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Assessment of Gender Trends in Admission And Academic Performance at Auchi Polytechnic, Auchi, Nigeria

[1]Oduntan, E.B., [2]Idogho, P.O & [3]Akpa, F.A.O.
Auchi Polytechnic
PMB 13, Auchi, Edo State, Nigeria
[1]eveoduntan@auchipoly.edu.ng [2]philipaidogho@yahoo.com [3]ladeakpa@yahoo.com

ABSTRACT

The study surveys the assessment of sex trends in admission of candidates for National Diploma (ND) and Higher National Diploma (HND) programmes in Auchi Polytechnic, Auchi, Nigeria. The sample data were gleaned from some selected departments. Statistics of registered students were downloaded from the polytechnic's website and descriptive statistics was used to analyse the data which also were represented graphically. Research questions were raised to streamline the study. Analysis revealed an upward growth of admission and improvement in performance of female students in science and technology courses. Data analysis revealed, among others, wide gaps in favour of the females in courses like Office Technology & Management, Food Technology, Fashion Technology, Science Lab Technology and Hospitality Management. Whereas there is a wide gap in favour of males in courses like Building Technology, Chemical Engineering, Architectural Technology, Surveying & Geo-informatics, Mechanical and Electrical engineering. Based on the findings of the study, it was recommended, among others, that stakeholders of technical education should further encourage the training of females in science and technology. Furthermore, the Polytechnic in collaboration with National Board for Technical Education, as part of community service should mount enlightenment campaign to educate people that the choice of courses should not be gender based.

Keyword: Academic performance, Gender, Enrollment, Education, Trend

Aims Research Journal Reference Format:
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1. INTRODUCTION

Girls and women are underrepresented in Science, Engineering and Technology (SET) courses compared to their male counterparts - not only in Auchi Polytechnic, but also in other tertiary institutions. In most schools, boys perform slightly better in science, engineering and technology courses than girls. However, the differences are small. On the other hand girls, have a significantly lower self concept in relation to science engineering and technology courses than boys. As female professionals in science, engineering and technology are still in a strong minority, they are becoming more visible, hence girls have few female role models in the fields of Science, Engineering and Technology.

But this is gradually changing as this study will show the improvement in the turnout of female graduands in various fields of this discourse. As a developing country, Nigeria is being confronted with various challenges that may be economic, social, political and educational. Gender is a term that refers to the socially constructed roles, responsibilities, identities and expectations assigned to men and women in our societies, families and cultures. The concept of gender also includes the expectations held about the characteristics, aptitudes, and likely behaviours of both women and men (femininity and masculinity).

These roles and expectations are learnt. It contrasts with the fundamental biological and physiological differences between males and females, which are known as secondary sex characteristics. Sex is another concept that is closely related to gender. Sex describes the biological differences between men and women, which are universal and determined at birth (UNESCO, 2005). Gender roles differ between cultures and communities and time is a factor that can determine it. For many, gender is always thought about in binary terms: man/woman; masculine/feminine. Expectations of women and men are limited by these binaries, and are communicated through sex role stereotyping.

These stereotypes limit gender appropriate behaviour to a range of rigid roles which are assigned to women and men on the basis of their gender, for example, 'women are nurturers', 'men are aggressors'. These role expectations are subtle and deeply ingrained, however there is great diversity in how individuals express their gender which frequently does not conform to these stereotypes. Not all women fit the stereotypical expectations of femininity, not all men fit those qualities associated with masculinity.

Education as a challenge in Nigeria constitutes a major focus because it is believed that education is an instrument of national development and thus, it could be employed to achieve political, economic and social developments. The development of any nation requires the collective efforts of its citizens and all residents. More importantly, to achieve national development, both male and female members of the society need to be carried along. In recent times it has been observed that there is a growing interest in the education of women, but a lot is still expected. There is need for effective sustainable human development that can be linked to women/female education. To improve and promote the status of women in our society, education plays a great role. As a proof, we can see the high number of women in key positions in the present government of Nigeria. If they were not educated, they would not have been called to occupy such offices. Achunine (2007), states that empowering women intellectually, socially and politically is imperative for redressing gender imbalance and enhancing the participation of women in decision making process in the family, community and also make contributions to the tasks of nation building.

Studies have shown that the 'gender gap' in SET is not always the same everywhere: it is sometimes bigger, sometimes smaller, boys perform better at a given point in time in some courses and girls perform better in other courses. This therefore means that, in principle, girls and boys can perform at the same level in SET. It is useful for teachers/instructors to be aware of the data on the performance and self-concept of boys and girls in the SET courses. Studies show that boys are on the average more extrinsically and intrinsically motivated, have a more positive self-perspective and have more self-confidence than girls. Also girls are much less likely than boys to believe that SET courses will become useful to them later on in life. Another study has also shown that girls are less likely than boys to see SET courses as being useful to them later and are therefore less motivated to make an effort in these courses.

