GENDER ISSUES IN TECHNICAL EDUCATION, PROBLEMS AND PROSPECTS: TECHNICAL EDUCATION PROGRAMME IN AKWA IBOM STATE COLLEGE OF EDUCATION IN PERSPECTIVE

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Abstract
The study sought to identify problems that hinder effective female participation in technical education programmes in Akwa Ibom State College of Education. The population involved in this investigation consisted of 350 students in the four Departments of Vocational Education in the college. The sample that participated in the study consisted of 90 students: 75 males and 15 females in the department of Technical education, 2010/2011 session. Two research questions and two null hypotheses were central to the study. A 10-item questionnaire developed by the researchers and validated by experts was employed to obtain data from the sample. The data generated were treated with descriptive statistics and t-test of independence for results. Student related gender problems and staff related gender problems were viewed by the respondents as hindering effective female participation in technical education in Akwa Ibom State College of Education. Both male and female respondents failed to differ significantly in their views of student related gender and staff related gender problems hindering effective female participation in technical education programme in college. For gender equality or parity to reign, the identified problems
must be seen as inequities to be eradicated from all forms of education operating under an apparent democratic atmosphere. Prospects of female participation in technical/vocational education lie in the eradication of gender disparity.

Education, as a normative enterprise, generates issues. Gender issues constitute an educational concern that has given rise to debates, conflicts etc. in almost all departments of human affairs. Gender issues hinge on either gender equality/parity or gender imbalance/disparity. Gender equality or parity means men and women enjoy same opportunities, outcomes, rights, obligations in all spheres of human endeavour. Equity between men and women exists when both sexes share equally in the distribution of power and influence, equal opportunities for economic independence, equal access to education, politics and equal opportunities to achieve self actualization. It is the absence of this equality between both sexes in many spheres of life that has generated serious gender issues which have contributed to an ugly dent in the image of democratic governance.

In Nigeria, the Federal Government has stipulated in the National Policy on Education that every Nigerian child shall have right to equal educational opportunities irrespective of any real or imagined disabilities, distinctions or dichotomies such as gender, ethnic group, religion or social status(Federal Republic of Nigeria (FRN), 2004). It is unfortunate that despite all the appreciable efforts of the government to achieve equalization of educational opportunities, there still exist noticeable disparities in educational attainment in terms of gender. This is a current educational issue of no mean order.

Gender has been defined differently by different sources. Central to all the definitions is the fact that gender implies male or female and their characteristics or socio – cultural construct created by society (Besow, 1991; Azikiwe, 1991; Ainabor, 2010; Owenvbiugie and Idjawe, 2011).

Gender issues have long been identified as one of the most pressing hindrances in the Nigerian Education System and the world at large. This is more amplified in technical education. However, the National Policy on Education (FRN, 2004) is an equal opportunity document which is devoid of gender bias. This policy supports the education of both sexes as observed by Ogwu and Oranu (2006).

The goals of technical and vocational education on education (FRN, 2004) are oriented towards producing skilled manpower and no distinction is made between the sexes in skills acquisition.
The task of nation building belongs to men and women but when a preponderant portion of the task is on males, then there is the problem of imbalance or gender disparity in the training of manpower. This gender disparity is a serious issue in the Nigerian and African education. The gender problems centre on low female enrolment, gender career stereotyping and discrimination in occupations and forms of education especially in technology education. Girls and women have been under represented in education and training mostly in sciences and technology education in particular (Imenda, 1989 and Ajeyalemi, 1990). Also UNESCO (1998) reported that female enrolment rates at all levels of education remain below that of males and that girls have a higher drop-out rates than boys. Moreover, their career choice is largely confined to the”feminine” areas like teaching, nursing secretarial studies and catering. This is confirmed by FAWE (1995 : 23) and PCEG (1993 :23-24 ) that…

