

Female Participation in Information, Communication and Technological Development in Nigeria: Implications for Early Career Guidance

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KEYWORDS Female Participation. Development. Communication. Information. Career Guidance

ABSTRACT The issue of women and their participation in development has been on the international agenda since the Paris peace conference of 1919, sequel to the universal declaration of human rights in 1948 and international women's year in 1975. This study delved into the level of participation of women in the technological development of their country, Nigeria. A cross section of working class women in various establishments in Benin City, South-South Nigeria was sampled. Altogether, two hundred (200) women were randomly selected for the study. A questionnaire tagged "Female Participation in Technological Development" was administered to the women. Their responses were collated and analyzed using frequency count and simple percentages. In addition, focus group discussions were conducted with selected groups of working class women. Content analysis was used to analyze the data. Data analysis showed that quite a large number of women (80%) were interested in ICT but only 60.67% had access to it. The constraints were time, gender roles, work-life imbalance and inadequate training and empowerment. There is need to develop a training program for the interested women and enlightenment seminars for other women and prospective working class females in the tertiary and secondary educational institutions. This is to ensure full participation of women in ICT, which will in turn ensure improved technological development in Nigeria as a country in a globalize world.

INTRODUCTION

One of the philosophical goals of education in Nigeria is the need for functional education towards the promotion of a progressive, united Nigeria. In view of this, the school programmes need to be relevant, practical and comprehensive. In order to address this philosophical goal and in response to the demands on education, the revised National Policy on Education, FRN (2004) introduced Information and Communication Technology (ICT) into the Nigerian school system. Furthermore, section II (pg 54) of the policy on educational services stated that "government shall provide facilities and necessary infrastructure for the promotion of Information and Communication Technology (ICT) at all levels of education" (FRN 2004).

The term 'technology' as explained by Simiyu (1999) is a latin derivative and encompasses two concepts 'technic' which means tools or materials; and 'logic' which means different approaches to problem solving. Technology as applied to the process of education includes ways of organizing events and activities as well as the materials and equipment involved in the process to achieve educational objectives. According to Nwaboku

(1997), technology is a factor which has constantly changed the future of societies in usually unforeseen directions. It is a single factor whose advancement makes the difference in development for all nations of the world.

The issue of women and their participation in development has been on the international agenda since the Paris Peace Conference of 1999 which established the League of Nations. In 1946, the Commission on the status of women was formed and this influenced the drafting of the Universal Declaration of Human Rights, which was adopted in 1948. In view of this, it is worthwhile to find out the proportion of female who have appreciable knowledge of Information and Communication Technology and their participation status in Nigeria. Huyer (1997) argues that women's time is a critical resource in short supply, therefore activities meant to improve their lives and increase their empowerment must be perceived by women to save time or increase their efficiency rather than add to the overly long list of activities in a day. The predominance of electronic-mail over other ICT applications is almost universally true among women given the time constraints that most women face.

The introduction of the new technologies has the potential to offer tutors and tutees new practical ways of dealing with some pressures and challenges facing them. With the new technology, the role of the tutor becomes increasingly that of a guide, facilitator of tutees' access to information and enabler of the development of tutees' skills as learners.

Hence, Computers in Teaching Initiative, CTI (1998), Identifies seven specific benefits in using Information and Communication Technology.

- Appropriate use of the technologies can release staff time (allowing more time to be spent in small group teaching, materials' development and research).
- Interactive and multimedia delivery systems enhance motivation and if used effectively, reinforce learning.
- ICT can provide a student-centred learning environment tailored to the pace and learning style of the individual
- The technology provides the potential for students to receive immediate feedback and for teachers to carry out rapid continuous assessment.
- Real-time or time-independent communication can take place among students and staff within and between institutions.
- Access to the Internet provides vast resources for assignments and researches.
- Familiarity with ICT extends students' transferable skills.

To achieve these benefits, ICT should be integrated into the girls' education and women's literacy programmes to expose girls to new technologies at earlier stages and allow for much needed integration of the science and technology. Baryeh et al. (2000) observed that women's participation in science and technology training is marginal, both in developed and developing countries. The report of United Nations Development UNDP (1999) showed that men dominate information technology globally. As at 1998, 27% of the internet users globally were women most of whom were based in the developed countries. According to International Telecommunication Union, ITU (2000) Nigeria like most developing countries has less than one percent of her population accessing the internet. Out of two thousand and one (2001) senior government officials responsible for information and communication technologies in developing countries only eleven (11) are women (5.5%).

Under-representation of women in the decision making process in both the developed and the developing world is particularly striking in the new ICT industries (Mitter 1995).

This study, therefore, was designed to find out the current level of female access and participation in ICT situation in Nigeria so as to devise ways institutions and organizations could channel efforts adequately to speed up technological development holistically. In order to carry out the investigation on female participation, these research questions were raised?