This study is currently an ongoing work and so analysis of some randomly selected departments in the polytechnic are used. They include: Office Technology & Management, Food Technology, Fashion Technology, Science Lab Technology, Hospitality Management, Building Technology, Chemical Engineering, Architectural Technology, Surveying & Geo-informatics, Mechanical and Electrical engineering.

1.1 The Minority Position of Women

It is a fact that women who opt for SET courses and jobs, or who work as a scientist or technical expert in the academic world, are still moderately to severely underrepresented. It is difficult for them to mould the culture within the study programme, the institution or the company so that they feel at home there. People who find themselves in a minority position based on certain significant characteristics must suffer from the same negative consequences. Ott (1989) has shown that such negative consequences do not apply to men in female professions compare to women in male professions. For instance, men who were brought into nursing in the 1980s were advised and supported by their female colleagues and rapidly ascended in the hierarchy. However, women who went to work for the police had to prove themselves twice over and remained excluded. Ott concludes that it is not about numbers but rather the status of the minority in question. If this status is high, the minority position has a favourable impact, but if it is low the effect is unfavourable. The latter is still the case for SET. This demands constant vigilance on the part of SET study programmes, companies and institutions with regard to the position of female students and employees.

Women who opt for masculine study programmes and professions are often faced with a dilemma: they want to be 'one of the guys', but instead stand out even more from all their male colleagues and often need to work extra hard. A strong female network within an institution can offer female students and/or staff a great deal of support. Representatives of the network can enter into discussions with stakeholders and together work on the empowerment of female students/staff. (Cocky, Noortje , Gertje & Esther ,2012)

Imogie and Eraikhuemen (2008) analyzed the enrolment and graduation trends of students into various faculties for five consecutive sessions at the University of Benin. Findings from the study reveal that more males were enrolled and also graduated at the undergraduate and post graduate levels in the science, Medicine, social sciences and engineering faculties. It was also revealed in their study that there is a wide gender gap in favour of females in the Arts faculty. This status quo has remained over time even though there is improved access to education by both gender. Although there is still some socio-economic barrier to education access in most countries, the researchers asserted that the observed differences would continue as long as the gender differences are reinforced even at the basic level of the society, which is the family unit.

1.2 Research Questions

The following questions were raised to direct the study:

1. What is the ND enrolment trend of the selected departments in Auchi Polytechnic between 2009/10 and 2012/13 academic sessions?
2. What is the HND enrolment trend of the selected departments in Auchi Polytechnic between 2009/10 and 2012/13 academic sessions?
3. What is the ND academic performance trend of the selected departments in Auchi Polytechnic between 2008/09 and 2011/12 academic sessions?
4. What is the HND academic performance trend of the selected departments in Auchi Polytechnic between 2008/09 and 2011/12 academic sessions?

2. METHODOLOGY

The study is a survey. The causal comparative research design was used. The students' admission and enrolment data of ND and HND from 2009/10 to 2012/13 of some selected departments in Auchi Polytechnic, Auchi were gathered. Also the data on students' graduation for 2008/09 to 2011/12 academic session were collected from Management Information Unit (MIS) of Auchi Polytechnic. The data were analysed on session by session bases. Gender as a key focus here was used to classify the records. Descriptive statistics such as mean and difference were used to analyse the collated data. Finally the data were represented graphically using bar charts.

3. INTERPRETATION OF RESULTS

Since there are four (4) research questions, they are analysed one after the order as shown below:

Research Question 1: What is the ND enrolment trend of the selected departments in Auchi Polytechnic between 2009/10 and 2012/13 academic sessions.

The ND enrolment trend in Auchi Polytechnic, between 2009/10 and 2012/13 academic sessions is shown in Table 1.

Table 1: National Diploma (ND) Enrolment of Selected Departments by Gender & Session

PROGRAMME	2009/10		2010/11		2011/12		2012/13		TOTAL		MEAN		DIFF
	F	M	F	M	F	M	F	M	F	M	F	M	
ARCHITECTURAL TECHNOLOGY	8	49	12	53	17	76	16	87	53	265	13.3	66.3	212
CHEMICAL ENGINEERING	16	70	20	104	6	81	24	148	66	403	16.5	100.8	337
BUILDING TECHNOLOGY	1	54	4	45	24	73	22	108	51	280	12.8	70.0	229
ELECTRICAL/ELECTRONICS ENG. TECH.	14	197	12	255	13	325	13	294	52	1071	13.0	267.8	1019
FASHION DESIGN & CLOTHING TECH.	3	2	12	1	20	4	44	16	79	23	19.8	5.8	56
FOOD TECHNOLOGY	43	11	57	9	79	44	75	26	254	90	63.5	22.5	164
HOSPITALITY MANAGEMENT	57	9	57	12	20	73	77	13	211	107	52.8	26.8	104
MECHANICAL ENGINEERING TECH.	7	165	9	238	11	285	13	276	40	964	10.0	241.0	924
OFFICE TECHNOLOGY & MANAGEMENT	64	18	98	36	126	44	129	43	417	141	104.3	35.3	276
SCIENCE LABORATORY TECH.	95	50	210	106	279	147	381	159	965	462	241.3	115.5	503
SURVEYING & GEOINFORMATICS	3	9	1	10	11	40	12	60	27	119	6.8	29.8	92
TOTAL	311	634	492	869	606	1192	806	1230					
MEAN	28.3	57.6	44.7	79.0	55.1	108.4	73.3	111.8					
DIFFERENCE	323		377		586		424						

