SEX, EMPLOYMENT STATUS AND THE LABOUR FORCE CONTRIBUTION OF POLYTECHNICS GRADUATES

Abam Arikpo, PhD
Department of Curriculum and Teaching, Faculty of Education, University of Calabar

Abstract

The purpose of this study is to find out the influence of sex, employment status and polytechnics education on labour force contributions of polytechnic graduates. Three null hypotheses were formulated to guide the study. Sixty (60) Polytechnics graduates who were either male, female, unemployed, self-employed, organized private sector employed or government sector employed were selected for the study, through snow balling and convenience sampling techniques. Five (5) Likert type questionnaires were used to collect data from the both male and female polytechnics graduates. Percentages, t-test, and chi-square statistics were used to analyze data collected at 0.05 alpha level. For the men all the three null hypotheses were rejected; while for women only two were, because calculated χ^2 was under these hypotheses greater than critical χ^2. The result revealed men to make significantly higher contribution to the national labour force than women. It was recommended conscientization and other androgogical methods be used to promote consciousness raising in the women.

Keywords: Sex, employment status, labour force, contribution

Introduction

Polytechnics education is in Nigeria offered in all forms to produce various technologists or technicians considered crucial to the economy and the countries development (Okorie, 2001). Its curriculum includes general education; general technical theory; training in special technical procedure, skill, attitude and related theory designed to produce, reproduce, empower and retrain technicians and technologists for technical sections of industry, agriculture, commerce, and home economics (Okorie, 2001). The National Police on Education (1981), for instance, sets its aims to include:

provision of trained manpower in applied science, technology and commerce particularly at major and sub professional grades;

provision of technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development;

provision of people who can apply scientific knowledge to the improvement and resolution of empirical problems to the usefulness and convenience of man;

giving of introductory professional studies in engineering and other technology;

giving of a training that would impart necessary skills that would lead to the production of craftsmen, technicians and other enterprising and self-reliant skilled personnel; and

enabling of young men and women to have an intelligent understanding of the increasing complexity of technology (Ikpe, 2000).

Therefore, according to Osuala (1987), on the general issues of vocational-technical education, the Eric Ashby Commission (1959) advocated: the development of post-secodary school courses for the training of technicians in technical institutes; the taking or offer of such technical courses side-by-side practical occupation training by individuals already in employment; the cooperation of the said technical institution with employers of labour to design short term courses that will produce supervisors and foremen; the running of the

technical institutes by an advisory committee made up of representatives of employers of labour; the establishment of a standing conference of technical education by the federal government to facilitate cooperation with government for advice on the need to enlist the interest of employers; the running of full-time, sandwich and part-time day and evening courses by technical institutes to meet the specific demands of the employers of labour on employees or the already employed (Ikpe, 2001).

The advocacies above, Okedara (1989) traces to the fact that, despite increasing industrial production, indigenous technicians were in the 1950's and 1960's very scarce. Hence, from 1960, this education which was given by the Yaba Technical Institute, the Enugu Technical Institute, the Kaduna Technical Institute, and Ibadan College of Technology, outside the Nigerian College of Arts, Science and Technology which did same far back 1952 through its branches in Ibadan, Enugu, Zaria, confined itself to professional education and provision of training for civil, mechanical, electrical, and mining engineering; land surveying, pharmacy, accountancy, secretarial studies, fine arts, agriculture and estate management (Okedara, 1984). It end products were to be people with intermediate qualification. This were by the recommendations of the Ashby commission to be 50,000 between 1960-1970; though within this period only 32,648 were produced (Okedara, 1984). Livingstone and Goodall (1970) attribute this rather low turnover to the fact that the colonial system of education left behind after independence gave status to arts than science and technology; and technical institutes and technical colleges were meant at the time for candidates with lower grades of pass in 'O' level G.C.E examinations.

Apart from this rather unfortunate situation, Nigerian children of the time had observed the Europeans with arts and social science bias education seat in offices in clean white shirts and suits to give out orders; while those with science or technology, or vocational education laboured and sweated as engineers or agricultural officers in soiled clothing, under steaming bonnets of vehicles and farms. Thus, there was a driving ambition to go for the former and not the latter. The latter could not be envied. So, technical schools, farm institutes, and engineering colleges were neglected (Livingstone & Gvodall, 1970).

