

School Location, School Section and Students' Gender as Predictors to Secondary School Dropout Rate in Rivers State, Nigeria

CHRISTIAN, Mathew

Ignatius Ajuru University of Education, PMB 5047, Rumuolumeni, Port Harcourt, Nigeria

Abstract

This study was undertaken to underscore the extent the variables of school location, students' gender and school section can predict the rate of drop out of secondary school students. Ex post facto design was adopted and all data on students' enrollment, retention and completion were collected from available schools' records for two cohorts of students and covering four sessions using a researcher developed school dropout data collation sheet (SDDCS). The result of the data analyzed show about 19% dropout rates with respect to the predictor variables. However, these rates were found to be non-significant at the dichotomous levels of these variables and regression analyses also show non-significant values in the extent to which the predictor variables relatively and jointly predict the rate of school dropout in Rivers State. This implies that neither school location, gender and even school section has significant effect on the rate of school dropout in Rivers State.

Keywords: school- location, student-gender, school-section, school-dropout, Rivers State

Introduction

School dropout is a phenomenon well known from the inception of formal education. In the context of this survey, dropouts are strictly students who were enrolled into formal school but never completed or graduated with their cohorts and as never re-enrolled into another formal school. Naturally, it is not all that start a race that will pull through the rigours to the end of the race. Some will drop out as some will make it to the finishing point. That is what every endeavour is about in life. Unfortunately a lot of deficit is suffered by such a system that experiences dropouts. This is not different even in the education sector where every other sector of a nation's economy like Nigeria is directly tied to.

According to **Tyler and Lofstrom (2009)**, the overall national dropout rate in the United States of America appears to be between 22 and 25 percent, but the rate is higher among black and Hispanic students, and it has not changed much in recent decades. **Stuit and Springer (2010)**, reported in a survey of the fiscal cost of school dropout of the California Department of Education, 98,420 public high school students dropped out of school in 2007-08, suggesting 19 percent of California high school students in any ninth-grade class will drop out over a four-year period. Again, the Hispanic and African American students drop out at an estimated rate of 24 percent and 33 percent respectively.

Using the 2004 American Community Survey, **Strange (2011) in Jordan, Kostandini and Mykerezi (2012, p.3)** said that the rural dropout rate (11%) is higher than the suburban rate (9%) but lower than in cities (13%). Studies have also suggested that dropouts are different in rural areas due to the local industry structure. **McGranahan (2004)** found the presence of mining and manufacturing employers requiring low skill workers makes rural dropouts different.

According to the **UNDP (2011)**, Nigeria is a country in the West of African bordered by the Gulf of Guinea between the republics of Benin and Cameroon. It has a total area of 923,768 km² (910,768 km² of land and 13,000 km² of water) out of which is a vast arable land of about 31.2% of the land mass is arable). With an estimated growth rate of 1.93% and fertility rate of 4.73 children born/woman, Nigeria, is already the most populous African nation which accounts for one-sixth of the African population. The National Population Commission of Nigeria census conducted in 2006, the country's population stood at 140,431,790, and by July 2011, had grown to 155,215,576. The median age has increased from 18.63 years in 2006 to 19 years in 2009. The dominant population group is 15-64 years (55.5%) followed by 0-14 years (41.5%). Rated 142 out of 169 countries on the 2011 Human Development Index (HDI), poverty remains bane to development in Nigeria with 63.5 % of her populace living in poverty. The 2008 Nigeria Demographic and Household Survey (NDHS) estimated the poverty index at 32.3%.

Problem Statement

Nigeria with all her resources human and material alike has no known organized programme or database for the tracking of dropouts from schools. The consequence of dropping out of school in the life of a nation is a well researched area of endeavour in developed nations and if there are any in Nigeria, such findings are yet to be accessed. Just like this phenomenon is not tracked in the country, it is equally not tracked at the least based on available literatures have not proved otherwise. The most of any literature of any study of this kind is the

UNICEF/FGN country study of out-of school and school dropouts which centres on identifies barriers and bottlenecks and suggested remedies. These dropout records exist only in individual schools and so, no informed decision can be made to that respect by relevant authorities. Therefore, it is expedient to contribute to this almost non-existent database through studies like this in different parts of the country.

Research questions

Five research questions were addressed as follows:

1. What is the mean students' dropout rate by school session with respect to school location, student gender and school section in secondary schools in Rivers State?
2. What is the mean students' dropout rate by cohort of students enrolled together with respect to school location and students' gender?
3. How significant is the students' dropout rate in secondary schools in Rivers State with respect to school location, students' gender and school section?
4. To what extent have the predictor variables jointly predicted students' school dropout rate in secondary schools in Rivers State?
5. To what extent have the predictor variables relatively predicted students' school dropout rate in secondary schools in Rivers State?

Methodology

Study adopted the survey design of the Ex post facto type. Ex post facto design was adopted because it was not possible or practicable to manipulate any variable as the cause and effect phenomenon of the study had occurred (Simon and Goes, 2013).

