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Department of Guidance and Counselling
University of Ibadan

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Scope and Editorial Policies

Nigerian Journal of Applied Psychology is primarily meant to publish reports which can make professional as well as laymen utilize psychological principles in making the human organism more mentally and physically healthy. The journal is meant to make it possible for many more people to utilize psychological principles in their day-to-day activities. One of the aims of the journal is therefore to report articles which when read by people may increase their self-understanding, awareness, problem-solving capacities, creativity and improved adaptive and coping behaviour strategies.

The Journal is an Applied Psychology Journal par excellence. The journal publishes reports which may have applications to individuals in the family, educational contexts, health delivery systems, criminal justice systems. Articles which can analyze and help to solve many problems of society are also welcome.

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- Health delivery systems
- Counselling
- Criminal justice systems
- Town and urban planning
- Prisons etc.
- Industry
- Organisational settings
- Agriculture
- Hotel organisation
- Parenting
- Family life education.

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Effects of Socio - Economic Status, School Type and Gender on Pupils achievement in Core Subjects Areas at the Junior Secondary School Level in Rivers State

By

Odinko, Monica N. & Myante Sunny Agi.
Institute of Education, University of Ibadan
moniquengozi@yahoo.com

Abstract

Educators in Nigeria are relentlessly concerned about the need to improve learners' academic achievement in core subject areas especially in Mathematics, English Language, Science and Social Studies. This is not only because a higher achievement in these core subjects lay foundation for technical skills, social orientation, numerical skills and skills in written and oral communication which are in short supply, but also because higher achievement is particularly valued in a society which sets high premium on academic success as the panacea for entrance into more prestigious occupation. This problem may not exist without some causes. This study therefore looked into some factors (school type, gender of the learner, socio-economic background of a child and school environmental factors) as they affect academic achievement of learners. Survey design was adopted for the study. Proportionate random sampling technique was used to select 17 private and 17 public schools in three Local Government Areas (Obio-Akpor, Port-Harcourt and Eleme) in Rivers State. In each school selected, 20 students (10 who attended private alongside 10 students who attended public schools) were chosen. In all, 34 schools, 680 students (368 males and 312 females) participated in the study. Six valid and reliable instruments developed by the researchers were used to generate information for the study (Integrated Science Achievement Test (ISAT), Social Studies Achievement Test (SSAT), English Language Achievement Test (ELAT), Mathematics Achievement

Test (MAT), Students Socio-Economic Background Questionnaire (SSEBQ) and School Environment Assessment Checklist (SEAC). The ISAT, SSAT, ELAT, and MAT were developed to measure student achievement in these subject areas. Their reliability coefficients kuder Richardson (KR20) were 0.81, 0.79, 0.76, and 0.82 for Integrated Science, Social Studies, English Language, and Mathematics respectively. The data was analyzed using descriptive and inferential statistics (frequency, percentages and t-test and ANOVA.)

Keywords: Gender, achievement, school type, socio-economic background, primary education.

Introduction

The term at-risk refers to children who are likely to fail in school or in life because of their life's social circumstances. It does appear that no single factor places a child at risk. Rather, when more than one factor is present, there is a compounding effect and the likelihood for failure increases significantly. Poverty is considered a major at-risk factor (Leroy and Symes, 2001). This can be attributed to a child's parents' socio-economic factors. Children become aware of social and economic status differences at a very young age. They also grow increasingly aware of both their own social status and that of their peers, developing class-related attitudes during their years in elementary school. One should not lose sight of the fact that poverty can threaten a wide range of child development, most critically school achievement and other academic related behaviours.

Researchers have repeatedly found SES effects on students' outcomes (Hochschild 2003, McNeal 2001, Seyfried 1998). For instance, students from low SES backgrounds who attend poorly funded schools do not perform as well as students from higher social classes (Eamon 2005); earn lower test scores and are more likely to drop out of school (Eamon 2005, Hochschild 2003); score about 10% lower in the National Assessment of Educational Programmes than high SES students in America and negatively affects academic

achievement because low SES prevents access to vital resources and creates additional stress at home (Eamon 2005, Majoribanks 1996).