1. 36 million girls in sub-Saharan Africa are out of school and those who gain access are poorly served.
2. Even when the same number of girls and boys enroll in the first grade by fourth grade, 50% of the female students would have dropped and 69% leave school before they have acquired full literacy.
3. By the end of the primary school cycle, the completion rate for girls is only 34%
4. Only 10% of girls as compared to 36% of boys attend secondary schools.
5. Four times as many boys as girls continue education up to tertiary level.
6. Four years additional schooling for girls can increase agricultural production by 89%

Similarly, Anagbogu (2001) reported that as a result of gender stereotyping, many girls prefer such courses like Home Economics and Mass communication which they consider as being less tedious for them leaving the technical courses to males. Azikiwe (2000) reported that in the seven Federal Colleges of Education (Technical) in Nigeria, there were 35 male students who chose automobile technology trade in the final year NCE course as against 4 females. Also 31 males specialized in building against 7 females while 49 male students opted for woodwork and electrical technology as against 7 females. The report also showed that the number of academic staff by sex and trade were as follows: auto mechanics 12 males, no females; woodwork 4 males, no females; metalwork 6 males, no females; electrical / electronics 12 males, no females and building education 12 males, 1 female. The consequence of this, according to Azikiwe (2000) is acute shortage of technical education staff (Academic and non-Academic) in Nigeria tertiary institutions particularly at the Federal Colleges of Education, Technical. Furthermore, there is gender disparity in academic achievement in science technology and mathematics education in favour of the males (Ogunleye, 2001). Gender disparity is not only an issue in Nigerian education but also a serious concern in African education.
Gender Disparity in Vocational – Technical Education in Akwa Ibom State College of Education

Gender imbalance has been a disturbing feature in the enrolment of students in the school of vocational and technical education in Akwa Ibom State College of Education right from its inception of nearly two decades ago, but only the recent figures are considered in this study (vide table1)

Table 1: Student Enrolment in Technical Education Programme, College of Education, Akwa Ibom State (2006 - 2010)

<table>
<thead>
<tr>
<th>S/N</th>
<th>Session</th>
<th>Males</th>
<th>Females</th>
<th>total</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2006/2007</td>
<td>20 (83.3%)</td>
<td>4 (16.7%)</td>
<td>24</td>
<td>Gender imbalance</td>
</tr>
<tr>
<td>2</td>
<td>2007/2008</td>
<td>19 (82.6%)</td>
<td>4 (17.4%)</td>
<td>23</td>
<td>Gender imbalance</td>
</tr>
<tr>
<td>3</td>
<td>2008/2009</td>
<td>17 (89.5%)</td>
<td>2 (10.5%)</td>
<td>19</td>
<td>Gender imbalance</td>
</tr>
<tr>
<td>4</td>
<td>2009/2010</td>
<td>15 (88.2%)</td>
<td>2 (11.8%)</td>
<td>17</td>
<td>Gender imbalance</td>
</tr>
<tr>
<td></td>
<td><strong>Totals</strong></td>
<td></td>
<td></td>
<td><strong>17</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Admissions Office, C.O.E Afaha Nsit, Akwa Ibom State

The Federal Ministry of Education Draft 2 (2009: 30-33) made the following reports regarding gender disparity in vocational education:
1. There are 159 recognized technical colleges offering trades at NTC/NBC level (19 Federal, 137 state and 3 private) with a total enrolment of 92, 216 (86.1% male and 13.9% females) in 2005.

2. In 2005, there were 2, 730 teaching staff comprising of a) 2, 285 (83.7%) males and b) 445 (16.3%) females. Student – staff ratio was 1:35. The standard ratio is 1:25 indicating the need for more qualified staff. Owenvbiugie and Idjawe (2011) reported gender disparity in trades practices. Out of 2, 542 apprentices who enrolled in vocational trade programmes 2, 215 (87%) were males while 327 (13%) were females. Reasons for this disparity have been rooted in gender problems.