Thus from 1977 – 1980 additional manpower requirements in Nigeria showed estimated numbers for technical, scientific, and other professionals and sat professionals, medical professionals, and patricians and craftsmen to be highest. This ofcourse was relative to administrative and management staff, statisticians, jurists, secretarial staff and agricultural staff. The situation is better read from table 1.

Table 1 Additional manpower requirement (1977-1980)

Occupational category	Estimated number
Administrative/managerial staff	15,200
Statisticians/jurists, secretarial staff	15,500
Technical/scientific/other professionals and sat-professionals	40,600
Agricultural staff	12,400
Medical staff	41,200
Articians/craftsmen	76,900
Total	201,800

Source: Background paper for National conference on manpower constituent to Nigeria's economic development, December 19-22, 1978.

This phenomenon is better explained by table 2. The table, like table 1 reports, as at 1981-1985 the job opportunities for graduates of technical institutes to have been huge. Products of these institutes or institutions could hardly meet the size and quality of required labour.

Table 2 Estimated manpower requirement for the forth national development plan (1981-1985)

S/N	Category of manpower	Estimated current stock 1980	Requirement for meeting existing shortage	Requirement for meeting 1985 employee/population target	Requirement for meeting wastage 1980-1985	Additional requirement 1980-1985
1	Architects	650	620	860	50	880
2	Accountants	6,000	2,650	8,500	465	5,615
3	Town planners	300	350	400	25	475
4	Civil and structural engineer	4,000	4,700	6,000	310	7,010
5	Builder	300	240	500	25	475
6	Electrical and electronic engineers	3,500	2,070	5,000	270	3,840
7	Agricultural engineers	350	260	600	30	540
8	Land surveyors	600	350	800	50	600
9	Quantity surveyors	400	220	500	30	350
10	Estate surveyors	500	250	690	40	480
11	Geologists and Geophysicists	450	370	600	35	555
12	Architectural technician	1,080	1,220	1,500	85	1,725
13	Civil engineering	9,800	5,950	12,300	760	9,210
14	Electrical/electronic engineering technician	10,600	8,060	13,500	825	11,785
15	Medical doctors	8,400	4,830	15,000	650	12,080
16	Dentists	400	286	900	30	816
17	Pharmacists	3,000	1,690	5,000	230	3,920
18	Veteromary	1,000	505	3,000	80	2,585
19	Nurses and mid-wives	50,000	21,430	90,000	3,880	65,310
20	Medical laboratory technologists	1,200	640	4,000	700	3,540
21	Radio graphers	400	190	800	30	620
22	Agricultural assistants	6,300	2,040	10,300	490	6,530
23	Agricultural Office	2,500	1,440	4,000	195	3,135
24	Statiusticians	500	370	500	40	410
25	Administrative office	4,500	2,370	6,500	350	4,720
26	Executive officer	6,800	2,270	10,000	530	6,000
27	Literarians	1,000	850	3,000	80	2,930
28	Legal practitioners	5,650	2,260	8,135	440	5,185

Source: Fourth National Development plan 1981-1985

Tracer's 1984 study, cited by Oladeji (1994) identified 5.7% of all polytechnic graduates to have employment as at the time they concluded the National Youth Service Corps Scheme (NYSC). A follow-up study showed about three quarters of these graduates (75.6%) to have spent 13-24 months before getting their jobs, while 14% spent well over two years (25-30months). Details of these are reflected in table 3.

Table 3 Distribution of employed polytechnic graduates by length of time spent in search of their jobs

Period after graduation	Polytechnic graduates number	Percentage (%)
1-12 months	45	31.92
13-25months	84	60.99
25-30 months	10	7.09

Source: National Manpower Board, Lagos: Report of graduate employment trailer study, 1986.

Oguntuanse (1985) blamed the situation on a number of sectors. These were lack of economic growth, absence of industrial expansion and slow pace of technological

development. Another was the existence of an education system which was not functionally relevant and appreciable to local needs. However, Traler (1984) in Adayemo (1997) also associates it with lack of capital for employment, whereas Arikpo (2005) attributes it to graduates' inclination towards government employment opportunities and those of the organized private sector. But Agba (1994) and Yesufu (2000) also identify it with sexism.

The purpose of the study was, therefore, to establish whether sex and any employment status influenced the contribution or participation of polytechnic graduate in the national labour force at the instance of the adversities listed above from about the mid-1980's to date. This, ofcourse, is subject to the fact that (i) the total labour force in Nigeria was expected to rise from 27.4 million in 1980 to 34.7 million in 1989, implying an annual growth rate of 2.9%, (ii) assuming a constant actively rate of 78.0%, government estimated the labour force strength to be at 32.74 million in its Third National Development Plan, and (iii) the annual growth of the female labour force was, between 1980 and 1989, expected to be higher than that of the males: with 2.9% being for women and 2.6% for men, because of societal modernization and consequent withdrawal from traditional roles at home (Arowolo, 1983).