1. What proportion of females in Benin-City, Nigeria participates in ICT?
2. Which of the telecommunication facilities is most subscribed to by females?
3. Which of them did they consider most functional in terms of quality service?

METHOD OF STUDY

This study was a survey of female participation in technological development in Nigeria. Females in various establishments in Benin City of Nigeria were randomly selected for the research. Benin City was selected because it is a cosmopolitan City with a large number of migrants from other parts of Nigeria. Benin City is located in Edo State which is one of the 36 States in Nigeria located in the South-South geopolitical part of the country.

A validated questionnaire on female participation in Information and Communication Technology was designed. The questionnaire was divided into two parts, part I comprise eighteen (18) items which elicited responses on female participation and knowledge of ICT. Descriptive statistical analyses of data were carried out and the results were presented in simple percentages and frequency counts. Bar charts were also used to illustrate the data for clarity.

Part II asked questions on telecommunication facility the respondents subscribed to and the facility that they deem most reliable in terms of quality service. The questionnaire items were subjected to reliability testing by administering it to 20 subjects and the alpha co-efficient reliability realized was 0.65 which indicated that the questionnaire is reliable.

RESULTS AND DISCUSSIONS

Descriptive statistical analysis in the table 1

shows that a sample of two hundred females (200) was selected for this study. Out of the 200 females sampled, twenty two (22) were Ph.D holders, thirty eight (38) Masters Degree holders, eighty three (83) first degree holders, and fifty (50)

Table 1: Educational qualification of respondents

<i>Educational qualification</i>	<i>Frequency</i>	<i>Percentage</i>
First Degree	83	41.5
NCE / OND	50	25.0
Masters Degree	38	19.0
PhD	22	11.0
Grade II Teachers' Certificate	7	3.5
Total	200	100.0

Ordinary National Diploma (OND) holders and seven (7) Grade II Teachers Certificate holders (TCII).

The qualitative data analysis showed that out of the 200 females, 60.67% indicated that they participate in one form or the other in Information and Communication Technology and 39.33% are not literate in ICT.

Research Question I: What proportion of females in Benin-City, Nigeria participates in ICT? The analysis is presented in table 2 and discussed below.

The Table 2 gives details of their responses to the various items. In item 3, 116 (58.00%) females said they cannot assess their e-mail without assistance. In item 10, 145 (72.50%) of

females indicated that they would like to go for training to be computer literate, item 12, 136 (68.00%) female indicated that they have interest in operating the computer but time was a constraint. This result collaborates with Huyer (1997) who argued that women's time is a critical resource in short supply in terms of ICT empowerment. Even access to e-mail which was considered as the major ICT application women use in developing countries is under utilized.

Research Question II: Which of the telecommunication facilities is most subscribed to by females? The analysis is presented in table 3 and discussed.

The respondents indicated the telecommunication facility/network they subscribed to. Out of the two hundred respondents 63 (31.50%) subscribe to Glo, 38 (19.00%) to MTN, 38 (19.00%) to V-mobile, 3 (1.50%) to M-Tel and 8 (4.00%) to none. Some subscribed to two or three networks simultaneously and such subscribers were 6 (3.00%) MTN/V-mobile, 24 (12.00%) Glo/V-mobile 7 (3.5.0%) Glo/V .mobile/MTN. Altogether 87 (43.5%, of the respondents subscribe to Glo and 62(31%) to MTN.

Research Question III: Which of them did they consider most functional in terms of quality service? The analysis is presented in table 4 and discussed below.

Analyses of data on the most reliable

Table 2: Response pattern on female participation in ICT

<i>S. No.</i>	<i>Items</i>	<i>Yes</i>		<i>No</i>		<i>Don't know</i>	
		<i>F</i>	<i>(%)</i>	<i>F</i>	<i>(%)</i>	<i>F</i>	<i>(%)</i>
1.	Have a personal computer	69	34.5	130	65.0	1	0.5
2.	Can operate computer without assistance	75	37.5	122	61.0	3	1.5
3.	Can assess my e-mail without assistance	80	40.0	116	58.0	4	2.0
4.	Need to be trained to use computer	145	72.5	52	26.0	3	1.5
5.	Operating a computer is quite complicated	80	40.0	93	46.5	31	15.5
6.	It is time consuming working on the computer	75	37.5	100	50.0	25	12.5
7.	My job does not demand the use of new Technology	67	33.5	127	63.5	6	3.0
8.	Hardly communicate through the use of new Technology	63	31.5	134	67.0	3	1.5
9.	Don't intend to communicate through the use of a new technology	33	16.5	157	78.5	10	5.0
10.	Would like to go for training to be computer literate	145	72.5	52	26.0	3	1.5
11.	Have been trained in the use of computers and can confidently operate one.	67	33.5	128	64.0	5	2.5
12.	Have interest in operating the computer but time is a constraint.	136	68.0	55	27.5	9	4.5
13.	Know about electronic conferencing	71	35.5	109	54.5	20	10.0
14.	Know about Tele-conferencing	80	40.0	98	49.0	22	11.0
15.	Interactive radio is an aspect of learning Technology	120	60.0	36	18.0	44	22.0
16.	Know about video conferencing	82	41.0	89	44.5	29	14.5
17.	Computer assisted learning is a form of technological development	161	80.5	31	15.5	8	4.0
18.	As a woman I do not need to be very computer literate	22	11.0	162	81.0	16	8.0