Source: MIS Unit, Auchi Polytechnic, Auchi

It is seen from table 1 that from 20009/10 to 2012/13 sessions female students have lower enrolments in departments like Architectural Technology, Chemical Engineering, Elect/Elect, Building Tech, Surveying & Geoinformatics and Mechanical Engineering. Whereas the reverse is the case in the other departments like Fashion Tech., Food Technology, Hospitality Management, Science Lab Tech And Office Technology. It is worthy of note that the departments under study are in School of Applied Sciences have more female students than male. Hence the total number of females in such departments from 2009/10 to 2012/13 sessions is higher than that of the males.

Also there is much difference in the total number of males in the departments that have higher male students than female. Looking at the trend also the enrolled female students are gradually improving in all the departments. Building Tech that had 1 female in 2009/10 session now has up to 22 in 2012/13 session. In the other departments where females students are lower, it is observed that there is not much increase in the trend for female enrolments.

Departments like Electrical Electronic has a mean of 13 for all the four sessions under consideration. Also Mechanical Engineering was not far from that, the mean for female is put at 10. Except for departments like Office Technology and Science Lab Technology, the difference in enrolments for males and females in various sessions is significant and so worthy to be noted. This can also clearly be seen in the graphical representation of the total female and male enrolments in the 3-D bar chart of figure 1 below.

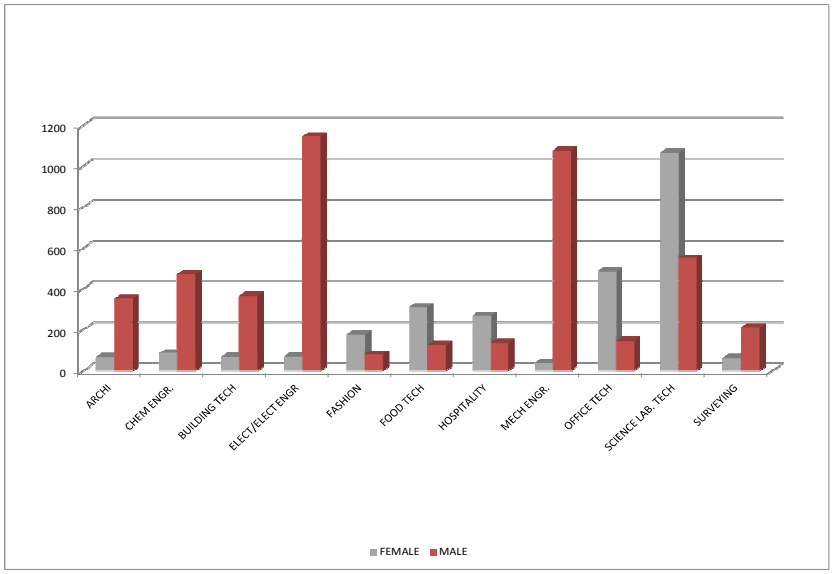

Figure 1(a) Graphical representation showing the enrolment trend of total female and male students in ND of selected departments in Auchi Polytechnic.

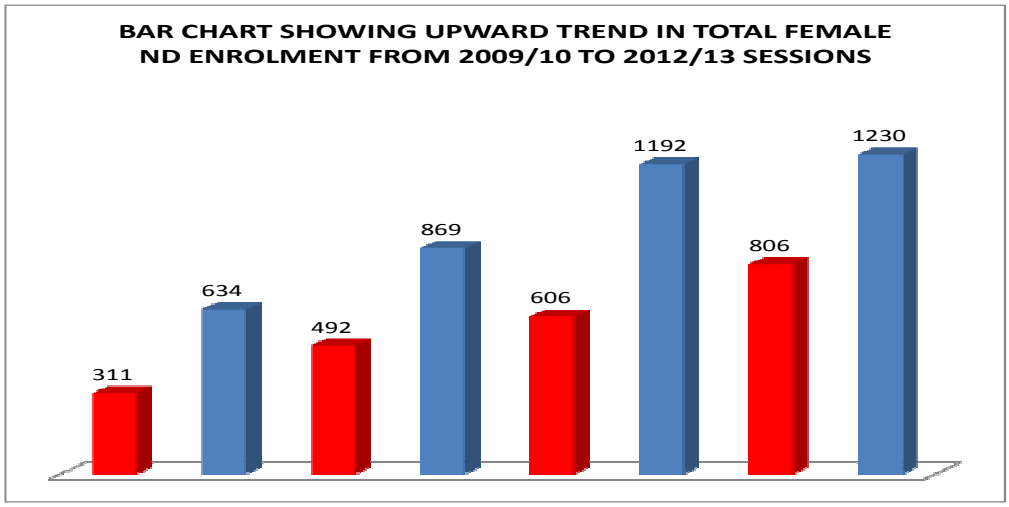

Figure 1(b) Graphical representation showing upward enrolment trend of total femaleND students from 2009/10 Session to 2012/13 Session

Research Question 2: What is the HND enrolment trend of the selected departments in Auchi Polytechnic between 2009/10 and 2012/13 academic sessions.?