Gender imbalances in vocational/technology education in Nigeria have been an issue of serious concern to educators, women themselves and other stakeholders. In the recent agricultural training offered by Akwa Ibom State government to farmers, men were considered first before females in both training and financial benefits. This kind of practice has a contributory effect on the already gender imbalance in the
affairs of the state and nation. Usoro, Usoro, Ibritam and Udofia (2009) identified causes of gender disparity in the Nigerian technical colleges to include: sex factor, parental interest, teachers, government and nature of technical education, female preference for some subjects and not others, traditional prejudice against education of women in Nigeria and Africa (Osuagwu, 1980; Nwachili and Egbue, 1993). In Ghana, Swaziland and Zambia and other African nations, males dominate over female counterparts in secondary and tertiary institutions as reported by Wheldon and Smith (1986). Causes cited include; sex factor, discrimination in admissions process, nature of technical education subjects and females’ subject preference.

The foregoing background constituted the theoretical rationale for this investigation.

Statement of the Problem

Educational literature is replete with numerous instances of gender imbalance among individuals pursuing technical education at secondary and tertiary institutions. This imbalance operates to the disfavour of females enrolling in technical education programmes in Nigeria, whereas the task of national development is that of both sexes. The national policy on education is an equal opportunity document which is devoid of gender bias. Despite the clear position of the national policy on education, the gender imbalance in the pursuit of technical education and technology education as a whole still persists as research evidence indicates.

The gender disparity in the pursuit of technical education is a common feature affecting females in the third world nations including Nigeria. The gender disparity in the technical education programme offered at Akwa Ibom State College of Education is a case in point. The question to raise at this juncture is: what are the causes of the gender problems that hinder females from participating in technical education in Nigeria with particular reference to technical education programme at the college of education, Akwa Ibom State? There is no ready answer to this question because little or no research has been done in this respect. Whatever answers are available, lack empirical support because they are mere opinions. It is the lack of or limited research evidence to indicate the causes of gender problems that hinder effective female participation in technical education programme in Akwa Ibom State College of Education, which provided the focal point of the problem for this investigation.

Significance of the Study

The findings of this study are apt to be significant in the following ways: the findings of this study will provide useful information to college authority as well as the ministry of education regarding the actual problems that hinder females from effective participation in technical education for their personal good and that of the nation. When the problems are identified, it became practicable to plan for solutions.
When published, the findings of the study would also be very beneficial to educational researchers and students as sources of literature evidence regarding causes of gender imbalance in technical education. The findings of this investigation are likely to generate related problems for further research.

**Purpose of the Study**

The purpose of the study was to ascertain the gender problems that hinder females from effective participation in the technical education programme offered by the College of Education in Akwa Ibom State. Specifically, the study was designed to ascertain the causes of:

1. Gender disparity that hinder effective female participation in technical education programmes in Akwa Ibom State College of Education.
2. Student gender-related problems that hinder effective female participation in technical education programme Akwa Ibom State College of Education.

**Research Questions**

The study sought to provide answers to the following research questions:

1. What are the student related gender problems that hinder effective female participation in technical education programmes in Akwa Ibom State College of Education?
2. What are the staffs related gender problems that hinder effective female participation in technical education programmes in Akwa Ibom State College of Technical Education?

**Null Hypotheses**

The following null hypotheses were formulated on the bases of the research questions and tested at P = .05 level of significance:

1. There is no significant difference between the mean responses of male and female students on the student related gender problems in the pursuit of technical education in the College of Education, Afaha Nsit.
2. There is no significant difference between the mean responses of male and female students on the staff related gender problems in the pursuit of technical education in the College of Education, Afaha Nsit.