There has been renewed debate on the controversial issue of gender differences in academic achievement especially in mathematics and science achievements. There are mixed reports on the research on gender differences in science. In some instances, many researchers have provided reports that there are no longer distinguishing differences in the cognitive, affective and psychomotor skill achievements of students in respect to gender (Arigbabu & Mji, 2004, Bilesanmi-Awoderu, 2006, Freedman, 2002, Sungur & Tekkaya, 2005). Other researchers have reported differently on this issue. For example, a study conducted by Eriba and Sesugh, (2006) revealed that boys outperformed girls in science and mathematics achievements; males are becoming the disadvantaged gender in schools (Weaver-Hightower, 2003), and that fewer males are interested in science (Afuwape & Oludipe, 2009; Bleuer and Waltz, 2002; Omoniyi, 2006). With respect to enrollment, work by Eccles, Lord, Roeser, Barber and Jozefowicz (1997) shows that gender differences in enrolment in advanced mathematical courses in high school are mediated by gender differences in expectation for success in mathematics and physics and perceived value of competence in mathematics.

Conversely, other research findings have also shown decline in the differences between the gender in the past few decades on standardized test, suggesting that the more exposure that women are getting through mathematics and science classes, the better their scores (Linver, Davis-Kean, and Eccles, 2002). This study will consider the extent to which gender is a factor to learning outcomes in the subject areas covered in this work.

In Nigeria and perhaps Africa, gender bias is still very prevalent (Arigbabu & Mji, 2004). To buttress this point, Onyeizugbo, (2003) reiterated that "sex roles are somewhat rigid in Africa, and that in Nigeria in particular, gender differences are emphasized. According to him, it is common practice to see gender difference stereotype manifested in everyday activity of an average Nigerian. For instance, certain vocations and professions (medicine, engineering and architecture) have traditionally been regarded for men and others

(nursing, catering, typing and arts) for women. It is not surprising then that the school, being a microcosm of society, consciously or unconsciously perpetuate stereotypical behaviour, and indeed, teachers within the system exhibit gender bias in the classrooms (Arigbabu & Mji, 2004). For example, it has been reported that teachers consciously or unconsciously, often met out differential treatment to boys and girls in their classes (Rubble & Martins, 1998). Students on their own tend to have formed stereotypical concept of mathematician and scientist whom they regard as constituting a special group (Arigbabu & Mji, 2004).

Based on experience, Private schools are regarded as the only avenue to achieving high learning outcomes. This tends to encourage demands for private schooling even by the very poor in society (Adelabu & Paul, 2004). This might be because children fare better with them academically. This also formed part of the concern of this study. One argument in favour of more private school provision is that it may encourage competition with the public school which may in turn increase the quality of public education (Friedman & Friedman 1981). However, Sander (1999) disagreed that private schools directly raise the standard or quality of education through competitive pressures but not in doubt that low quality public schooling increases the demand for private schooling. Concerns are expressed in recent international development literature about the existence of a low-cost private education sector serving the poor in developing countries. In particular, apprehension is raised about purported low quality of schools that are not registered with, or approved by government (Tooley, Dixon & Amuah, 2007; Odinko, 2007).

Further, Oxfam Education Report suggests that for developing countries in general, "...the notion that private schools are servicing the needs of a small minority of wealthy parents is misplaced...a lower cost private sector has emerged to meet the demands of poor households" (Watkins, 2000). In Nigeria, it is noted that unapproved private schools are providing schooling opportunities to a significant number of children, particularly in Urban and Peri-Urban areas (Adelabu and Paul 2004; Odinko, 2007). They argued that, although their case study indicates that the "unapproved" private schools serving

the poor have “grown in response to the states’ failure to provide primary schooling which is both accessible and of good quality. To them, this does not mean that all education offered in the private sector is acceptable. This is because their study result revealed that most private unapproved schools offer low quality of education that is below a desirable level. The result showed no evidence that private schools actually increase students’ performance. Instead, it revealed that private schools simply have higher percentages of students who would perform well and in any environment based on their previous performance and background.

Conducive environment can improve students’ active participation and the effectiveness of teaching. Regardless of where a school is located, a healthy school environment that is comfortable and secure from danger radiates a “sense of well-being” and sends caring message. Healthy school environments are keys to a high performance in educational institutions. Successfully managing a school environment is a necessary and essential educational investment. Research increasingly shows that there is a clear link between environmental quality of schools and educational performance and that school environment shapes attitude of students, teachers and staff which in turn affect teaching and learning behaviour and performance of both teachers and learners (Berner, 1993).