Apart from the reasons above, there was a Structural Adjustment Programme (SAP) from the mid-1980's. This promoted social mobilization for social justice, self-reliance, and economic emancipation. The vision of the move was to be realized through strategies identified with the introduction of migrant fishermen education, nomadic education, National Board for Technical Education, Nigerian Education Research and Development Council (NERDC), the regional unit for execution of an 180 million distance education network, labour market deregulation policies, affiliation of Nigerian trade unions with the organization of African Trade Unions Unity (OATUU) and International Labour Organization (ILO), establishment of a National Productivity Center (NPC), the establishment of the Directorial of Food, Roads and Rural Infrastructure (DFFRI). The National Youth Employment and Vocational Skills Development Programme, Small Scale Industrial and Graduates Employment Programme, the Better Life Programme (BLF), Government Own Nigerian Agricultural Insurance Company (NAIC), Agricultural Development Projects (ADPs), River Basin Development Authority (RBDA), National Economic Recovery Fund (NERFUND), Small Holder Farm Credit Scheme (SHFCS), Commercial and Merchant ; Banking, Community and Micro Finance Banking, National Agricultural Land Development Authority (NALDA), Technical Committee on Privatization and Commercialization (TCPC), Raw Materials Development Policy, Creation of more States and Local Government Areas, Debt-Equity Swap Programme, Technical Aids Corps, Functional Education for Women, Quota Admission Policy, Family Economic Advancement Programme (FEAP) and Job Creation and Poverty Alleviation Programme (JCPA) (NISER Surveillance Reports, 1991; 1993).The strategies of these entities respectively offered productive marketable skills; short term training on small scale business management skills; an enabling environment that increase rural productive activities in food, agriculture, rural industrialization, technical development and rural house; elimination of poverty and illiteracy or ignorance among rural dwellers especially women; promotion cooperative societies; cottage industries and health care programmes; insurances covers which made supply of agricultural loans from commercial banks more attractive and their disbursement and recovery burden free; care for risk suffered by farmers through price fluctuations associated with agricultural products and produce; provision of portable water for household use and dam and irrigation systems that support farming; establishment of small and medium size industries which strive on locally sourced farming materials; fertilizer procurement and distribution; grants for famers; award of loans from commercial banks and merchant banks; a gather of community banks into sizes viable for mechanization and economics of scale; evasion of existing educational imbalances between the cattle rearing people of Fulbe, Bororo, Kayam, Shua Arabs, Badawi, Baldum,

Achenewa, Buzzu, the fishing people of Riverine South and others; privatization of some government own assert and incentives which enhance workers take home pay.

The ex post facto research design was adopted for the study. This was because the independent variable, sex employment status and technical education had already occurred. As such they could not be manipulated.

Polytechnic graduates of south-south Nigeria, having been considered representative of other polytechnic graduation in Nigeria were selected through convenience and snow-balling sampling techniques as the sample. The sample distribution was as follows: 16 (26.7%) of sample members were unemployed, 10 (16.7%) were self employed, 14 (23.3%) were private sector employed and 20 (33.3%) were government employed. However, the dichotomous distribution of the sample by sex respectively showed, 12 (27.3%) males and 4 (25%) females to be unemployed, 9 (20,5%) males and 1 (6.25%) females to be self employed, 10 (22.7%) males and 4 (25%) to be organized private sector employed, and 13 (29.5%) males and 7 (43.75%) females to be government sector employed. The overall sample was 60, with 44 (73.3%) male and 16 (26.7%) female dichotomies. But the non-dichotomous distribution indicated. 12 (20%) males and 4 (6.7%) females unemployed, 9 (15%) males and 1 (1.7%) females self employed, 10 (16.7%) males and 4 (6.7%) females organized private sector employed, 13 (21.7%) males and 7 (11.7%) females government sector employed.