Table 2 shows the enrolment trend of female and male students in the HND programme of some selected departments in Auchi Polytechnic, Auchi.

TABLE 2: HIGHER NATIONAL DIPLOMA (HND) ENROLMENT OF SELECTED DEPARTMENTS BY GENDER AND SESSION

PROGRAMME	2009/10		2010/11		2011/12		2012/13		TOTAL		MEAN		DIFF
	F	M	F	M	F	M	F	M	F	M	F	M	**
ARCHITECTURAL TECHNOLOGY	**	**	**	**	**	**	**	**	**	**	**	**	**
BUILDING TECHNOLOGY	5	54	9	42	2	58	7	51	11	100	2.8	25.0	89
CHEMICAL ENGINEERING TECH.	**	**	**	**	**	**	**	**	**	**	**	**	**
ELECTRICAL/ELECTRONICS ENG. TECH.	14	172	21	221	18	241	19	361	72	995	18.0	248.8	923
FASHION DESIGN & CLOTHING TECH.	**	**	**	**	**	**	**	**	**	**	**	**	**
FOOD TECHNOLOGY	**	**	**	**	**	**	**	**	**	**	**	**	**
HOSPITALITY MANAGEMENT	64	5	65	11	68	11	153	21	350	48	87.5	12.0	302
MECHANICAL ENGINEERING TECH.	14	178	12	183	9	215	14	362	49	938	12.3	234.5	889
OFFICE TECHNOLOGY & MANAGEMENT	149	28	126	36	140	32	292	60	707	156	176.8	39.0	551
SCIENCE LABORATORY TECH.	93	50	188	108	162	94	422	189	865	441	216.3	110.3	424
SURVEYING & GEOINFORMATICS	1	15	5	12	6	30	7	28	19	85	4.8	21.3	66
TOTAL	340	502	426	613	405	681	914	1072					
MEAN	30.9	45.6	38.7	55.7	36.8	61.9	83.1	97.5					
DIFFERENCE	162		187		276		158						

Source: MIS Unit, Auchipolytechnic, Auchi
** This indicates that HND programme is not existing in these departments.

It is shown here that 4 out of the 11 departments do not have HND programmes yet. Similarly as observed in ND enrollment, it is observed that 3 out of the 11 departments have more female students enrolling between 2009/10 and 2012/13. For Hospitality Management there is a total of 350 female students compared to only 48 male students from 2009/10 to 2012/13 sessions. Office Technology shows a very sharp difference between male and female enrolments of 551 female students over male students' enrolment. Science Lab Technology has a total of 865 female students' enrollment as against 441 male students that enrolled. On the other hand where we have more male students enrolments from 2009/10 to 2012/13 sessions, the differences are all very sharp. Where we have a total of 995 male students enrollments in electrical/electronics, there are just 72 female students. Similarly we have 938 total males enrollment for Mechanical as against 49 female students that enrolled. These differences are obvious and significant and so worth recognising. Also figure 2 below shows a graphical representation of these data.

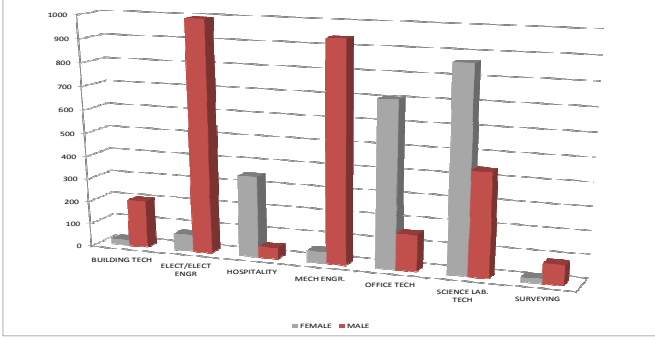

Figure 2(a) Graphical representation showing the enrolment trend of total female and male students in HND of selected departments in Auchi Polytechnic.