Thus, it appears that academic performance in the core subject areas under study may be a function of many factors. Despite the identified causes of academic failure adduced by researchers which ought to provide clues for solution, the problem of academic failure especially in public schools in Nigeria has persisted. The above situation of poor academic performance however appears not to have gravely affected private primary schools which are widely believed to be doing better than public schools in Nigeria academically. This current trend would have been considered an anomaly because in the past the reverse used to be the case. Whether the prevailing better performance of private schools is significantly due to the content or process of their curriculum delivery or both is yet to be identified exhaustively. This gap is what this study sought to fill looking at how school type, alongside gender, socio-economic status, and school

environment affect performance in selected core subjects (Social studies, Integrated Science, English language and Mathematics) in Rivers State. Specifically, the study will provide answers to the following questions:

1. Is there any significant difference in the mean scores in the core subjects tested (Integrated Science, Social Studies, Mathematics and English Language) for:
 - (a) those who attended private primary schools and those who did not?
 - (b) male and female students who attended private primary school and those who did not?
 - (c) students from high, medium, and low socio-economic background who attended private school and those who are not?
 - (d) those provided with adequate learning materials and those who were not?

Methodology

Design

Survey design was adopted for the study because the researcher had no intentions of manipulating the variables and is interested in using large sample size.

Sample

Proportionate random sampling technique was used to select 17 private and 17 public schools in three Local Government Areas (Obio-Akpor, Port-Harcourt and Eleme) in Rivers State. This was because the three L.G.As do not have equal number of schools. In each school selected purposive sampling was used to select 10 students who attended private alongside 10 students who attended public schools. Care was taken to ensure that both male and female students were proportionately represented. In all, 34 schools, 680 students (368 males and 312 females).

Instrumentation

Six valid and reliable instruments developed by the researchers were used to generate information for the study (Integrated Science Achievement Test (ISAT), Social Studies Achievement Test (SSAT), English Language Achievement Test (ELAT), Mathematics Achievement Test (MAT), Students Socio-Economic Background Questionnaire (SSEBQ) and School Environment Assessment Checklist (SEAC). The ISAT, SSAT, ELAT, and MAT were developed by the researcher to measure student achievement in these subject areas. The instruments contain 20 multiple choice test items each with four options, A to D. The 20 items were selected from a pool of 36 multiple choice items with content made from the JSS I curriculum in the core subject areas of Social Studies, Integrated Science, English Language and Mathematics. The test blue print used to develop these items took into cognizance the volume of learning experiences associated with each sub-topic in assigning percentages to the total number of items. The SSEBQ was used to generate information on the respondents in the following areas: present class, gender, type of school attended and parents' socio-economic background while SEAC sought information on the adequacy of the nature of school environment (human and material) that supports effective learning and positive student academic achievement. The instruments were thereafter pilot tested on a group outside the study sample but with similar characteristics. The reliability coefficient of the test items was established using Kuder Richardson (KR20) at 0.81, 0.79, 0.76, and 0.82 for Integrated Science, Social Studies, English Language, and Mathematics respectively.

Data Analysis Procedure

The data was analysed using descriptive and inferential statistics (frequency, percentages and t-test and ANOVA)

Results

School Type: Research Question 1

Is there any significant difference in the mean scores in the core subjects tested for those who attended private primary schools and those who did not?

Table 1: Comparison of performance in the core subjects of JSS1 students by type of school (Private/Public).

Core Subjects	Group School	N	Mean	Std. Dev.	df	T	Sig. two-tailed	Eta value
Mathematics	Private	340	75.3154	22.36939	678	23.927	.000	0.4579(46%)
	Public	340	46.1100	18.40878				
English Lang.	Private	340	74.1059	14.57006	678	16.384	.000	0.280(28%)
	Public	340	53.1576	18.56215				
Integrated Sc.	Private	340	59.9706	15.10042	678	12.549	.000	0.188(19%)
	Public	340	44.5073	18.00236				
Social Studies	Private	340	64.3471	14.44888	678	6.243	.000	0.054(5%)
	Public	340	56.5305	18.02979				

* $p < 0.05$.

Students who attended private primary schools produced higher scores in the core subject areas tested: Mathematics (M=75.3, SD=22.98; English language: M=74.10, SD=19.82, Integrated Science: M=60; SD=17.43; Social Studies M=64.35, SD=14.45 than did those who attended public primary school, Mathematics: M=46.11, SD=20.57; English language: M=53.2, SD=19.57, Integrated science M=44.51, SD=18; Social science: M=56.53, SD=18.03. The differences between the means were significant, $t(678)=23.9$ (Mathematics); 16.4 (English language), 12.55 (Integrated Science) and 6.24 (Social Studies), $P < 0.005$, two tailed.

