

Comparative analysis of gender performances in geography among NCE III Students of KSCOE, Ankpa, for sustainable equitable quality education.

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Abstract: The paper investigated the gender performances in geography among NCE students of KSCOE, Ankpa with curricular implications. A total of 220 final year students' results comprising 120 males and 80 females between 2015-2018 were studied. The research design adopted was ex-post-facto. Three research questions and three hypotheses guided the study. The data was sourced from documented final CGPA's for the three academic sessions from the school for the analysis. Descriptive statistics was used for analysis of the first and second research questions. T-Test and correlation analysis were applied through SPSS for the test of hypothesis on the scale of 0.05 Levels of significance. The results showed that there was a progressive increase in percentage enrolment of male students studying geography, while there was a corresponding decline in the female number. It was recommended that the interest and motivation of students should be promoted right from the pre-NCE level and attention should be specially given to certain gender-sensitive courses in curriculum review.

Keywords; Gender performances, KSCOE Ankpa, Quality Education, Sustainable Education.

I.INTRODUCTION

here has been increased attention to the performances between both sexes. (Bandaru, 2012). That is why education quality influences Twhat students learn and what benefit they draw from education (Tadesse,2007). Onoyase (2015) stated that the issue of academic performance of students is of great importance to every concerned parent. This is because the future career of any child is greatly determined and highly dependent on the child's academic performance early in life. However, it should be noted that there may be a number of arrayed factors that can contribute to the child's performance while in school, ranging from the nature of the child in terms of inherited intelligence, availability of school facilities, teaching techniques/methods of instructors among others. Filgona and Sababa (2017) observed that the socio-cultural difference between girls and boys has over the years given rise to the examining academic achievement. These may likely be as a result of the societal perception of some courses as more masculine and feminine. A typical African sees engineering courses as more of men course while arts oriented courses as for women. It is worthy of note that the interest and love students develop for geography right from the initial developmental stage is greatly influenced by methods of teaching of the subject. Geography as a discipline has a unique place in Nigerian education system. At the primary level, it is not a subject but it is reflected in teaching of social studies. However, at the senior secondary level (SSS), it is one of the subjects captured in the syllabus of WAEC and NECO. It is taught from the SS1 to SS III as physical, regional, human geography and map reading and interpretation. At the NCE level, it is also part of the NCCE minimum standard, cutting across PRE-NCE to NCE III and covering a variety of course units and titles. It is also a single major course combined within disciplines such as ISS, CRS, Mathematics and Social Studies. At the Polytechnic level, aspects of it are taught within environmental studies or management. At the University level,

Geography is a single honour course standing on its own, merit for which a B.Sc, B.A, B.Sc.Eds degree can be obtained (Odoh,2003). According to UNSTATS (2018), Quality education and lifelong learning opportunities for all are central to ensuring a full and productive life to all individuals and to the realization of sustainable development. Despite the considerable increase in child enrolments in schools, a large number of children still remain out of school mainly because educational systems cannot keep up with the aggressively growing population especially in sub-Saharan Africa. Since 2000, there has been enormous progress in achieving the target of universal primary education. The total enrolment rate in developing regions reached 91 percent in 2015, and the worldwide number of children out of school has dropped by almost half. There has also been a dramatic increase in literacy rates, and many more girls are in school than ever before. These are all remarkable successes over the years. SDGFund (2019) Education is a public good and a human right from which nobody can be excluded since it contributes to the overall development of people and society UNESCO (2008).

II.STUDY AREA

Kogi State College of Education, Ankpa is sited in Ankpa town in Ankpa Local Government Area. It was established in 1981 after it was converted from Advanced Teachers College (ATC) to a full blown College of Education awarding Nigeria Certificate in Education (NCE). Ankpa town in Ankpa LGA in Kogi State is located on Latitude $7^{\circ} 45^1$ and $7^{\circ} 22^1 N$ and $7^{\circ} 22^1$ and $7^{\circ} 45^1 E$ with a land area of approximately 1200km² (500sq mi) while that of the College is 120,3900.968 sq meters(KSCOE,Ankpa Master Plan 1981). It has an average temperature of 28 o C with rainy season spanning through seven months from April to October. It is characterized by derived tropical guinea savanna/woodland and gallery vegetation along the River Anambra (locally known as River Imabolo)