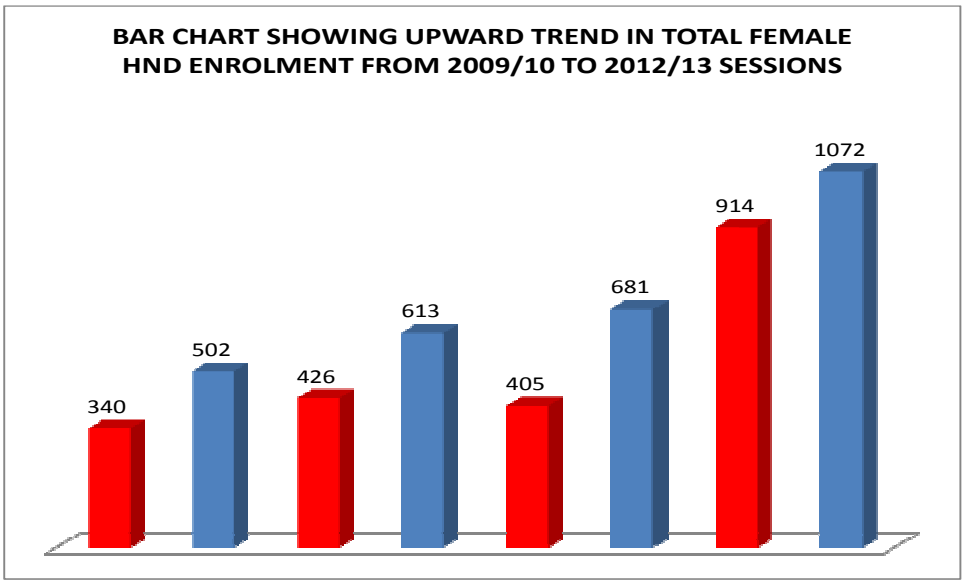

Figure 2(b) Graphical representation showing upward enrolment trend of total femaleHND students from 2009/10 Session to 2012/13 Session

Research Question 3: What is the ND academic performance trend in Auchi Polytechnic, between 2008/09 and 2011/12 academic sessions.?

Academic performance trend for ND students between 2008/09 and 2011/12 academic sessions are shown in Table 3 below.

TABLE 3: NATIONAL DIPLOMA (ND) ACADEMIC PERFORMANCE FROM 2008/09 TO 2011/12 SESSIONS

PROGRAMME	2008/09		2009/10		2010/11		2011/12		TOTAL		MEAN		DIFF
	F	M	F	M	F	M	F	M	F	M	F	M	
ARCHITECTURAL TECH.	**	**	**	**	3	36	7	45	10	81	5.0	40.5	71
CHEM ENGR.	**	**	**	**	11	55	14	37	25	92	12.5	46.0	67
BUILDING TECH	6	33	6	29	3	36	3	37	18	135	4.5	33.8	117
ELECT/ELECT ENGR	3	60	7	144	8	156	12	174	30	534	7.5	133.5	504
FASHION	4	2	8	2	15	2	12	1	39	7	9.8	1.8	-32
FOOD TECH	**	**	44	27	42	15	48	12	134	54	33.5	13.5	-80
HOSPITALITY	34	4	98	32	22	2	35	17	189	55	47.3	13.8	-134
MECH ENGR.	6	46	7	149	7	140	10	162	30	497	7.5	124.3	467
OFFICE TECH	49	6	53	6	12	57	85	25	199	94	49.8	23.5	-105
SCIENCE LAB. TECH	77	59	139	115	78	52	155	111	449	337	112.3	84.3	-112
SURVEYING & GEOINFO	3	11	1	8	2	9	1	10	7	38	1.8	9.5	31
TOTAL	182	221	363	512	203	560	382	631					
MEAN	16.5	20.1	33.0	46.5	18.5	50.9	34.7	57.4					
DIFFERENCE	39		149		357		249						

Source: MIS Unit, Auchi Polytechnic, Auchi
** Indicates that the affected department has not started as at that session.

Female performance in departments like Architectural Technology, Chemical Engineering, Electrical/Electronics and Mechanical Engineering have very low turnout of female students in the sessions under study. This was also same when they were enrolled for those courses. It is worthy of note that Science Lab. Tech has very high number of female students that graduated when compared with male students. It was an average of 112.3 for female and 84.3 for male. Also from the table below it will be observed that some differences are negative.

This shows that in those departments, female students are more in number than male. The graphical representation for this table is displayed below as figure 3. Despite the difference in total for male and female in some departments, total male enrolment is still higher than total female enrolment from one session to another. This can be seen in the total below each session in Table 3.

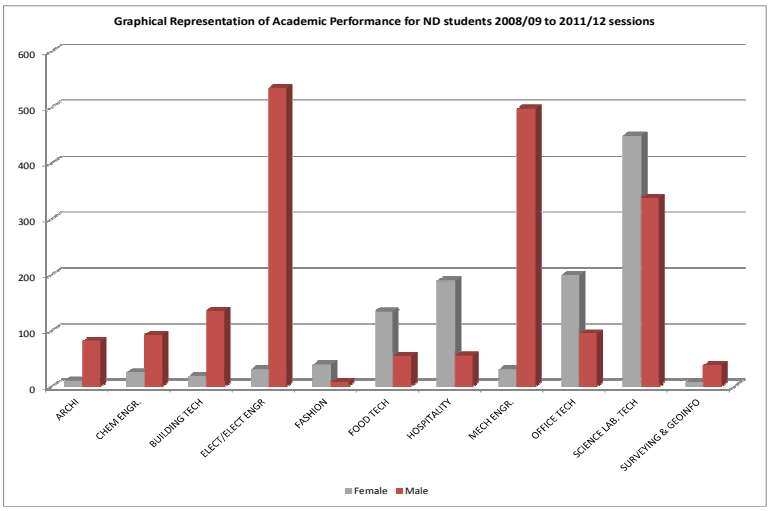

Figure 3 Graphical representation showing the academic performance trend of total female and male students in ND of selected departments in Auchi Polytechnic.