Research Question 2. Is there a significant difference in mean scores of learners who attended private primary schools and those who did not based on gender?

Table 2: Comparison of mean scores in the core subject areas based on gender.

Subject	Type of School	Gender	N	Mean	Std. Dev.	Df	t	Sig.2-tailed
Mathematics	Private	Male	151	78.66	9.0251	678	4.689	0.00
		Female	189	72.5582	14.4339			
	Public	Male	217	45.5493	18.0802		1.757	0.461
		Female	123	47.1037	19.0114			
English Lang.	Private	Male	151	78.1639	11.4708	678	4.905	0.000
		Female	189	70.8638	15.9379			
	Public	Male	217	54.4771	18.5620		1.757	0.81
		Female	123	50.8191	18.4055			
Inter. Science	Private	Male	151	64.3046	11.8045	678	5.068	0.000
		Female	189	56.5079	16.5181			
	Public	Male	217	47.4908	17.3994		4.430	0.000
		Female	123	39.2195	14.9384			
Social Studies	Private	Male	151	68.4439	11.2969	678	5.003	0.000
		Female	189	61.0741	15.8233			
	Public	Male	217	61.2156	16.1518		6.572	0.000
		Female	123	48.2276	18.2536			

* $P < 0.05$

Independent sample t-test analysis was conducted to compare the scores of the students (Males and females) in the core subjects in public and private schools. Significant difference exists between the performances of the two groups. Male students who attended private schools performed better than male counterparts who attend public primary schools in Mathematics (mean score for those who attended private school = 78.66; SD = 9.9251; $t(339) = 4.689$, $p = 0.000$ those who did not ($M = 45.5493$; $SD = 18.0802$; $t(229) = 7.57$; $p = .461$). Also, female students who attended private primary school performed significantly better than their counterparts who attended public schools. The mean score for those who attended $M = 72.550$, $S.D = 14.4339$; $t(339) = 4.689$, $p = 0.000$ while mean score for those who did not was ($M = 47.103$, $S.D = 19.0114$, $t(339) = .738$)

Further, with respect to English language male students who attended private performed significantly better than the male students who did not ($M = 78.1639$, $S.D = 11.4708$ | $t(678) = 4.905$, $p = 0.000$; while

male student who did not with mean=54.4771; S.D=18.5620, $t(678)=1.757$; $p<.081$. Also for females, those who attended private school ($M=70.8638$, $S.D=15.9378$; $t(678)=4.9051$, $p<0.000$ while the mean score who did not was ($M=50.8191$, $S.D=18.4055$, $t(678)=1.757$, $p<081$).

Also the trend was exhibited in Integrated Science. Male students who attended private primary school with (Mean=64.3046, $S.D=11.8045$, $t(678) 5.068$, $p<0.00$) while the mean score for those who did not ($M=47.4908$; $S.D=17.3994$, $t(678) 4.430$, $p=0.000$. The same was applicable to females mean score of females who attended private schools was significantly higher ($M=56.5079$, $S.D=16.5181$, $t(678)=5.068$, $p=0.000$ while the mean score of those who did not attend private school (39.2195 ; $S.D=14.9384$; $t(678)=6.572$, $p=0.000$

In social studies also, male students who attended private schools performed better than their public school counterparts with (mean=68.44, $S.D=11.30$, $t(678) = 5.003$, $p < 0.000$) while those of males who attended public school stood at mean=61.21, $S.D=16.15$, $t(678)=6.572$, $p>0.000$. The females in private schools equally did better than those in public schools with (mean=61.07, $S.D=15.82$, $t(678)=5.003$, $p<0.000$). The means of females in public schools is 48.23, $S.D=18.25$, $t(678)=6.572$, $p<0.000$

Research Question 3. Is there any significant difference in the mean scores in the core subjects tested for students from high, medium and low Socio-economic background?

Table 3: Average Performance of Students in the Core Subject area by Socio Economic status and School Type.