III. STATEMENT OF THE PROBLEM

The rating of performance along gender lines has become needful to correct certain perceptions and to identify the degree and reasons for differences in performance among final year geography students. For too long now, the theory and practice in geography education at the NCE level have been essentially on formative and summative assessment techniques. Gender based assessment over time and course combinations might facilitate the use of other assessment techniques for a more proactive and problem solving discipline. Such an assessment might give a holistic appraisal of the importance of geography. The paucity of studies in this regard makes this study all the more relevant. Equally, if the national policy on education grants the same opportunity for both male and female education, then it becomes needful to examine performance differentials, if any, and their curricular implication, especially in geography. The study may also put aside any stereotype or perception of the academic superiority of one sex over the other based on invalid reasons.

IV. OBJECTIVES OF THE STUDY

The objectives of the study are to:

1. Determine the relative percentage of male and female geography students from 2015 -2018.
2. Clarify the relative percentage of each subject combinations prevalent in geography department from 2015 2018.
3. Test the difference, if any, in the performance of male and female geography students across the sessions.
4. Examine the significant relationship in performance of male and female students in geography across the four subject combinations.

5. Examine the relationship, if any, in performance of male and female students in geography across the sessions under study.

V. NULL HYPOTHESIS

The following null hypotheses (H^0) were tested on a scale of 0.05 level of significance:

1. There is no significant difference in performance of male and female geography students over the period of study.
2. There is a significant relationship in performance of male and female students in geography across the four subject combinations of SOS/GEO, MAT/GEO, ISS/GEO and CRS/GEO.
3. There is no significant relationship in performance of male and female students in geography between the sessions under study, i.e, 2015/2016, 2016/2017, 2017/2018.

VI. METHODOLOGY

The study adopted an ex-pos-facto design which involves the use of existing data gotten from the college. The population of the study was 220 comprising 140 male and 80 female between 2015 and 2018. The data used were the final year results of geography students gotten from the examination results archived in the department of geography, Kogi State College of Education, Ankpa. Descriptive statistics and T-Test statistics were used in the data analysis at P 0.05 level of significance.

VII.RESULTS

What is the Percentage of male and female geography student from 2015-2018?

The total number of each sex was divided by total number of both sexes within the study period and was multiplied by 100, as shown on table below:

Table 1: Percentage of male and female geography students between 2015-2018

Sex	SESSIONS					
	2015/2016	%	2016/2017	%	2017/2018	%
Male	40	59.7	32	51.6	68	66.6
Female	27	40.3	20	38.5	33	32.4

Source: Author’s field work: 2018.

Table 1 indicates that across the three academic session under review, male students studying geography were greater in number and percentage (59.7 %, 51.6 % and 66.6%, for 2015/16, 2016/17 and 2017/18 respectively). While the female students totaled 40.3%, 38.5% and 32.4% for the corresponding academic sessions respectively. The highest male students population was in 2017/ 18 at 66.6% while that of female students was in 2015/16 at 40.3%. It seemed therefore that while there was a progressive increase in

admission for male students offering geography, there was progressive decline in the percentage of female students admitted to study geography. The curricular implications of this trend shall be examined in the study.

What was the relative percentage of subject combination prevalent in geography department between 2015-2018?

Documented final scores of the students from 2015-2018 were used. The raw total for each subject combinations were tallied and the percentage found. Table below reflects these percentages.

Table 2: Relative Percentages of Subject Combinations across Sessions.

Sessions	COMBINATION							
	SOS/GEO		MAT/GEO		CRS/GEO		ISS/GEO	
	Total	%	Total	%	Total	%	Total	%
2015-2016	18	32.4	26	46.4	7	12.5	5	8.92
2016-2017	58	58.5	27	27.2	9	9.09	5	5.05
2017-2018	22	33.84	9	13.83	21	32.30	13	20

The table above indicates the following trends. The highest raw number of cases (final year student in all the subject combinations was in the 2016/2017 academic session). The other two sessions tailed at 56 cases each. Difference also occurred in the percentage. Course combination per session, for 2015/2016, MAT/GEO had highest percentage reading of 46.4% followed by SOS/Geo at 32.4%. For 2016/2017 session, SOS/GEO recorded 53.5% while Mat/Geo recorded 27.2% for 2017/2018 session, ISS/GEO combination had always recorded the least percentage therefore, within the department, SOS/GEO and MATH/GEO had the most number of students admitted to Students)’ geography while CRS/GEO and ISS/ GEO were relatively less. In this regard, for the period under study these finding points to certain curricular implications much later in the study.

