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Anthony Ossai Ukpene
University of Delta, Agbor, Delta State
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WOMEN AS SCIENCE, TECHNOLOGY, AND MATHEMATICS EDUCATION PRACTITIONERS IN KANO STATE

Anthony Ossai Ukpene

Abstract

The research focused on generating information on the level of women's participation as practitioners of Science, Technology and Mathematics Education (STME) in Colleges of Education in Kano State. a survey of three Colleges of Education in the state revealed that STME is witnessing very low women participation as both teacher trainers and trainees. Impediments to STME such as early marriages, local customs, religion and attitudes are recommended for further investigations.

Introduction

The traditional African belief, that the education of women to be at par with their male folks was sacrilegious to men's ego has left a deep-rooted misnomer in the perception of the capacity of the average African, albeit Nigerian women to attain superlative heights through formal education. The retrogressive notion that women's primary roles should focus on child bearing and rearing, home making and churning out delicious foods for the family from her kitchen has left a conspicuous disorientation in the psyche of most Nigerian populists and a few elites. To those whom this notion holds sway, it was a waste of resources exposing women to formal functional education for effective competition with their male counterparts. In some families, where boys and girls are of school age, the former usually receives a preference. The belief that informs this reasoning is that upon marriage, an educated girl child carries the family's wealth invested on her off to another man.

Regrettably, however, the proportion of uneducated women, that is, those not literate enough to compete for middle and high-level manpower jobs in the country continues to soar. Ifeyori (1996) noted that most women in rural Nigeria lack the education to secure formal sector employment. Suara (1994), quoting a Lourie (1990) report, posited that as at 1985, 65% of the total African population of illiterates were women. A country whose similar population of women are illiterates is strongly deviated from meeting its developmental needs.

A call for women's education arises from the complex roles they play in modern society - as housewives, mothers, social mobilizers, breadwinners and citizens (Ugwuogo, 1998). In its effort to enhance women empowerment, scientific and technological literacy, self-fulfillment, and optimum contribution to the technological development of the country, the Federal Government of Nigeria established the Federal College of Education (Technical) Gusau, Zamfara State, for females only. As part of governments further resolve to improve the level of scientific and technological literacy of the girl child by raising enrolment and reducing the gender disparity suffered by girls, the National Commission for Colleges of Education, in Alajuruonye (1996), was mandated to:

Make recommendations on the development of pre-vocational, technical, agricultural, business and home economics education in all our primary and secondary schools and advice as to necessary facilities for them, the course requirement, the relative contribution of government and industries and how to ensure that women take full part in these.

Despite these innovations, Akanbi, Alhamdu, and Muhammad (1995) observed that women are plagued by perennial low level enrolment into tertiary education. This is probably because of the false social impression that an educated woman is at best a counterfeit man (Ayanniyi, 1997), which accounts for some men resentful of their wives picking up paid employment (Alhamdu and Eniayeju, 1995). The

traditional Nigerian society is replete with negative perception on girl-child education, hence, they are brought up to be less analytical and less capable in mathematical subjects (Amazygbo, 1992).

Deriving from a socio-cultural background where females are married off early in life or confined to pudha (whether educated or not) according to local customs, women participation as teacher trainers or trainees in science technology and mathematics education is not a popular vocation in Kano State.

Problem Of The Study

Some authorities postulate that women face discrimination in enrolment into tertiary education (Akanbi, et al. 1995), employment and remuneration packages (Suara, 1995; Akanbi 1995, Alhamdu et al. 1995, and Ayanniyi, 1997). This research therefore seeks to: -

- Assess the relative abundance of women involved as STME teacher trainers in Colleges of Education in Kano State.
- Analyse the enrolment opportunities given to women to study science, technology and mathematics education.

Methodology

The staff and students involved in the teaching and learning respectively of science, technology and mathematics education from the Federal College of Education (Technical) Bichi, Federal College of Education Kano, and the State College of Education Kumbotso, all in Kano State, were used for the study. F. C. E. (Tech.) Bichi is technical biased while the remaining two run conventional courses. A compendium of male and female staff and students employed as STM teacher trainers or enrolled as STM teacher trainees from NCE I to III in the 2000 / 2001 session was done. A non-parametric statistic was used to interprete the result.

Result

The result obtained on women involved in STM education as teacher trainers is reflected in table I, whereas the one on opportunities given to women to train as potential practitioners of STM Education is reflected in table II. From table I, technical education as well as Physical and Health Education (PHE) recorded zero women involvement. Only 9.92% of the lecturing force in other areas of physical sciences investigated are women. From table II technical education and PHE also recorded the least female enrolment of 3.61% and 5.0% respectively. There is a variable level of enrolment in other areas of physical sciences. Comparatively, however, 22.27% of the total student population enrolled to study for STM Education are women.

Discussion

The level of women participation in STM Education either as teachers or students in Kano State is infinitesimally low. However claims that women face discrimination in enrolment into tertiary institutions, in employment and remuneration packages cannot be established in the study, because even though few women are employed, they enjoy the same remuneration packages with their male counterparts. Low level women enrolment in science and technical courses agrees with Amazygbo (1992) who asserted that most women shun courses involving mathematics. For top flight employment some women prefer enrolment in business courses and vocations that enhance self employment and positive societal acclaim. Even though they are encouraged to study sciences, their response to this call continues to receive lukeworm attention. Consequently, additional investigations are needed to ascertain if early marriages, attitude, inhibitions from local customs and religion in Kano State impede active women participation in STM Education, and on strategies for improvement.

