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GENDER DIFFERENCES IN THE USE OF ICT AMONG TEACHERS IN MODEL PRIMARY SCHOOLS IN RIVERS STATE, NIGERIA

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ABSTRACT: *The study sought to determine gender differences in the use of ICT among Teachers in Model Primary Schools in Rivers State, Nigeria. It was a descriptive study with a sample of 200 teachers drawn from 25 functional model primary schools in two local government areas (LGA) of Rivers State namely Port Harcourt City Council and Obio-Akpor. Two research questions and two hypotheses guided the study. The findings showed that there was no significant difference between the mean scores of the male and female model primary school teachers in the use of ICT and no significant difference between the mean scores of female model primary school teachers in Port Harcourt City Council and Obio-Akpor Local Government Areas in the use of ICT. Based on the findings, recommendations were made which included that the Federal, State and Local Governments in Nigeria should equip more schools with ICT facilities and training should be given to both male and female teachers to enable them effectively utilize ICT in their various schools.*

Keywords: Information and Communication Technologies (ICT), Gender, Gender disparity, Education

INTRODUCTION

Since the mid-20th century, gender and ICT have been very topical issues. Gender has most times been used interchangeably with sex. However there seems to be a slight difference between them. The English Oxford Living Dictionaries (2016) explains these differences when it states that the word sex refers to 'the state of being male or female' as it relates to biological differences, while gender refers to cultural or social differences. Therefore, in this study we will use the word gender to refer to the differences the culture or society places on masculinity and femininity. Information and communication Technologies (ICTs) on the other hand refer to all goods and services that provide access to information and allow for communication. TechTarget (2007-2017) defines ICT as any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, and satellite systems, as well as the various services and applications associated with them, such as videoconferencing and distance learning. The proliferation of these technologies is as a result of the Internet.

That ICTs have had a positive effect on education cannot be overemphasized. The introduction of ICTs in education have led to what is popularly known as electronic learning (e-learning). e-learning basically refers to any form of structured educational program carried on over the

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internet. With e-learning, more people have access to formal education. Apart from promoting e-learning, ICTs have also been integrated in the traditional face to face classroom. Studies have shown that this is very effective as it fosters learning.

Herron (2010) cited in Costley (2014) conducted a study to examine the experiences of pre-service teachers who used technology in mathematics lessons. The study showed that the use of technology had a positive effect on student's learning in mathematics. The students were more engaged during the lessons as they made use of technology. The authors thus concluded that technology can be used as a way to create a hands-on and meaningful mathematics lessons. Similarly, Blanskat, Blamire, and Kefala (2006) cited in EdTechReview February (2014) conducted a study which aimed at determining the impact of utilizing ICT in schools' achievements. The study measured the impact of ICT on students' outcomes. and tried to establish a link between the use of ICT and students' results in examination. The findings showed that ICT has positive impact on students' performances in primary schools particularly in English language.

Lewin et al, 2000 cited in EdTechReview February (2014) also pointed out that the use of ICTs in education allows students learn new analytical skills such as improvements in reading comprehension and develop some writing skills such as spelling, grammar, punctuation, editing and re-drafting. Use of ICTs for teaching and learning encourage independent and active learning, and students' take responsibility for their own learning (Passey, 1999 in EdTechReview February, 2014). Students become motivated to learn and retention is enhanced in an ICT integrated classroom.

Gender differences in Education and ICT: what the literature shows

Gender disparity has been seen in various fields such as business and politics. Education is not any better. The British Council Gender in Nigeria Report (2012) reveals that the school enrolment ratio of girls is significantly lower than that of boys (see Table 1). The report further shows that girls' completion rates are generally lower than that of boys; some States in the North, such as Jigawa, record girls' completion rates as low as 7.8% (UNESCO, 2008 cited in British Council Gender in Nigeria Report 2012)). The net enrolment rate for girls is 22%, compared to 29% for boys. So there is every likelihood that girls will experience high dropout rates more than the boys.

Table 1: Net primary and secondary attendance ration (1990-2010)

	All %		Female %		Male %	
Year	Primary	Secondary	Primary	Secondary	Primary	Secondary
1990	51	24	48	22	54	26
2003	60	35	57	33	64	38
2010	61	44	58	44	64	44

Source: British Council Gender in Nigeria Report, 2012

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The Department for International Development (DFID) in its second report of session 2016-2017, revealed that education prospects are a challenge for all Nigerian children. However, it observed that girls are particularly disadvantaged. The report further showed that enrolment rates are lower among girls than boys across the country. According to that report, 85% of female children in the North East cannot read at all, compared with 20% in the South West, and 25% of all young people in the North between the ages 17–22 have fewer than two years of education with 97% of these being women.

Gender disparity can also be seen in the area of ICT. Wajcman (2006) observed that many feminists believe that western technology embodies patriarchal values. She further argued that most women are reluctant to go into technology because of the sex-stereotyped definition of technology as an activity appropriate for men. In her words:

As with science, the very language of technology, its symbolism, is masculine. It is not simply a question of acquiring skills, because these skills are embedded in a culture of masculinity that is largely coterminous with the culture of technology…therefore to enter this world, to learn its language, women have to first forsake their femininity" (Wajcman, 2006:73)

In 2003, Kofi Annan, who was then United Nations Secretary General, said that: "The so-called digital divide is actually several gaps in one.…There is a gender divide, with women and girls enjoying less access to information technology than men and boys". Sanda and Kurfi (2013) also reiterated that despite the much emphasis placed on the use of ICTs in Nigeria, women are usually underrepresented in terms of access and use to ICT. They also observed that though women play a pivotal role in the development of their societies, yet their impact has been silenced in this new technology due to lack of access and the necessary skills for the operation. Fenwick (2004) in Mahmood and Bokhari (2012) showed that gender inequity persists both in access to and experience of learning opportunities with ICT. Ware and Stuck (1985) cited in Mahmood and Bokhari (2012) are of the opinion that stereotypical male images found in computing magazines acted as deterrents for female involvement in technologies. Similarly, Withers (2000) cited in Mahmood and Bokhari (2012) believes that gender and ICT interact in complex ways but in the aggregate, females are much less likely to participate in ICT courses, careers and leadership.