The population of this study is comprised of all secondary school students in Rivers State. Multi-stage sampling technique was adopted for sampling in this study. Firstly, purposive sampling technique was adopted to select the Rivers West Senatorial Zone on the grounds representativeness of the Rivers State geographical profile in terms of Riverine/Upland dichotomous location issues. Secondly, random sampling technique was used to select 6 secondary schools, 3 each from the two locations of the zone.

Data collection was carried with one researcher developed instrument called the School Dropout Data Collation Sheet (SDDCS). The instrument was face-validated by thorough vetting of items and content. Data collected include all enrollments and completion records of junior secondary I and III and same for senior secondary for the period covering 2008/2009 to 2011/2012 sessions. Data were collated against school location and students' gender on sessional basis (4 sessions) and cohort basis (2 cohorts).

Data analyses involved mean and standard deviation for research questions 1 and 2, independent t-test for research question 3 and research questions 4 and 5 was analyzed using regression analysis.

Results

The results of analyses of data collected are presented according to the research questions posed and were used to address same.

RQ1 What is the students' dropout rate by school session with respect to school location, students' gender and school section in secondary schools in Rivers State?

Table 1: Dropout rate in by school location, students' gender and school section

Session	2008/2009	2009/2010	2010/2011	2011/2012	Mean
Riverine	21.56±09.33	21.07±10.53	26.23±06.69	16.18±04.03	21.43±11.56
N	6	6	6	6	24
Upland	16.01±04.04	13.42±03.22	19.13±08.48	17.32±09.05	16.47±08.11
N	6	6	6	6	24
Mean	18.79±06.69	17.24±08.91	22.68±13.81	16.75±06.54	18.95±07.35
N	12	12	12	12	48
Male	22.16±10.24	19.63±09.31	24.09±13.89	16.96±09.45	20.83±10.71
N	8	8	8	7	31
Female	12.04±04.86	12.47±06.58	19.86±15.31	17.30±14.32	15.53±10.90
N	4	4	4	5	17
Mean	18.78±09.31	17.24±08.91	22.68±13.81	17.10±11.11	18.95±10.96
N	12	12	12	12	48
JSS	21.80±11.01	21.07±10.50	26.23±15.62	16.88±10.36	21.50±11.72
N	7	6	6	6	25
SSS	14.56±07.03	13.42±05.39	19.13±12.05	17.32±12.82	16.18±09.56
N	5	6	6	6	23
Mean	18.78±09.90	17.24±08.91	22.68±13.81	17.10±11.72	18.95±10.96
N	12	12	12	12	48

Table 1 shows mean and standard deviation of students' secondary school dropout rates by school locations by four academic sessions covering 2008 to 2012 in Rivers State. The results show that mean sessional dropout rate ranged between 17%-19% with the highest in 2010/2011 and the lowest in 2011/2012. The result also shows that the overall mean dropout rate was about 19% (figure in bold character). The result also shows that the highest rate was 26% recorded during the 2010/2011 session among the students of schools in Degema province, 24% among males, and 26% among JSS students whereas the lowest rate of about 16% was recorded in the earlier session, 2009/2010. However, common to all variables is the mean dropout rate of about 19%.

RQ2 What is the mean school location and gender dropout rate by cohort of students enrolled together?

Table 2: Mean School Location Dropout Rate by Cohorts of Students

Variables	Mean Cohort Dropout Rate		
	2008/09-2010/11	2009/10-2011/12	Mean±SD
Riverine	24.39±14.58	21.38±09.99	22.89±12.29
Upland	15.24±05.34	14.38±06.93	14.81±06.14
Mean ±SD	19.48±09.96	17.88±08.46	18.85±09.22
Male	23.03±12.04	21.39±12.15	22.21±12.00
Female	15.70±08.16	16.62±10.09	16.16±09.13
Mean±SD	19.37±10.10	19.01±11.12	19.19±10.57
JSS	23.03±12.38	15.70±08.16	19.37±10.27
SSS	21.39±11.96	16.62±10.09	19.01±11.03
Mean±SD	21.21±12.17	16.16±09.13	19.19±10.65

Table 2 shows mean and standard deviation of cohorts of students by school location, students' gender and school section. The mean dropout rate from table 2 shows about 19% rate across all predictor variables

RQ3 How significant is the students' dropout rate in secondary schools in Rivers State with respect to (a) school location, (b) students' gender and (c) school section?

Table 3: Mean difference of students' school dropout rate by predictor variables

Variables	N	Mean ± SD	Mean diff.	df	t	Sig
School location	Riverine	24	21.43±11.97	46	1.59	0.13
	Upland	24	16.47±09.46			
Students' gender	Male	31	20.83±10.70	46	1.63	0.64
	Female	17	15.53±10.90			
School section	JSS	24	20.73±11.91	46	1.13	0.51
	SSS	24	17.17±09.95			

Table 3 shows the mean differences students' dropout from secondary schools with respect to the dichotomous variables of school location, students' gender and school section. All mean differences were found to be significant at $p < 0.05$.