**Methodology**

This study involved a descriptive design focusing on a case study. The study was executed in Akwa Ibom State College of Education, Afaha Nsit. The population of the study consisted of 350 students in the school of vocational - technical Education, College of Education, Afaha Nsit. Since vocational education shares in the problems of gender disparity, it becomes necessary to focus on and use technical education students as purposive as well as cluster sample to represent the four service
areas in the school. The sample that participated in the study consisted of 75 male and 15 female students (90). A 10 – item questionnaire developed by the researchers was used to collect data for the study. Each questionnaire was followed by five response options namely: Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The instrument was validated by three lecturers at the College of Education, Afaha Nsit: One test and measurement expert from the educational foundations and two experts from the Department of Technical Education. Adequate copies of the questionnaire were produced and distributed by hand to the respondents. All the 90 copies of the questionnaire administered were completed and returned representing 100% return rate. The return of all the completed forms was possible because the study involved a time – place sample.

Data Analysis
The data obtained were analyzed with descriptive (mean computation) and inferential statistics (t – test of independence) in order to provide answers to research questions and test the null hypotheses. A mean of $X = 2.50$ was acceptable. Null hypothesis was rejected in favour of alternative one when computed value exceeded the tabled value and not rejected when the reverse was the case.

Results
The results of this investigation are reported following each research question/null hypothesis testing.

Research Question 1
What are the students’s related gender problems that hinder females from effective participation in technical education programme offered in Akwa Ibom State College of Education?
The responses to the questionnaire items related to the Research Question 1 are summarized in table 2.

Table 2: Summary of Responses to Questionnaire Items Related to Research Question 1

<table>
<thead>
<tr>
<th>S/N</th>
<th>Problems / Issues</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>$X$</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Poor female aptitude for technical education</td>
<td>38</td>
<td>22</td>
<td>9</td>
<td>7</td>
<td>3.06</td>
<td>Agree</td>
</tr>
<tr>
<td>2</td>
<td>Female students low preference for male teachers</td>
<td>18</td>
<td>20</td>
<td>12</td>
<td>8</td>
<td>2.65</td>
<td>Agree</td>
</tr>
<tr>
<td>3</td>
<td>Lack of drive of female students to participate in shop practicals.</td>
<td>40</td>
<td>23</td>
<td>9</td>
<td>7</td>
<td>3.12</td>
<td>Agree</td>
</tr>
</tbody>
</table>
Female students’ fear of the hazardous nature of technical education.

Female students prefer some technical subjects instead of others e.g. Electrical/Electronics, technical drawing as opposed to Metal/Auto.

Data analysis of table 2 indicates that the respondents viewed student related gender problems as hindering effective female participation in technical education in Akwa Ibom State College of Education. The mean response to each item was above 3.00. Respondents used in the study agreed on all the items as being the student related gender problems in technical education.

**Research Question 2:** What are the related gender problems that hinder effective female participation in technical education in Akwa Ibom State College of Education? The responses to the questionnaire items related to Research Question 2 are summarized in table 3.

**Table 3: Summary of Responses to Questionnaire Items Related to Research Question 2**

<table>
<thead>
<tr>
<th>S/N</th>
<th>Problem / Issues</th>
<th>Sa</th>
<th>A</th>
<th>D</th>
<th>Sd</th>
<th>X</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Female Students Prefer Female Technical Teachers</td>
<td>42</td>
<td>26</td>
<td>8</td>
<td>4</td>
<td>3.25</td>
<td>Agree</td>
</tr>
<tr>
<td>7</td>
<td>Gender Discrimination In Appointment Of Course/Group Leaders By The Class Members</td>
<td>32</td>
<td>26</td>
<td>17</td>
<td>3</td>
<td>2.99</td>
<td>Agree</td>
</tr>
<tr>
<td>8</td>
<td>Male Teachers Give More Attention To Male Students</td>
<td>20</td>
<td>32</td>
<td>2</td>
<td>1</td>
<td>3.01</td>
<td>Agree</td>
</tr>
<tr>
<td>9</td>
<td>Curriculum Content Favours Male Students</td>
<td>29</td>
<td>24</td>
<td>15</td>
<td>9</td>
<td>2.70</td>
<td>Agree</td>
</tr>
<tr>
<td>10</td>
<td>Grouping Male And Female Students For Practicals Exposes The Weakness Of The Latter.</td>
<td>5</td>
<td>7</td>
<td>26</td>
<td>22</td>
<td>2.16</td>
<td>Disagree</td>
</tr>
</tbody>
</table>

The data analysis in table 3 indicates perception of 4 items (each with \( \bar{X} = 2.70 \text{ to } 3.25 \text{ 00}^+ \)) as being the staff related gender problems that hinder effective female participation in technical education in Akwa Ibom State College of Education. The last questionnaire item failed to win an acceptable mean score (which is of course negligible).