Since ICT in recent times is gradually replacing the traditional teacher- centred teaching and learning environment in education; and emphasis has shifted from the teacher to the learner, it becomes imperative that both male and female teachers adopt the use of ICT in facilitating learning. Perhaps it is in recognition of this that the Rivers State Government in Nigeria built and equipped model primary schools with ICT facilities. The Government also recognized that accessing and using educational materials for sustainable development will only be possible if the teachers (male and female) have the appropriate ICT competence. To that effect, the teachers were appropriately trained. The problem is: has the training given rise to gender equality in the use of ICT among teachers in the model primary schools in Port Harcourt metropolis? This is what necessitated this study.

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Objectives of the Study

The objectives of the study include

1. To determine the extent of disparity between the male and female teachers in the model primary schools in Port Harcourt metropolis in the use of ICT.
2. To investigate the extent of disparity between the female teachers in Port Harcourt City Council and female teachers in Obio-Akpor Local Government Area in the use of ICT.

Research Questions

The following research questions will be answered in this study:

1. What is the extent of disparity between male and female model primary school teachers in the use of ICT?
2. What is the extent of disparity between the female teachers in Port Harcourt City Council and those in Obio-Akpor Local Government Area in the use of ICT?

Hypotheses

The following null hypotheses which were tested at .05 level of significance were formulated to guide this study.

Ho1: there is no significant difference between the mean scores of the male and female model primary school teachers in the use of ICT.

Ho2: there is no significant difference between the mean scores of female model primary school teachers in Port Harcourt City Council and those in Obio-Akpor Local Government Area in the use of ICT.

METHODOLOGY

The Descriptive survey research design was used for this study. There are 25 functional model primary schools in each of the two local government areas under study. The sample of 200 teachers was used for the study. The research questions were answered using mean with a mean-cut-off point of (2.5), while the hypotheses was tested using independent t-test.

Research question 1: What is the extent of disparity between male and female model primary school teachers in the use of ICT?

Hypothesis 1: There is no significant difference between the mean scores of the male and female model primary school teachers in the use of information and communication technology

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Table 2: *Independent t-test showing model primary school teachers' use of information and communication technology based on gender*

	Gender of Model Primary School Teachers	N	Mean	Std. Deviation	t	df	p	Alpha
Scores of Model Primary School Teachers	Male	32	70.50	15.063	- 0.398	198	0.691	0.05
	Female	168	71.69	15.593				

Table 2 shows that there is no significant difference between the mean scores of the male and female model primary school teachers in the use of information and communication technology. The result of the analysis indicates no significant difference, t (198) = - 0.398, P > 0.05. Therefore, null hypothesis one is accepted.

Research Question 2: What is the extent of disparity between the female teachers in Port Harcourt City Council and those in Obio-Akpor Local Government Area in the use of ICT?
Hypothesis 2: There is no significant difference between the mean scores of female model primary school teachers in Port Harcourt City Council and female teachers in Obio/Akpor Local Council in the use of ICT
Table 3: *Independent t-test showing female model primary school teachers' use of information and communication technology based on Local Government Area*

	LGA of Model Primary School Teachers	N	Mean	Std. Deviation	t	df	P	Alpha
Scores of Model Primary School Teachers	Port Harcourt City Council	108	71.94	16.376	0.430	198	0.668	0.05
	Obio/Akpor Local Council	92	70.99	14.426				

Table 3 shows that there is no significant difference between the mean scores of female model primary school teachers in Port Harcourt City Council and female teachers in Obio/Akpor Local Council in the use of ICT. The result of the analysis indicates no significant difference, t (198) = 0.430, P > 0.05. Therefore, null hypothesis two is accepted.

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CONCLUSION

From the result of the study, it is concluded that there is no gender disparity in the use of ICT among male and female teachers in the model primary schools in Rivers State, Nigeria. Also, there was no significant difference in the use of ICT by the female teachers in the two local Government areas of Rivers State under study. We can thus conclude that the training given to the teachers in the model primary schools in Rivers State, Nigeria have been very beneficial. This result is positive. Since Education in general and ICT education in particular plays a fundamental role in the growth and development of every nation's economy, then ICT education should be encouraged by the Government. It is generally believed that a country with an educated citizenry will develop faster than one whose citizens are not educated. This opinion makes education the right of every citizen. DFID 2016-2017 report shows that educated women are more likely to play productive social and economic roles within their families and communities. They become better mothers and they have fewer, healthier children who they want to have better educational opportunities so the benefits are trans-generational.

RECOMMENDATIONS

Based on the findings above, the following recommendations are given:

1. The Federal, State and Local Governments in Nigeria should equip more schools with ICT facilities.
2. Training should be given to both male and female teachers to enable them effectively utilize ICT in their various schools.
3. Special ICT programs should be organized for students during the summer holidays to motivate them to use ICT for academic purposes.

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