Five Likert type questionnaires were used to collect date. These were the Personal Employment Characteristics Self Rating Questionnaire (PEC SQ), the Graduate Employment Search Behaviour Job Creation Inventory (GESJI), the Personality Job Creation Behaviour Inventory (PJCBI), the Gender Role Stereotyping Job Creation Behavior Inventory (GJCBI) and the C-O Work Behaviour Inventory (COJBI). In all these questionnaires, the study made use of mostly their demographic section or information. Each of them was trial tested and the data obtained used to compute their different rehabilitee coefficient through Cronbach coefficient Alpha, Accordingly, their reliability coefficients were found to be 0.84, o.82, 0.91, 0.93, and 0.91. The instruments were, however, adaptations of those earlier developed by the National Directorate of Employment (1989), Hitchin (1996), Akinboye (2001), Alexander (1996) and Jones and Jones (1990).

For each of the employment status and sex category, copies of the questionnaire were administered to members of the sample directly and moreso with the help of nine (9) personal assistants. The inventory was not collected back immediately from the respondents; they could not complete the questionnaire immediately. The exercise lasted 3 months and 88% response note was recorded.

Data generated with these instruments were analyzed using t-test and chi-square (x^2) statistics. This, ofcourse, was done relative to the fallowing research polytechnic graduates.

Ho_1: Sex does not significantly influence polytechnic graduates' contribution to the labour force of Nigeria.

Ho_2: Employment status does not significantly influence polytechnic graduates' contribution to the labour force of Nigeria.

Ho_3: Contribution towards the Nigerian labour force does not differ for male polytechnic graduates and female polytechnic graduates.

The mean perception scores, standard deviations, per centages, expected frequencies, variance and z-scores for contributions toward the Nigerian labour force by polytechnic graduates on the basis of sex and employment status are shown in tables 1, 2, 3.

Table 4 T-test analysis of sex and labour contribution by polytechnic graduated (N=60)

Sex	N	X	SD	Z	df	Standard error	t-cal	t-crit	P<0.05
Male	44	11	1.58	20.88					
					6	1.53	4.575	2.447	0.99s
Female	16	4	2.12	5.66					

The results in the table show the females to vis-à-vis the males, have at 6 degrees of freedom and 0.05 alpha level the least mean labour contribution or participation score (x-4,SD=22.12,Z=5.553), while the males have the highest (x =11,SD=1.58, 2=2.88). The difference is 7-0.54, and -2.78 respectively. Therefore, the null hypothesis Ho2 is rejected, because the result indicate a significant in the labour force contributions or production of male and female polytechnic graduates (t cal = 4.57 and t crit = 2.447).

Table 5 Chi-square comparison of male and female polytechnic graduates labour force contribution according to employment status (N=60)

Sex		Men (N=44)					Women (N16)					
Employment status	N	%	FE	X^2 cal	df	X^2crit	N	%	Fe	X^2cal	df	X^2cril
Employed	12	75	32.27	12.73*	3	2.366	4	25	4.27	0.017	3	2.366
Self employed	9	90	32.27	16.78*	3	2.366	1	10	4.27	2.504	3*	2.366
Private sector employed	10	71.4	32.27	15.37*	3	2.366	4	28.64	4.27	0.017	3	4.27
Government employed	3	65	32.27	11.51*	3	2.366	7	35	4.27	1.745	3	2.366

P< 0.05

From the table, all calculated chi-square (x^2) for the four employment categories were, for the men, greater than the critical x2 value of 2.366 at 0.06 alpha level. So, the H02 hypothesis was rejected. This meant employment status had or still has great influence on news contribution to, or participation in the Nigerian labour force. Men contribute to or participate in one way or the other in the Nigeria labour force contribution, or participation in the Nigeria labour force is a common phenomenon characteristic of every man's employment status be I that of unemployment, self employment, organized private sector employment or government employment. Arowolo (1983) in his study of population charge and labour force supply in Nigeria support this finding relative to the status of the old east, minus and mid-west, regions, except those of the old western region, where minus Lagos, woman as men showed a significant contribution to the labour force.

The finding is a further support to those of Ysufu (2000), which reports females to constitute 44,462,621 (49.96%) of the total Nigerian population in 1991, 23,675,975 of the 46,091,452 of the potential labour force, but 9,009,595 (37.4%) of the total number of 24,117,842 employed persons, while the men accounted for 15,107, 883, or 62.6%.

Keating (1994) identifies these dispancies with the fact that males possers a grandeur and magnitude which the females do not. According to her in all instance, the males quest is exchanged for rootedness, while that of female's is very often after activities centered around the home. Keatings position is supported by Ukpokody (1994), Udumukwu (1994) and Nnaemeka (1994).