Testing of the Null Hypotheses

Null Hypothesis 1: There is no significant difference between the mean responses of male and female students on the student related gender problems that hinder effective female participation in technical education in Akwa Ibom State College of Education.

The results of testing hypothesis 1 are summarized in table 4.

Table 4: Summary of Results of Testing the Null Hypothesis 1

<table>
<thead>
<tr>
<th>Item No</th>
<th>$X_1$</th>
<th>SD$_1$</th>
<th>$X_2$</th>
<th>SD$_2$</th>
<th>$t_c$</th>
<th>$t$ at P = .05</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.86</td>
<td>1.18</td>
<td>3.75</td>
<td>1.34</td>
<td>0.30</td>
<td>1.96</td>
<td>Do not reject $H_0$</td>
</tr>
<tr>
<td>2</td>
<td>3.95</td>
<td>1.29</td>
<td>3.74</td>
<td>1.19</td>
<td>0.63</td>
<td>1.96</td>
<td>Do not reject $H_0$</td>
</tr>
<tr>
<td>3</td>
<td>3.88</td>
<td>1.09</td>
<td>3.58</td>
<td>0.85</td>
<td>1.19</td>
<td>1.96</td>
<td>Do not reject $H_0$</td>
</tr>
<tr>
<td>4</td>
<td>4.12</td>
<td>0.97</td>
<td>3.67</td>
<td>1.35</td>
<td>1.23</td>
<td>1.96</td>
<td>Do not reject $H_0$</td>
</tr>
<tr>
<td>5</td>
<td>3.48</td>
<td>1.02</td>
<td>4.13</td>
<td>0.84</td>
<td>1.18</td>
<td>1.96</td>
<td>Do not reject $H_0$</td>
</tr>
</tbody>
</table>

$N_1 = 75, N_2 = 15, df = 88$

Data analysis in table 4 yielded lower values of computed $t$ than the critical value. The null hypothesis was therefore not rejected. The respondents failed to differ significantly in their perception of student gender-related problems as hindering effective female participation in technical education.

$H_{02}$: There is no significant difference between the mean responses of male and female students on the staff related gender problems hindering effective female participation in technical education in Akwa Ibom State College of Education.

The summary of results of testing the null hypothesis 2 is presented in table

Table 5: Summary of Results of Testing the Null Hypothesis 2

<table>
<thead>
<tr>
<th>Item No</th>
<th>$X_1$</th>
<th>SD$_1$</th>
<th>$X_2$</th>
<th>SD$_2$</th>
<th>$t_c$</th>
<th>$t$</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.56</td>
<td>1.09</td>
<td>4.26</td>
<td>0.85</td>
<td>1.19</td>
<td>1.96</td>
<td>Do not reject $H_0$</td>
</tr>
<tr>
<td>7</td>
<td>4.27</td>
<td>0.94</td>
<td>3.87</td>
<td>1.19</td>
<td>1.23</td>
<td>1.96</td>
<td>Do not reject $H_0$</td>
</tr>
<tr>
<td>8</td>
<td>4.13</td>
<td>1.03</td>
<td>3.84</td>
<td>1.25</td>
<td>0.62</td>
<td>1.96</td>
<td>Do not reject $H_0$</td>
</tr>
</tbody>
</table>
Summary of Findings

The findings of this investigation may be summarized as follows:

1. Poor female aptitude for technical education, lack of drive for workshop practicals, fear of hazardous nature of technical education, female students’ preference of some subjects and not for others were viewed by respondents as factors hindering effective female participation in technical education in Akwa Ibom State College of Education.