Research Question 4: What is the HND academic performance trend in Auchi Polytechnic, between 2008/09 and 2011/12 academic sessions.?

Table 4 shows the academic performance of HND students form 2008/09 to 2011/12 in some selected departments in Auchi Polytechnic, Auchi.

TABLE 4: HIGHER NATIONAL DIPLOMA (ND) ACADEMIC PERFORMANCE FOR 2008/09 TO 2011/12 SESSION

PROGRAMME	2008/09		2009/10		2010/11		2011/12		TOTAL		MEAN		DIFF
	F	M	F	M	F	M	F	M	F	M	F	M	
BUILDING TECH	4	40	6	38	6	37	7	35	23	150	5.8	37.5	127
ELECT/ELECT ENGR	10	111	7	133	11	170	9	145	37	559	9.3	139.8	522
HOSPITALITY	61	8	45	6	29	5	62	11	197	30	49.3	7.5	-167
MECH ENGR.	13	169	12	177	14	151	10	159	49	656	12.3	164.0	607
OFFICE TECH	73	8	84	12	99	18	104	22	360	60	90.0	15.0	-300
SCIENCE LAB. TECH	135	79	105	59	87	47	160	118	487	303	121.8	75.8	-184
SURVEYING & GEOINFO	1	32	2	12	2	17	8	22	13	83	3.3	20.8	70
TOTAL	297	447	261	437	248	445	360	512					
MEAN	27.0	40.6	23.7	39.7	22.5	40.5	32.7	46.5					
DIFFERENCE	150		176		197		152						

Source: MIS Unit, Auchi Poltechnic, Auchi

There are fewer departments here because some of the departments mentioned under research question 3 do not have HND programmes yet. We observe that more females graduated from Hospitality, Office Technology & Management and Science Lab. Technology as can be seen where the differences department by department resulted in negative values. But at the end of each session, we have more male students than female students. Mechanical and Electrical/Electronics have very high number of males, 559 and 656 respectively, compared to the low number of females students, 37 and 49 respectively. This clearly confirms that engineering courses have more of male than female students.

Graphical Representation of Academic Performance for HND Students 2009/09 to 2011/12 sessions

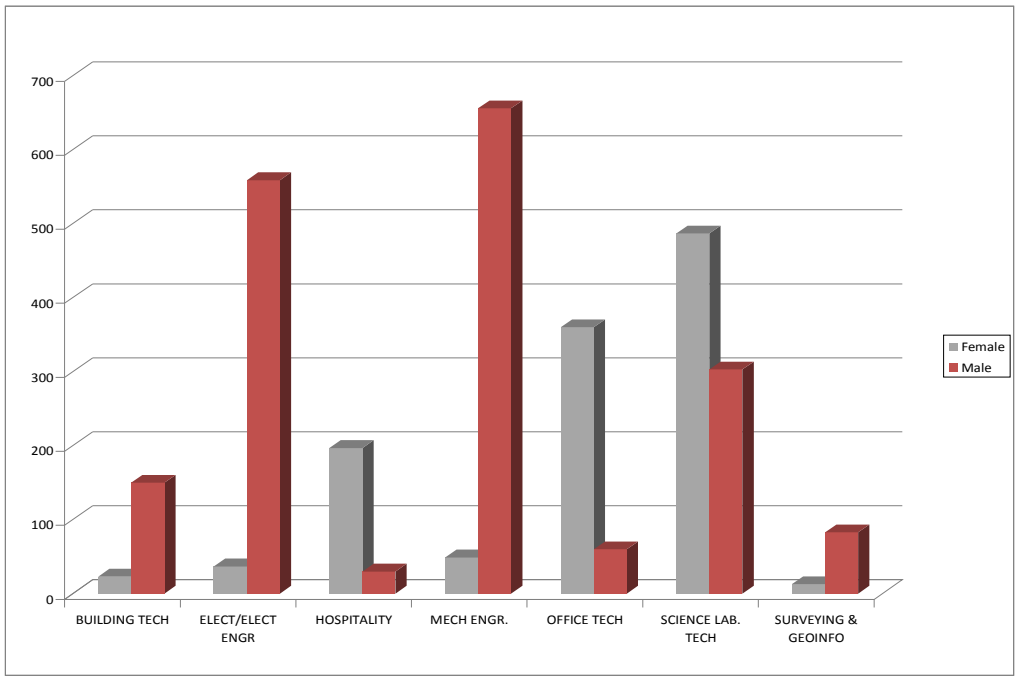

Figure 4 Graphical representation showing the academic performance trend of total female and male students in HND of selected departments in Auchi Polytechnic.

Table 5 below shows the overall Academic Performance Breakdown Showing Statistics of Graduands of Selected Departments in Auchi Polytechnic According to GPA classification from 2008/09 to 2011/12 Academic session.