References

Akanbi, A.A. (1995): Discriminatory practices against women in Nigerian government employment in focus. Women and Education. A Journal of FCE Kano Women Association 1 (1) 1-6.

Akanbi, A.A., Alhamdu, J.E. and Muhammad R.J. (1995): Constraints to active participation of women in society. A Journal of FCE Kano Women Association 1 (1) 65-69.

Alajuruonye, L.N. (1996): Literacy for Nigerian Women: a priority strategy for national development. Journal of Women in Research and development 1(1).

Alhamdu, J and Eniayeju, A. (1995): The perception of men about the employed mother. W and E A Journal of FCE Kano Women Association. Vol. I(I).

Amazygbo, U. O. (1992): Women in Nigeria. A. B. U. Press Limited, Zaria.

Ayanniyi, R. B. (1997): Enhancing the Productivity of Nigerian women through equal educational opportunity. W and E. A Journal of FCE Kano Women Association. 2(I) 161-168.

Ifeyori, I. I. (1996): The Impact of Better Life Programme on the Economic Status of Nigerian Women. Ibadan: IFRA and African Books Builders Limited.

Suara, J. S. O. (1994): Executive Leadership in Nigerian Colleges of Education: the gender imbalance. Issues in Teacher Education in Suara, Ahmed, Yusuf, Kolo (eds.) Lagos. Text and Leisure Publishers. 61-69.

Suara, J. S. O. (1995): Nigerian Women: literacy labour and career achievements. W and E. A Journal of FCE Kano Women Association I(I) 7-11.

Ugwuogo, C. C. C. (1998): Women in technical teacher education: the Journey so far. Bichi Journal of Education. 2(I) 40-45.

APPENDIX

TABLE I: STAFF DISTRIBUTION IN STME BY GENDER IN THREE COLLEGES OF EDUCATION IN KANO STATE. APRIL 2001.

	FCE(T) BICHI		FCE KANO		COE KUMBOTSO		TOTAL		PERCENTAGE	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Technical Education	20	0	NA	NA	NA	NA	22	0	100	0.0
Mathematics	7	1	8	1	4	1	19	3	86.4	13.6
Physics	4	1	4	0	4	1	12	2	85.7	14.3
Chemistry	4	0	9	0	4	1	17	1	94.4	5.56
Biology	3	0	7	3	8	0	18	3	85.7	14.3
Integrated Science	3	0	7	3	5	1	15	4	78.9	21.1
PHE	NA	NA	6	0	9	0	15	0	100	0.0
							118	13		

Σ131
Men = 90.08%
Women = 9.92%

NA - Courses are not mounted in those Colleges
Source: Nominal Staff Lists in respective Colleges

TABLE II: STUDENTS' DISTRIBUTION IN STME BY GENDER IN THREE COLLEGES OF EDUCATION IN KANO STATE. APRIL 2001.

	FCE (T) BICHI						FCE KANO						COE KUMBOTSO						TOTAL		PERCENT.	
	NCE I		II		III		I		II		III		I		II		III					
Course Comb.	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W
Tech. Educ.	155	2	73	7	65	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	294	11	96.39	3.61
Bio/Chem.	NA	NA	NA	NA	NA	NA	21	31	14	8	20	34	83	25	8	3	3	0	149	101	59.6	40.4
Bio/Geo	NA	NA	NA	NA	NA	NA	22	26	11	19	16	15	17	4	4	1	-	-	70	65	51.85	48.15
Phy / Chem.	NA	NA	NA	NA	NA	NA	*	*	3	1	4	1	13	9	24	1	2	0	46	12	79.31	20.69
Int. Sc. (DM)	NA	NA	NA	NA	NA	NA	9	9	9	10	7	15	99	28	45	8	13	5	182	75	70.82	29.18
PHE (DM)	NA	NA	NA	NA	NA	NA	*	*	41	3	25	4	110	5	52	0	-	-	228	12	95.0	5.0
Chem. /Mat	5	0	-	-	-	-	*	*	10	3	0	1	33	7	8	0	1	0	57	11	83.8	16.18
Mat/Com	17	10	10	6	-	-	*	*	-	-	13	4	NA	NA	NA	NA	NA	NA	40	20	66.67	33.33
Mat/ Phy	3	1	-	-	-	-	*	*	23	4	11	4	23	5	13	0	1	0	74	14	84.09	15.91
Bio/Int. Sc.	4	4	-	-	-	-	NA	NA	NA	NA	NA	NA	33	9	2	1	1	1	40	15	72.73	27.27
Mat/Int. Sc.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5	3	3	0	-	-	8	3	72.73	27.27
Mat/PES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4	2	2	0	-	-	6	2	75.0	25.0
Chem. / Int. Sc.	0	3	-	-	-	-	NA	NA	NA	NA	NA	NA	4	1	6	0	-	-	10	4	71.43	28.57
																			1204	345		

Source: College Departmental Registration Lists. April,2001.
NA: Course not offered in the College
*: Registration was still going on at the time of investigation. Complete data not available
-: No students at that level of instruction.

Σ1549. M=77.73%
W=22.27%