RQ4 To what extent have the predictor variables jointly predicted students' school dropout rate in secondary schools in Rivers State?

Table 4: Joint effect of predictor variables on school dropout rate

R = 0.29 ^a R ² = 0.09 Adjusted R ² = 0.02 SE = 10.83						
ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	488.740	3			
	Residual	5159.629	44	162.913	1.39	0.26 ^a
	Total	5648.369	47	117.264		

a. predictors: (constant), school location, student gender, school section. b. dependent variable: Dropout rate

Table 4 shows the combine effect of all the predictor variables. The regression analysis shows that only 9% ($R^2 = 0.09$; $F=1.39 @ 0.26 > 0 > 0.05$) of the variance the school dropout rate is accounted for by the combined effect of all the predictor variables and that value was even found to be non-significant.

RQ5 To what extent have the predictor variables relatively predicted students' school dropout rate in secondary schools in Rivers State?

Table 5: Relative effect of the predictor variables on school dropout rate

Model		Unstandardized coefficients		Standardized coefficients		
		B	SE	β	t	Sig.
1	(constant)	32.39	6.90		4.693	0.00
	School location	-2.92	4.66	-0.14	-0.63	0.53
	Student gender	-2.88	4.87	-0.13	-0.59	0.56
	School section	-3.44	3.13	-0.16	-1.10	0.28

Table 5 shows the relative contribution of the predictor variables. From the table students gender was found not to be strongest contributor to the variance followed by school location and lastly by school section. All predictors' relative contributions to the total variance were found to non-significant. However, the extent of prediction was according to the following trend: section > location > gender.

Discussion

The major findings of this study include the following:

Firstly, the mean students' dropout rate from school in the Rivers West Senatorial Zone for a period of four academic sessions spanning 2008/2009 through 2011/2012 was found to be about 19% across the school locations, students' gender and school section in the six schools investigated. This finding corroborates those of Colorado rural school dropout rate reported three-year average dropout rate for 2006/2007 to 2008/2009 ranging between 0.39% to 8.01% (Tombari, Andrews, Gallinati and Seeley, 2009); 18.9% for California statewide average for 2007/2008 (Stuit and Springer, 2010); 1.4% to 12.6% rate in an analysis of dropout rates among secondary school students in Delta State of Nigeria between 1999/2000 to 2004/2005 academic years (Nakpodia, 2010); 9million (37%) of UBE school age dropout in 2007; 9%-13% in an American Community Survey in 2004 (Strange, 2011: In Jordan, Kostandini and Mykerezi, 2012) and 10million in 2008 and 10.5 million in 2013 (Inuwa and Yusof, 2013). This may not be unconnected with all the causes of dropout identified such as poverty in the form of low socioeconomic status of families, relatively high cost of education, poor government policy implementation, the pursuit of source of livelihood, etc (McGranahan,

2004).

Secondly, the mean differences students' dropout rate from secondary schools with respect to the dichotomous variables of school location, students' gender and school section were found to non-significant at $p < 0.05$. This may not be unconnected with these variables do not constitute distinct factors of students' dropout from school in a fast growing global village in which this part of the world is not isolated and specifically the cosmopolitan outlook of all the local government areas of Rivers State.

Thirdly, the predictor variables jointly accounted for 9% of the variance in the dropout rate of students from the schools investigated. The value was found not to be significant. The same effect was also found for the predictors when considered relatively. However, the observed effect or prediction though non-significant follows the following trend: gender>location>section. The regression analyses of these variables, jointly and relatively on the students' dropout rate from school also do not show a significant effect as only 9% ($R^2 = 0.09$; $F = 1.39$ @ $0.26 > 0 > 0.05$) of the total variance in the school dropout rate is accounted for by the combined effect of all these variables and which value was found to be non-significant. Relatively, all predictor variables were found to contribute non-significantly to the total variance in the dropout rate. However, students' gender was found to be the strongest contributor to the followed by school location and school section. This finding corroborates finding that posits that there is no gender differences when it came to students dropping out (Tombari, Andrews, Gallinati and Seeley, 2009; Nakpodia, 2010; Jordan, Kostandini and Mykerezi, 2012); 13 of 18 individuals interviewed on school location stated no differences among populations when it came to students dropping out (Tombari, Andrews, Gallinati and Seeley, 2009).

Conclusion

This study revealed that there is a very high dropout rate in secondary schools in Rivers State. However, this rate is not significant predictable school location or students' gender, neither is it predictable by the section of the school a dropout is. Therefore, all three predictor variables were found not to significantly affect students' dropout from secondary schools in Rivers State.

Recommendation

From the findings of this study, the following recommendations are hereby made by the researcher:

1. A further study to determine the actual dropout rate as some students who appear to have dropped may have actually re-enrolled into another school but there is no record of sort to that effect.
2. An elaborate study should be conducted with a view to building database of students or children who purportedly dropped out of school.
3. A further study should be conducted to expose actual causes of dropout from school with respect to the staggering high dropout rate reported in this study with a view to providing remedies.

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