Subjects	SES	Public School						Private School					
		N	Mean	Std. Dev.	df	f	Sig.	N	Mean	Std. Dev.	df	f	Sig.
Maths	Low	79	41.2089	18.82534	339	8.016	.000	74	71.44	14.77	339	6.541	.002
								26	732				
	Mod- erate	156	45.5577	16.91458				118	74.03	11.80			
								60	093				
	High	106	50.8750	19.61111				148	78.27	12.32			
	Total	341	46.2031	18.52822				340	75.31	12.98			
								54	728				
English Langu- age	Low	79	50.9146	19.71869	339	8.156	.000	74	69.65	16.32	339	2.87	.058
								88	245				
	Mod- erate	156	52.0304	17.74198				11	72.72	13.81			
								8	67	103			
	High	106	56.7689	18.81203				14	77.42	13.52			

	Total	341	53.2449	18.64949				8	91	168			
								34	74.10	14.57			
								0	59	006			
Integrated Science	Low	79	39.5443	17.66700	7.755	.001		74	55.40	17.21	339	10.67	.000
	Moderate	156	43.3846	16.09386			11	58.64	14.07				
	High	106	50.3302	17.10957			8	41	642				
	Total	341	44.6540	17.23191			14	63.31	14.06				
							8	08	441				
	Low	79	53.2785	20.50637	33.9	7.526	.001	74	59.91	16.53	339	4.458	.012
	Moderate	156	55.4744	17.27032				11	63.22	13.45			
	High	106	60.6981	16.61392				8	88	293			
	Total	341	56.5894	18.05730				14	67.45	13.46			
							8	27	769				
							34	64.34	14.44				
							0	71	888				

*P<0.05

Table 3 shows that there is significant relationship between Socio Economics Status and students' performance in all the four core subjects. The computed outcome is significant, the Table show that the F-ratio for those who attended private school was 9.016 for Mathematics, 8.156 for English language, 7.755 for Integrated Science and 7.526 for Social Studies respectively. P value=0.000, 0.000, 0.001 and 0.001 for Mathematics, English Language, Integrated Science and Social Studies respectively. The Adjusted R Square = 0.620 which implies that 62% of the variance in students' performance in all the four core subjects can be attributed to Socio-economic status. However, because of the significance differences revealed, the result was subjected to further analysis.

Table 3b: Post Hoc further Analysis revealing where the level of significance is emanating from

Subjects Tested	Socio (I), Socio (J)		Mean Difference (I - J)	Std. Error	Sig.
	Economic Status	Economic Status			
Mathematics	Low	Moderate	-1.9904	1.57609	.451
		High	-11.0069*	1.59817	.000
	Moderate	Low	1.9904	1.57609	.451
		High	-9.0165*	1.36023	.000
	High	Low	11.0069*	1.59817	.000
		Moderate	9.0165*	1.36023	.000
	Low	Moderate	-.9630	1.65420	.844
		High	-8.8267*	1.67737	.000

English Language	Moderate	Low	.9630	1.65420	.844
		High	-7.8637*	1.42764	.000
	High	Low	8.8267*	1.67737	.000
		Moderate	7.8637*	1.67737	.000
Integrated Science	Low	Moderate	-2.7405	1.55500	.212
		High	-10.6780*	1.57678	.000
	Moderate	Low	2.7405	1.55500	.212
		High	-7.9375*	1.34203	.000
	High	Low	10.6780*	1.57678	.000
	Moderate	7.9375*	1.34203	.000	
Social Studies	Low	Moderate	-2.3237	1.55699	.329
		High	-8.1437*	1.57880	.000
	Moderate	Low	2.3237	1.55699	.329
		High	-5.8200*	1.34375	.000
	High	Low	8.1437*	1.57880	.000
	Moderate	5.8200*	1.34375	.000	

• sig at .05

More specifically, the results of further analysis based on scheffe post-hoc comparison test shows that the identified differences in the test scores obtained by the students used for this study emanated from the following pairs of Socio-Economic Status (SES) of the respondents across the core subjects areas: Mathematics for both public and private schools used (moderate versus high SES with students from high SES families having higher mean average of (11.0069) whereas that of moderate was (9.0165) and low versus high with students from low SES having mean score of (1.9904) indicating that students from High SES performed better in mathematics test administered than those from moderate and low SES homes. Thus, revealing that the level of significance shown in Table 3a, is emanating from the scores of students from high SES families. Differences also occurred English Language (moderate versus high SES) with student from high SES having higher mean average of (8.8267; moderate 7.8637); low versus high, with students from low socio-economic background having lower mean score of (.9630) also indicating that the level of significance is from scores of students from high socio-economic status families. This shows that students from high socio-economic background performed better than those from either low or moderate SES homes in English Language.