Test of Hypotheses

Ho1 : There is no significant difference in performance of male and female geography students over the period of study.

The T-Test group and independent samples tests was generated on SPSS and there were used to test this null hypothesis, Table below addresses this.

Table 3: Performance of Male and Female Students in Geography

Group statistics

	Sex of Students	N	Mean	Standard Deviation	Standard Error mean
CGPA	Male	140	2.2625	.76427	.06459
	Female	80	2.3035	.76817	.08588

Independent Samples Test

	Levene's Test for Equality of Variances		T-Test for Equality				
	F	SIG	T	DF	SIG	(2Mean Diff Tailed)	
CGPA	Equal variances assumed	0.55	.815	-.382	218	.703	-.04100
	Equal variances not assumed	0.55		-.382	163.852	.703	-.4100

The first table shows the group statistics of the CGPA for male and female geography students, number 140 and 80, respectively. Even though their means were close at 2.2625 and 2.3035 respectively with even a closer standard deviation at 0.76427 and 0.76817. The independent sample tests which is juxtaposed with variances assumed with equal variances not assumed gave a level of significance of 0.815 at the given Alpha level of 0.5 (i.e. 95% confidence level) there is a significant difference in the performance of male and female students in geography over the period of study. In other words, the data failed to uphold the Ho, therefore, it is rejected. This has curricular implications, as would be determined later.

Ho2: There is no Significant relationship in performance of male and female students in geography across the four subject combinations of SOS/GEO, MAT/GEO, ISS/GEO and CRS/GEO.

Dependent Variable	Course combinations	Course combinations	Mean Difference	Std. Error	Sig.
	SOS/GEO	MAT/GEO	-.46661*	.11941	.001

	ISS/GEO	-.03870	.17049	.996
	CRS/GEO	.10784	.14199	.873
MAT/GEO	SOS/GEO	.46662*	.11941	.001
	ISS/GEO	.42792	.17966	.084
	CRS/GEO	.57445*	.15287	.001
ISS/GEO	SOS/GEO	.03870	.17049	.996
	MAT/GEO	-.42790	.17966	.084
	CRS/GEO	.14653	.19539	.877
CRS/GEO	SOS/GEO	-.10784	.14199	.873
	MAT/GEO	-.57445	.15287	.001
	ISS/GEO	-.14653	.19539	.877

*Correlation is significant at 0.05 levels

The table is a correlation analysis of each subject combination with the others to readings in mean difference, standard error, and level of significance. The trend indicates the following: the least significant subject combination in terms of performance were Sos/Geo versus Mat/Geo (0.001), Mat/Geo versus Sos/Geo (0.001), Mat/Geo versus Crs/Geo (0.001) and Crs/Geo Versus Malt/Geo (0.001). For these categories of correlation, the data upheld the null hypothesis. Highly Significant correlations were obtained. The following correlations SOS/Geo versus Iss/Geo (0.996), Sos/Geo Versus CrS/Geo (0.873), ISS/Geo Versus SOS/Geo (0.996), Iss/Geo versus Crs/Geo (0.877), Crs/Geo Versus SOS/Geo (0.873) and Crs/Geo versus Iss/Geo (0.877). For these Combinations, the data did not uphold the null hypothesis. Therefore it was rejected. The curricular implications of these findings shall also be examined.

IX. DISCUSSION OF RESULTS AND CURRICULAR IMPLICATIONS

The analysis and interpretation of the results done so far has thrown up setting revelations concerning the data used in this study.