This table further shows a detailed breakdown of the academic performances of male and female students in terms of their GPA classification. The summary of it is what we have in Tables 3 and 4 above. It is observed from this table that the performance of male students at the different classes of graduation (Distinction, Upper Credit, Lower Credit and Pass) for ND and HND is higher than female. In some cases, they are equal. Surprisingly, in courses like Science lab Tech where we have more female enrollments, the male students performed better academically in the distinction class for the sessions under review. We have more females in Upper and Lower Credit and Pass in Science Lab. Technology.

Table 5: Overall Academic Performance of Graduands 2008/09 to 2011/12 Academic Sessions

	2008/2009				2009/2010				2010/2011				2011/2012			
	ND		HND		ND		HND		ND		HND		ND		HND	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Science Lab. Tech.																
Distinction	3	2	7	5	13	3	4	4	3	3	2	0	4	6	5	3
Upper Credit	18	10	22	45	41	44	20	28	14	19	16	24	27	20	41	42
Lower Credit	30	53	45	66	45	66	21	51	20	31	20	45	51	71	62	100
Pass	8	12	5	19	16	26	14	22	15	25	9	18	29	58	10	15
	59	**77**	**79**	**135**	**115**	**139**	**59**	**105**	**52**	**78**	**47**	**87**	**111**	**155**	**118**	**160**
Hospitality Mgt.																
Distinction	0	1	0	0	0	4	0	0	1	1	0	1	1	2	0	1
Upper Credit	0	5	3	4	1	17	0	8	0	6	2	6	7	13	0	7
Lower Credit	1	21	1	46	27	67	4	29	1	11	1	8	7	13	9	35
Pass	3	7	4	11	4	10	2	8	0	4	2	14	2	7	2	19
	4	**34**	**8**	**61**	**32**	**98**	**6**	**45**	**2**	**22**	**5**	**29**	**17**	**35**	**11**	**62**
Food Science & Tech																
Distinction	0	0	0	0	2	2			1	0	0	0	1	1	0	0
Upper Credit	0	0	0	0	10	9			5	6	0	0	5	11	0	0
Lower Credit	0	0	0	0	10	19			6	23	0	0	4	21	0	0
Pass					5	14			3	13			2	15		
	0	**0**	**0**	**0**	**27**	**44**	**0**	**0**	**15**	**42**	**0**	**0**	**12**	**48**	**0**	**0**
Mech. Engineering																
Distinction	2	0	4	3	16	0	7	0	5	0	6	2	5	0	6	0
Upper Credit	10	0	41	3	42	2	45	3	32	1	37	7	30	2	39	3
Lower Credit	12	2	79	5	65	2	112	6	63	6	97	5	69	7	81	7
Pass	22	4	45	2	26	3	13	3	40	0	11	0	58	1	33	0
	46	**6**	**169**	**13**	**149**	**7**	**177**	**12**	**140**	**7**	**151**	**14**	**162**	**10**	**159**	**10**
Elect/Elect Engineering																
Distinction	3	0	6	0	8	0	2	0	1	0	4	0	12	0	9	1
Upper Credit	15	1	21	6	40	0	32	1	20	2	34	4	54	3	48	3
Lower Credit	20	0	74	4	72	5	83	5	90	2	111	4	80	4	103	5
Pass	22	2	10	0	24	2	16	1	45	4	21	3	28	5	31	1
	60	**3**	**111**	**10**	**144**	**7**	**133**	**7**	**156**	**8**	**170**	**11**	**174**	**12**	**191**	**10**
Surveying & Geo-Informatics																
Distinction	1	0	0	0	0	0	0	0	0	0	0	0	4	0	0	2
Upper Credit	1	1	7	0	1	0	2	1	1	1	6	0	2	0	3	1
Lower Credit	6	1	22	1	5	0	8	1	7	1	8	1	1	0	7	3
Pass	3	1	3	0	2	1	2	0	1	0	3	1	3	1	12	2
	11	**3**	**32**	**1**	**8**	**1**	**12**	**2**	**9**	**2**	**17**	**2**	**10**	**1**	**22**	**8**

