviations, and t-test for Basic Science II Students' Achievement Scores

Group	N	M	SD	Mean Difference	t-value	p
Affected	200	18.15	4.99			
Unaffected	200	27.50	4.14	-9.35	-20.39	.000

Schools from affected locations had a mean score of 18.15, while non-affected students had a mean score of 27.50 (Table 2). Basic Science II students from unaffected locations performed significantly better than their peers from affected locations, $t(398) = -20.30$, $p = 0.001$. Thus, the null hypothesis was rejected, with findings indicating that there was a significant difference in academic achievement between the two groups

(affected and unaffected) in Basic Science II students in secondary schools in Rivers State.

Null Hypothesis 3

There is no significant difference in Basic Science I students' academic achievement between the affected and unaffected secondary schools in Rivers State.

Table 3
Means, Standard Deviations, and t-test for Basic Science I Students' Achievement Scores

Group	N	M	SD	Mean Difference	t-value	p
Affected	200	20.84	3.88			
Unaffected	200	30.93	3.66	-10.09	-26.73	.000

Basic Science I students from affected locations had a mean score of 20.84, while non-affected students had a mean score of 30.93 (Table 3). Differences in students' achievement scores was statistically significant, $t(398) = -26.73$, $p = 0.001$, with students in unaffected areas performing better than those in affected areas. Thus, the null hypothesis was rejected indicating that there was a significant difference in academic

achievement between the two groups (affected and unaffected) in Basic Science I students in secondary schools in Rivers State.

Null Hypothesis 4

There is no significant difference in students' attitude to schooling between the affected and unaffected schools in Rivers State.

Table 4
Means, Standard Deviations, and t-test for Students' Attitude to School

Group	N	M	SD	Mean Difference	t-value	p
Affected	200	41.26	5.32			
Unaffected	200	42.12	5.91	-.865	-1.53	.125

Students from affected locations had a mean score of 41.26, while non-affected students had a mean score of 42.12 (Table 4). While students from the unaffected locations exhibited slightly descriptively higher attitudes to schooling than their peers from affected locations, these differences were not significantly different, $t(398) = -1.53$, $p = 0.125$. Thus, the null hypothesis that there is no significant difference in the attitude of students to schooling between the affected and unaffected secondary schools in Rivers State was not rejected.

Discussion

The results indicated that students from unaffected locations performed better than their peers from affected locations on the *BSAT*. It could be deduced that the Niger Delta crisis had negatively impacted the students' academic achievement. The results of this study also showed that

students from unaffected locations did not demonstrate more positive attitudes to schooling than their counterparts from affected locations. These findings are inconsistent with those reported by Shah (2009) who indicated that students with positive attitudes towards school demonstrate significantly better academic achievement than their counterparts with negative attitude towards school.

Overall, all students in this study demonstrated low attitudes towards schooling as measured on the *SASQ*, suggesting that many students may lack motivation for school regardless of location. Alternatively, the instrument used here may have lacked the ability to document subtle differences among students.

The findings also are inconsistent with some studies (such as Okwelle, 2004) that have found students' poor academic

performance in both internal and external examinations was attributed to lack of learning materials in schools. Based on the findings of this study, it appears that students from unaffected areas perform better than those from affected areas despite similar access to resources and attitudes to school. There are several possible explanations for this finding. As Mkpa (2002) reported, even when instructional resources are available in schools, many teachers do not use them in teaching. Moreover, as Okafor (2006, cited in Victoria, 2009) suggested, teachers may use inadequate strategies in their science classrooms that can affect achievement. Given the conflict in the Niger Delta, it is possible that teacher practice and student achievement has been negatively affected. It is also possible that the principals included in this study may not have had as informed an opinion about the students' achievement and attitudes as teachers. We recommend further study to explore teachers' views on students' academic achievement and studies that account for possible differences in attitude and achievement based on gender.

The study is limited to four local government areas of Rivers State and focused solely on junior secondary school basic science. The finance and personnel support to carry out this research in multiple local government areas was not available. Further study should be carried out at the entire state level, involving all 23 local government areas and a number of

subject areas beyond Basic Sciences.

Conclusion

Nigeria's rapid development has had adverse effects on its population, particularly youth. For example, since the Niger Delta crisis, many youth have elected to engage in illegal bunkering and refining of crude oil (i.e., "kpom fire") instead of going to school. The findings of this study suggest that while secondary school students affected by the Niger Delta crisis did not develop a more negative attitude to school than those from unaffected schools, their achievement scores lagged behind their peers. Secondary students in the unaffected secondary schools performed better than their counterparts in the affected locations in the Basic Science I and Basic Science II tests.

The schools unaffected by the Niger Delta crisis had descriptively (but not statistically) more educational resources, with students also performing better on measures of science achievement than their counterparts in affected areas. Presumably, the Niger Delta crisis destroyed most of the educational resources that enhance effective teaching and learning, contributing to these students' poor performance in basic science.

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Authors

Tamunosisi Furo Pepple, Ph.D. is a Senior Lecturer in the Department of Chemistry, Faculty of Natural and Applied Sciences at Ignatius Ajuru University of Education in Port Harcourt, Nigeria. He has been involved in teaching and supervising master's degree and undergraduate students since 2000. His research interest is in curriculum and chemical education. Tamunosisi can be reached at: iauae.edu.nig

Gift Allen Ogologo is a Lecturer 1 in the Department of Integrated Science, Faculty of Natural and Applied Sciences at Ignatius Ajuru University of Education in Port Harcourt, Nigeria. He is currently completing his Ph.D. in science education. His research interest is in teaching methods. Gift can be reached at: iauae.edu.nig