1. During the study period (2015-2018), there was a progressive increase in the percentage enrolment of male students study geography, while there was a corresponding decline in the female number.
2. The relative percentage of students total was recorded in 2016 2017 academic session while the two combinations of SOS/GEO and MAT/GEO had progressively higher percentage totals than CRS/GEO and ISS/GEO.
3. There was a significant difference in the performance of male and female students in geography of the period of study ($d = 0.815$) which was greater than the pre-set level of 0.05.
4. Highly Significant correlation was observed among the subject combinations of SOS/GEO versus ISS/GEO, SOS/GEO versus CRS/GEO and CRS/GEO versus ISS/GEO.

5. The data did not uphold the null hypothesis that there is no significant relationship in performance of male and female students in geography across the three sessions.

Firstly, the curriculum makes no provision for differential teaching learning modes for male and female students of geography. However, there is need to embark on a curriculum review process that spur female students interest in geography.

The present four course format is understood to be inline with the curriculum at the basic level of education (primary 1 -6 and JSS1-3, which goes by the popular code 934) but to improve students interest in enrolment, other courses such as English/Geo, Isc/Geo, and Intro-Tec/Geo should be brought on board.

It is imperative to note that the following maybe what are the likely causes of differential in performance among students within the study periods:

- ✓ Activities and assignments in other courses negatively influenced the student's performance in geography.
- ✓ Geography lecturer's disposition and teaching techniques negatively affected student's performance.
- ✓ Performance in geography at SSCE O'Level was a significant determinant or factors of performance at NCE Level.
- ✓ In addition, the fact that significant different was observed in the performance of male and female students in geography over time points to need for a curriculum review to stream line these performance differentials. It is debatable If differences in percentages enrollment have accounted for these differentials in performance among, the sexes. Whatever the case, both male and female peculiar interest in geography should be weighted. Such areas of adjustments to accommodate new innovation/techniques towards curriculum constant realization may be;
 - a) GEO 114 - Local Geography
 - b) GEO123 - Man and His Environment
 - c) GEO 212 - Introduction to NERDC National Curriculum for Geography
 - d) GEO 221 - Practicum for NERDC National Curriculum(Geography)
 - e) GEO 222 - Research Methods in Geography
 - f) GEO 224 - Fieldwork in Geography
- ✓ Significant relationship also existed in performance of male and female students across four subject combinations which nullified the null hypothesis earlier raised. Even though the sets of students had biases in other course such as Social studies, Mathematics, Christian religion Studies and Islamic studies, there are common ground is Geography. Within this department, at least, they were subjected to the same treatment by way of exposure to lecturers and teaching techniques, course content, continuous assessment test and so forth. Perhaps, only in their entry grades and exposure to the principles of Geography at the O'Level would there be expected to differ significantly. Of course, the fact that they graduated from different secondary schools should also introduce differences in their performance in geography at the NCE Level.

X. RECOMMENDATIONS

The following are the proffered recommendations for necessary action:

1. A gender based curriculum innovation process should be embarked on. Relevant stake-holders should be brought on board. These should include: Heads of Department of Geography, Senior Lecturers in Geography officials of Ministry of Education, officials of NCCE and even officials of ANGs.

2. Particular attention should be paid to such courses at the NCE Level as map reading and interpretation, local geography, Man and his Physical Environment, Introduction to NERDC curriculum in Geography, Research Method in Geography and Field work in Geography. This is basically because, the designed and mode of mentoring of these course is gender sensitive.
3. Improvisation and domestication of tools and learning resources for studying should be specified in the curriculum to cover each of these course units and to be undertaken by both lecturers and students of geography alike. Attention should be paid to the specific requirement of each course unit.
4. The interest and motivation of students should be promoted right from the Pre-NCE Level by simplifying the concepts taught, making clear the problem solving aspects of the discipline and introducing such basic education friendly subject combinations as Eng/Geo, Isc/Geo and Intro-Tec/Geo.
5. This findings and the attendant action should be broadened for dissemination to sister colleges of education as well as NCE and the NERDC this is because even when findings are local, approval for implementation may be global, that is for higher authority. In this case, the authorities are the regulatory agencies established by law.

XI.CONCLUSION

A study of this nature is imperative in order to stay in touch with student's performance across different planes such as academic sessions, sex, course combinations and even more as results have shown. The application of this in areas such as curriculum which is the desire of others may improve the tone of academic excellence among students which is the desire members of the society with concern for better educational system.

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