Table 3: The telecommunication facility subscribed to by respondents

<i>Telecommunication facility</i>	<i>Frequency</i>	<i>Percentage</i>
GLO	63	31.5
MTN	38	19.0
V-MOBILE	38	19.0
GLO/V-MOBILE	24	12.0
MTN/GLO	13	6.5
None	8	4.0
GLO/V-MOBILE/MTN	7	3.5
MTN/V-MOBILE	6	3.0
M-TEL	3	1.5
Total	200	100.0

telecommunication facility as perceived by respondents showed that Glo was the one most selected in terms of rendering quality service. 76 (38%), 45 (22.50%) V-mobile, 41 (20.50%) MTN, 35 (17.50%) none and 3 (1.50%) M-tel. This shows that most people have more confidence in the services of Glo network than the others and M-tel is the least network considered by respondents in terms of quality service (see Table 4)

Table 4: The most functional telecommunication facility

<i>Telecommunication facility</i>	<i>Frequency</i>	<i>Percentage</i>
GLO	76	38.0
V-MOBILE	45	22.5
MTN	41	20.5
None	35	17.5
M-TEL	3	1.5
Total	200	100.0

Implications for Early Career Guidance

The findings of this study have drawn our attention to the need for early career guidance, and communication technology in order to socialize them to making appropriate career decisions. With the introduction of ICT into the secondary school system recently, more effort should be made to impact on the budding adolescents this valuable resource that will ensure rapid technological development.

CONCLUSION AND RECOMMENDATIONS

The conclusion drawn from the results of this study is that there is need to give priority to Information and Technology Education (ICT) so that interested females in all works of life will participate. ICT should be introduced in the junior primary schools, so there is urgent need for

training of teachers at that level. Training in ICT should be planned separately for various categories of female as there was no relationship in their participation status. Educators and researchers in both developed and developing countries should focus attention on strategies to increase girls demand for ICT education. It is recommended that girls should be encouraged to enroll in Science and Mathematics. Their confidence and self esteem need to be enhanced to study non-traditional subjects by exposing them early in life to computer and internet technology and thereby reducing gender stereotypes that affect their attitudes towards science related careers. Information and Communication Technology should be introduced early in school life since it is a new technology.

REFERENCES

- Baryeh EA, Mogotsi M, Squire PJ 2000. A Study of Female Engineering Students in Botswana. *Paper presented at the 2nd South African Conference on Engineering Education Vanderbij park, South Africa*, 28 to 29 September, 2000.
- Computers in Teaching Initiative 1998. An Evaluation of the Computers in Teaching Initiative and Teaching and Learning Technology support network. Retrieved from <http://www.hefce.ac.uk/pubs/HEFCE/47.html>.
- Huyer S 1997. Supporting women's use of information technologies for sustainable developments WIGSAT submitted to the Gender and sustainable development unit, IDRC Retrieved from <http://www.idrc.ca/acacia/outputs/womenicts/.html>.
- International Telecommunication Union, 2000. List of Least developed countries as at March 2000, Geneva. Retrieved from <http://www.unctad.org/en/subsites/ids/document/ idc-list.htm>.
- Mitter S 1995. Who benefits: Measuring the different impact of new technologies. In: *Missing Links: Science and Technology for Sustainable and Equitable Development*. Ottawa: International development Research Centre, P. 234.
- Nwaboku NC 1997. New Information Technologies in Education and New Roles for Potential Teachers. *UNESCO-Africa*, 15: 30-37.
- Simiyu AM 1999. New and Emerging Technologies in teaching and learning in Higher Education Lead. *Presentation at the Regional Workshop on Teaching and learning in Higher Education*, MOI University, Eldoret, Kenya 18 to 22 May, 1999.
- Sophia H 1997. Supporting women's use of Information Technologies for Sustainable Development WIGSAT submitted to the Gender and Sustainable Development UNIT IDRC. Retrieved from <http://www.idrc.ca/acacia/outputs/womenictshtml>.
- UNDP 1999. Human Development Report for gender-related development index, female literacy, and GDP per capita indices, Newyork;Oxford University Press.