On the contrary, results in the table show under the females the Ho_2 hypothesis not rejected. At 0.05 alpha level, all the calculated chi-square (x^2) values are, except for the self employment status lower than the critical chi-square value. For self employment status x^2 cal = 2.504 and x2-critic =2.366. but for the employment status of the unemployed, organized private sector employed and government employed it is 0.017, 0.017, and 1.745, which of 3df are lower than the 2.366 critical x2. This position is in the support of that of Arikpo, Edem and Kolawole (2009). In their study of factors influencing self employing males services, they discovered multiple regression coefficients for females were 0.549, while those for males were 0.417. Equally, whereas for the males, the factors accounted for 17.4% observable variance in the dependent variable, for the females they accounted 30.1%. The disparity could be attributed to the fact that such self employing jobs are of reproductive, productive and emancipator roles socio-fundamentally peculiar to women (Fadeyi, 2001).

Table 6 X^2 comparison of male and female labour force continuous of polytechnic graduate (N=60)

Sex	N	Unemployed	Self employed	Private sector employed	Government employed	Total	df	X^2cal	X^2crit
Male	44	12 (32.27)	9 (32.27)	10 (32.27)	13 (32.27)	129.08	3	56.39	2.366
Female	16	4 (4.27)	1 (4.27)	4 (4.27)	7 (4.27)	17.08	3 3	4.283	2.366

P< 0.05

Table 6 indicates x^2 calculated for males and females to be greater than x^2 critical (x^2 = 56.39 and 4.283 as against 2.366 respectively). But calculated x^2 for male (x^2=56.39) is at 0.05 alpha level greater than that calculated for females (x^2= 4.283). However, for both sex, the hypothesis $H0_3$ is rejected. This is because there is significant difference in the labour force contributions of male and female polytechnic graduates. The disparity is x^2=52.107 to the favour of men. This finding is contradicted by the 1991 Federal Republic of Nigeria's population census analytical report on agricultural labour force.

The report presents women between ages 15-19, 20-24, 25-29, 45-49, to make slightly higher contributions than the men, those between ages 30-34 to make same amount of contribution as the men, but men 35-39, 40-44, 50-54, 55-59, and 60-64 to make contribution slightly higher than the women, even when the contribution is in the area of agriculture considered most peculiar to women (Yesufu 2000). To cotti quoted Lowder-Newton (1985) such functions in women's contribution go back to a social power based on women's special female qualities rather than general human rights. The difference is to her manifested not in sexuality or men's desires but power or ability to influence and produce intended affects on society (Udumukwu, 1994).

It is to this end necessary that the content and context of the polytechnic education prevalent in Nigeria provides the women with activities, content, behavioural outcomes and examinations that are conscious raising. Central to amelioration of the low contribution of women than men towards the Nigerian labour force at all ages will need to be a collective critical reconstruction of the meaning of the woman's socio-economic experience. So, consciousness for the women will imply purity, autonomy and freedom from any worldly entanglement with men domestically, curriculum will to this end need to employ conscientization as a method and means of changing the status quo. Status quo here will mean the relationship between men and women, the thingnified woman and elated man, and polytechnic adulation which serves to help women indent and their deportable position in contribution toward the national labour force. Its task will be to move women from the socio-economically closed to the socio-economically open individual, it will a labour force participation transforming process; an instrument for correcting the socio-economic injustice done to women by men; teaching women to question (i) the non-natural and instinctive roles men and society assigns to them; (ii) the power of men over them; (iii) the traditional settings which make them subjects to men; (iv) some social anthropologists who look at them as commodities or goods to be kept by men if through valuable, but either circulated, discarded, through divorce when no longer needed; (v) the traditional arrogance and unquestionable wisdom of men to enable them decode the myth behind their minimal contribution to the national labour force; a dialogue process, which establishes a horizontal than vertical relationship between men and women polytechnics graduates making both equal participants or contributors to Nigeria's labour force.

Another method to be employed by curriculum will need as well to be the real labour force contribution materials. This will expose the women to the use of readily available labour force contribution materials in their immediate environment for cultivation of labour force contribution practices of men. The method says rather than rely on themes, settings, plots, points of view, characterization, and diction of text materials for courses offered in

polytechnics, these limitless real materials are enough to create labour force contribution, or participation common of men.

Distance education may as well be another strategy for disseminating to women that labour force contribution ability of men. It will not only teach the women the labour force contribution abilities of men, but mobilize and sensitize them towards such labour force contributions.

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