2. Female students’ preference for female technical teachers (very few in number) gender discrimination in the appointment of classes course leader by class members, greater teacher attention on male rather than female students, gender biased curriculum and grouping of male and female students for practicals were viewed by respondents as hindering effective female participation in technical education.

3. Both male and female respondents failed to differ significantly in their views of student related gender and staff related gender problems that hinder effective female participation in technical education programmes in Akwa Ibom State College of Education.

Discussion of Findings

The findings of this investigation may be stated and discussed as follows:

The respondents viewed student – related gender problems as hindering effective female participation in technical education in Akwa Ibom State College of education. Poor female aptitude towards technical education, lack of drive in females for workshop practicals, fear of hazardous nature of technical education and females’ preference for some subjects (few) and not others constituted some of the factors preventing effective female participation in technical education. The above findings have supported the efforts of Acker and Oatley (1993); Azikiwe (2000), Usoro, Usoro and Ibritam (2009). These findings are not limited to technical education programmes.
Female students’ preference for female technical teachers (who are extremely few at the moment), gender discrimination in the appointment of class or course leaders by class members, greater teacher attention on males than on female counterparts, gender – biased curriculum and grouping of male and female students for workshop practicals were viewed by the respondents as hindering affective female participation in technical education. The foregoing empirical evidence has confirmed the reports of Azikiwe (2000), Azikiwe and Nnajiofor (2001), Ogunleye (2001), Usoro, Usoro & Ibritam (2009). Both male and female respondents failed to differ significantly in their views of student related gender problems as hindering effective female participation in technical education. Male and female respondents also failed to differ significantly in their views of staff related gender problems that are deemed to hinder effective female participation in technical education. While the foregoing observations are true reflections of actual occurrences in the pedagogic scene, they are quite unique. Their uniqueness arises from the fact that they have no parallels in the review of literature. Other factors that have been observed to contribute to gender disparity in technical education include: parental influence – parents encourage boys to pursue technical education and discourage girls from pursuing the same course; lack of or inadequate counseling services in vocational education programmes in Nigeria is doing more harm than good in fostering gender equality for democratic and national growth (Usoro, Usoro, Ibritam and Udofia 2009).

**Challenges and Prospects of Vocational Technical Education vis – à – vis the Gender Issues**

Gender disparity is a serious challenge to vocational and technical education. Other challenges include: lack of standardization and development of non-formal Technical and Vocational Education and Training; dearth of qualified and competent teachers; very limited formal system of producing technical teachers in the country; low societal estimation of vocational education leading to overwhelming preference for general secondary education; low esteem and remuneration for skilled vocational workers; exodus of vocational teachers to other more lucrative ventures; extremely low population of female technical teachers. The prospects of effective female participation in technical/vocational education lie in the aggressive eradication of gender disparity. Since the task of national building is not that of masculine gender alone, but also that of the female, it becomes very vital to give equal opportunities for the development of both sexes into the needed manpower.
Conclusions

On the bases of research findings and discussion of same, the following conclusions may be drawn:

1. Gender disparity is a serious challenge of no mean order to vocational education enterprise and consequently a hindrance against full – scale manpower production for national development.
2. Both men and women are aware of the gender problems and their consequences but the solution requires the political will and aggressive contributions of all the stakeholders to end gender inequality in the interest of the nation.

Recommendations

On the bases of the findings and discussion of this study, the following recommendations are to be proffered:

1. The admission criteria for females should be modified to allow more female students to enroll in technical education programmes.
2. Appointment of technical education teachers should be a gender – free exercise but with greater leaning on consideration of females.
3. Teacher training programmes should admit and train more teachers for technical education programmes in Nigeria. Offer of incentives might be a booster for this gender.

References