Furthermore, significant differences in students' test scores occurred in Integrated Science subject between moderate versus high

SES with students from high SES having a higher mean of (10.6780), those from moderate SES (7.9375) and low versus high SES with students from low SES families having average score (2.7405) revealing that students from high SES no matters the type of school they attend performed better in basic science than those from low or moderate SES homes. In addition, test score in social studies also revealed some differences. For instance moderate versus high and low versus high, students from high SES obtained highest average of 8.1437, followed by those from moderate SES families with mean score of 5.8200 and the least mean from students from low SES 2.3237

It would, thus, seem that the cases of observed significant differences in the test scores returned in the core subjects by the students who participated in this study emanated from students from high socio-economic status home background.

Research Question 4. Is there any significant difference in the mean scores in the core subjects tested for students whose school made adequate provision for learning materials and those whose school does not?

Table 4 Comparison of mean scores in the core subject areas by nature of school environment.

Core Subjects	Group School	N	Mean	Std. Dev.	df	T	Sig. two-tailed	Eta value
Mathematics	Inadequate	17	65.7353	11.85046	32	-5.951	.000	0.525(52%)
	Adequate	17	84.4559	5.27171				
English Lang.	Inadequate	17	62.8971	13.07164	32	-6.565	.000	0.573(57%)
	Adequate	17	84.8824	4.44947				
Integrated Sc.	Inadequate	17	48.8235	14.09005	32	-5.925	.000	0.523(52%)
	Adequate	17	70.5882	5.55719				
Social Studies	Inadequate	17	53.6471	13.47656	32	-5.981	.000	0.527(53%)
	Adequate	17	74.5882	5.17275				

* $p < 0.05$

In this, the unit of analysis is "school" – number of schools used was 34 (17 private and 17 public schools). Table 4 reveals that the students in private schools with adequate environment produced higher mean scores in the core subjects: (Mathematics: Mean = 84.9, SD=5.27) than those in public schools with inadequate environment. (Means =65.7353, SD = 1.85. The difference between means was

significant, $t(32) = -5.9, P < 0.05$, two-tailed. Also, the result for the mean score of the two group in English language also shows that the students whose school environments were adequate produced higher mean score ($M = 84.9, SD = 4.45$) than their counterparts whose school environment were adequate produced higher mean score ($M = 84.9, SD = 4.45$) than their counter parts whose school environments were inadequate ($M = 62.9, SD = 13.07$). The difference between means was significant, $t(32) = -6.6, P < 0.05$, two tailed.

Further the scores produced by the two groups for Integrated science and Social studies also reveals that the students whose school environments were adequate produced higher mean (Integrated science: $M = 70.58, SD = 5.55$, Social science: $M = 74.58, SD = 5.17$) than did the students whose school environments were inadequate (Integrated science: $M = 48.82, SD = 14.09$; Social studies: $M = 53.64, SD = 13.47$). The differences between means in these two subjects were significant Integrated science; $t(32) = -5.92$; Social studies; $t(32) = -5.98, P < 0.05$, two-tailed.

The magnitude of the difference in means in these subjects were high with Cohen's value of (eta squared of 0.525, 0.5730, 0.523 and 0.537 for Mathematics, English language, Integrated Science and Social Studies respectively.) When expressed in percentage, it means that 52% (Mathematics), 57% (English language), 52% (Integrated science) and 53% (Social studies) of the total variance in the core subjects between the two groups is explained by the type of school environment.

Discussion

Findings from this study showed that private school outperformed public schools. This result supports the view of McCLeen, (2010), who reported that because private schools tend to offer more rigorous curriculum than public schools, students attending private schools are better prepared for the demands of college. In other to give ones child the best opportunities for academic excellence, parents may be counseled to send their children to private schools were they may be given better foundation to succeed in their academics endeavours.

She further said that the education and preparation provided by private schools are unparalleled. Statistics show that pupils who attend private schools are four times more likely to acquire high honours when they enroll into high school than their public school counterparts. Students graduating from private schools have demonstrated ability not only to excel in high school but in college as well.