Building Tech																
Distinction	2	0	1	0	0	0	0	0	1	0	1	0	5	0	2	0
Upper Credit	5	3	9	1	1	1	7	2	8	0	5	0	9	0	3	0
Lower Credit	19	3	22	2	21	3	13	1	17	1	20	4	10	1	25	4
Pass	7	0	8	1	7	2	18	3	10	2	11	2	13	2	5	3
	33	**6**	**40**	**4**	**29**	**6**	**38**	**6**	**36**	**3**	**37**	**6**	**37**	**3**	**35**	**7**
CHEMICAL																
Distinction	**	**	**	**	**	**	**	**	2	1	**	**	6	2	2	0
Upper Credit	**	**	**	**	**	**	**	**	19	5	**	**	17	2	3	0
Lower Credit	**	**	**	**	**	**	**	**	22	4	**	**	38	10	25	4
Pass	**	**	**	**	**	**	**	**	12	1	**	**	16	0	5	3
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**55**	**11**	**0**	**0**	**77**	**14**	**35**	**7**
ARCHI																
Distinction	2	0	0	0	0	0	0	0	1	0	**	**	1	0	**	**
Upper Credit	5	3	0	0	1	1	0	0	8	0	**	**	10	1	**	**
Lower Credit	19	3	0	0	21	3	0	0	17	1	**	**	24	4	**	**
Pass	7	0	0	0	7	2	0	0	10	2	**	**	10	2	**	**
	33	**6**	**0**	**0**	**29**	**6**	**0**	**0**	**36**	**3**	**0**	**0**	**45**	**7**	**0**	**0**
OFFICE TECH																
Distinction	0	2	0	0	0	0	0	2	1	1	1	3	1	0	2	4
Upper Credit	2	11	4	31	1	10	4	29	2	15	6	40	5	20	4	38
Lower Credit	3	20	2	28	3	23	6	31	5	23	7	38	14	42	13	42
Pass	1	16	2	14	2	20	2	22	4	18	4	18	5	23	3	20
	6	**49**	**8**	**73**	**6**	**53**	**12**	**84**	**12**	**57**	**18**	**99**	**25**	**85**	**22**	**104**
FASHION																
Distinction	0	0	0	0	0	1	0	0	0	1	**	**	0	1	**	**
Upper Credit	0	2	0	0	1	1	0	0	1	4	**	**	0	7	**	**
Lower Credit	2	2	0	0	1	4	0	0	1	6	**	**	1	3	**	**
Pass	0	0	0	0	0	2	0	0	0	4	**	**	0	1	**	**
	2	**4**	**0**	**0**	**2**	**8**	**0**	**0**	**2**	**15**	**0**	**0**	**1**	**12**	**0**	**0**

Source:MIS Unit, Auchi Polytechnic, Auchi

4. CONCLUSION

In some countries the shortage of women teachers can inhibit the enrolment of girls. In many cases, girls start to undertake heavy domestic chores at a very early age and are expected to manage both educational and domestic responsibilities, often resulting in poor scholastic performance and an early drop-out from schooling. After analyzing the data, it was revealed that there are wide gaps in favour of males when the overall total number of males and females from one session to another are viewed in both enrolment and graduation. It was also revealed that there is an upward trend in female enrolment in the selected departments. In view of these observations in this paper, suggestions are made for the improvement of girl-child education and participation in the sciences and engineering courses. This paper is of the view that the observed gaps are basically as a result of the societal perception of the roles of males and females, especially as it is generally believed that engineering and science courses/disciplines are for men and arts and education are for women. If the society is well informed on the fact that people can make career choices based on issues personal to them rather than on their gender, then the issue of gender sensitivity in choice of career will gradually be scoured.

5. RECOMMENDATIONS

In the light of the findings, the researchers hereby recommend, among others:

- that stakeholders of technical education should further encourage the training of females in science engineering and technology.
- that the Polytechnic in collaboration with National Board for Technical Education (NBTE), as part of community service should mount enlightenment campaign to educate people that the choice of courses should not be gender biased.
- the government should also encourage females that are enrolled into science and engineering disciplines by giving out scholarship to them; and
- very exceptional female students who graduate with good grades should not be left out by offering them good employments in the public sector.

If these are implemented, it will go a long way in bridging the gaps in enrolment and graduation figures for males and females. Also the society, women and men need to work together with children and youth to break down persistent gender stereotypes, taking into account the rights of the child and their responsibilities.

REFRENCES

1. Achunine R.N. (2007) Gender Challenges of Girls' Education and Development in Nigeria, The way Forward. A lead paper presented at the 2nd B-Annual International Conference organized by forum for African Women Educationalists (FAWE) Nigeria South zone, held 13th-19th May 2007 at Owerri, Imo State.
2. Cocky Booy, Noortje Jansen, Gertje Joukes & Esther van Schaik (2012) Trend Analysis Gender in Higher STEM Education, VHTO, National Expert Organisation, Girls/Women and Science/Technology Science Park 400 1098 XH Amsterdam, The Netherlands.
3. Imogie A. O. & Eraikhuemen L. (2008), An Inquiry into Sex Differentiation in Admission and Academic Performance at the University of Benin, Nigeria, *Benin Journal of Gender Studies*, Vol 1 (1) pp 1-14
4. Medinat F. S., Florence A. O.. & Lasiele A. Y. (2011) Education reforms in Nigeria: Implications for the girl-child participation in Sciences Technology and Mathematics (STM), *Education Research Journal*, Vol 1(1) pp. 1-8 Retrieved Aug 25th 2013 from http://www.resjournals.com/ERJ.
5. Ott, Marlies (1989), Effects of the Male-Female Ratio at Work: Policewomen and Male Nurses, SAGE Journal of *Psychology of Women Quarterly* doi: 10.1111/j.1471402.1989.tb00984.x, *vol. 13 no. 1 41-57*
6. UN 4th World Conference on Women, (1995) Platform for Action:The Girl Child, Beijing, China, retrieved from http://www.un.org/womenwatch/daw/beijing/platform/girl.htm. Sept 28th, 2013