Some of the things that may have given private schools academic advantage over those who those in public schools, in the view of this researcher are curriculum and class size. Public schools offer general programmes, designed for all children, which usually includes mathematics, English language, reading, writing, science, social studies, physical education etc. In addition to these key subjects, only an insignificant few public schools offer programmes in other subject areas. Those that care to do it hide it from the prying eyes of the government and without a standard curriculum. In a public school, the substance of what children learn is mandated by the state and learning is measured through state standardized tests. Private schools on the other hand have the flexibility to create a specialized program for students. For example, private schools may use art or science in all classes, or take children on extended outdoor trips that blend lessons across the curriculum. Private schools can create their own curriculum and assessment systems, although most also choose to use standardized tests. This gives them advantage over public schools.

Though the government recognizes, the value of small classes and may have provided funding to keep class sizes small especially in primary schools, the reality on ground is that as students become older, class size tends to get bigger in public schools, especially in large school districts and urban centres. Private schools however are generally committed to providing small classes and individual attention to students. Many parents who can afford the financial commitment choose private schools for this reason. The bottom line here is that there are a few fundamental differences between public and private schools that affect learning outcomes in favour of private schools. There are great private schools and there are great public schools.

Although many researchers have provided reports that there are no longer distinguishing differences in the cognitive, affective and

psychomotor skill achievement of student in respect to gender (Bilesanmi-Awoderu, 2006; David & Stanley, 2002, Sungur & Tekkaya, 2005) and as a result girls are been encouraged and sensitized into developing positive attitudes toward science, recently some studies reported that males are becoming the disadvantaged gender in schools, and that fewer males are interested in science (Bleuer & Waltz, 2002; Omoniyi, 2006). Findings from this study do not support this later view as males performed better than their female counterparts in both public and private schools.

Some research (Bilesanmi Awoderu, 2006; Sungur & Tekkaya, 2005) have indicated an academic achievement gap between the sexes, that is boys ahead of girls while others (Bleuer & Waltz, 2002; Omoniyi, 2006) have shown that the achievement gap has been narrowing and that in some instances girls have higher academic achievement than boys found to exert more efforts at school leading to better school performance (Chambers & Schreiber 2004). While findings from the study do not generally support the above view, of girls performing better than boys, it supports the view that the achievement gap has been narrowing and that in some instances girls perform higher. This was shown in the performance in Mathematics where females did better than males in public schools. However, males are found to outperform females in mathematics and science. On the contrary, research result has also shown that little or no difference between the sexes (Chambers & Schreiber, 2004). Interestingly, in this study the males outperformed the girls in English language and Social Studies which most researchers agree is a female dominated area. Findings from this study also revealed that students from high socio-economic background performed better than those from moderate and low socio-economic background and this supports the views of most studies. As reported by Eamon (2005), it is believed that low SES negatively affects academic achievement because low SES prevents access to vital resources and creates additional stress at home. The economic hardships that are caused by low SES lead to disruptions in parenting, an increasing amount of family conflicts, and an increased likelihood of depression in parents and single-parent households. The above position may have contributed to the low performance of this

group as revealed in this study which tends to support the view that socio-economic background of parents is a strong factor in academic achievement.

School environment factors, such as school size, neighborhood, and relationship between teacher and student also influence test scores (Crosnoe, Johnson & Elder 2004). A students' educational outcome and academic success could be greatly influenced by the environment of the type of school that they attend. Thus, the school one attends could set the parameters of a student learning experience. Depending on the environment, a school can either open or close the doors that lead to academic achievement. Crosnoe, Johnson & Elder (2004) suggest that type of school (public or private) is among the important structural components of school. For instance, to them Private schools tend to have both better funding and smaller class sizes than public schools (Crosnoe et al, 2004b). The additional funding of private schools leads to better academic performance and more access to resources such as computers, which have been shown to enhance academic achievement. The factors that constitute school environment as carried out in this study adequately impacted significantly on learning outcomes. Most of these factors were, however, found adequate in the private schools selected for this study, a factor which may have also contributed to their better performance in comparison to the public schools used in this study.

Conclusion

Considering the results emanating from this study and the associated discussion, we share the view that concerted efforts should be made by the stakeholders in education to ensure the primary as well as secondary school environments are made conducive enough to encourage effective teaching and learning. Government should also endeavour to come to the aids of parents whose children are within this age bracket with respect to financial help. This can be brought about through scholarships and reduction in school fees charged at this level especially at the private schools. Female children should be given additional incentives both at home and at school to encourage them to perform better in their academic endeavours.

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