GENDER INEQUALITY IN THE USE OF ICT TOOLS AMONG STUDENTS IN TECHNICAL COLLEGES IN DELTA STATE

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Abstract

This study examined gender inequality in the use of ICT among students in Technical Colleges in Delta State. Three research questions and three null hypotheses were formulated to guide the study. A multistage stratified random sampling technique was used to sample 100 students from a population of 453 NTC II students in Technical Colleges in Delta State. The instrument used was questionnaire titled, assessment of gender inequality in the use of ICT in technical colleges in Delta State (AGIUICTTC). The instrument was validated by three research experts. The Cronbach Alpha reliability test was used to determine the reliability of the instrument and a reliability coefficient of 0.79 was obtained. The data collected from the questionnaire were analyzed using Chi-square statistics at 0.05level of significance. The finding of the study revealed that there is gender difference in the use of ICT among students in technical colleges in Delta State. Based on the findings, it was recommended that government should provide equal opportunities for both male and female students in the technical colleges.

Keywords*:* Gender, Inequality ICT and Technical College.

Introduction

The world we live today has become a global village as a result of technological development. This globalization occasioned by unprecedented and unparallel proliferation of new technologies has created a new world order. According to Chika (2018) the pace of change brought by new technologies has had a significant effect on the way people live, learn and work all over the world. He further stated that the synergy of combining globalization with new scientific and technological pursuits in our daily existence has led to the emergence of information and communication technologies (ICTs) in every part of the world. Buza, and Mula (2017) opined that in today world even the most primitive part of the society relies on the use of information and communication technologies (ICTs).

ICTs according to Nwana (2018) can be defined as "diverse set of technological tools and resources used to communicate, and to create, disseminate, store and manage information. He states further that these technologies include computer, the internet, broadcasting technologies (radio and television) and telephony. In the same vain David-West and Akamueze (2022), viewed I CTs as the set of activities which is facilitated by electronic means to process, transmit and display information. He further stated that ICTs could be refers to technologies people use to share, distribute, gather information and to communicate through computers and computer networks.

Currently ICT is becoming popular in educational sectors due to its abilities in facilitating teaching and learning as well as administrative activities in schools. Atsuwe, Adeniran and Iortyom, (2019) stated that the reason for this popularity is because ICTs play a vital role in enhancing the quality of educational system in many nations. Nwana, (2018), stated that in the mid 20th century, the role of information and communication technology in educational institutions increased immeasurably as a result of social progress and the vigorous development in science and technology. In addition, Cepni (2016) stated that because of rapid expansion of mass and diversified information which has received the name "information explosion", the need for a scientific approach to information and for elucidation of its most characteristic properties which has led to principal changes in the interpretation of the concept of information has arisen. Chika (2018) stated that it was broaden first to include information exchange not only between man and man but also between machine and machine as well as the exchange of signals in the animals and plant world. Chika further stated that moving education forward through communication and information technology in the 21st century became paramount. New and emerging

technologies challenge the traditional process of teaching and learning. According to Eze and Onwusa (2020), information technology while an important area of study in its own right began to have major impact across all curriculum areas. Easy worldwide communication provides access to vast array of data, challenging assimilation and assessment skills.

In the light of the afore-mention Atika, Najmal and Jafar, (2021) state that the use of ICTs in educational sector for better quality experience for both staff and students were enhanced. The avenue for students to study together over the internet was facilitated. Most importantly ICTs created free access to information and enhances lifelong activity through access to ICTs in the home, at work, and in educational establishments. (David-West, 2020).

Studies by Buza and Mula (2017) as well as Omosebi, and Motunrayo (2021) revealed that despite the over whelming evidence that ICT holds promises for improving access to quality education, there is still growing concerns regarding the disparity in use of ICTs in educational institutions especially between male and female students in technical colleges. This disparity is termed as gender inequality in the use of ICT **(**Basavaraja, & Kumar 2017).

Gender refers to the biological and physiological reality of being male or female (Igbo, Onu & Obiyo 2015). Igbo et al, described gender as a behaviour pattern and attitude perceived as a masculine and feminine within a culture. Furthermore Eze, Obidile and Okotubu (2020), described gender as a psychological term, which describes behaviours and attributes expected of individual on the basis of being a male or female. It is a social and cultural construct which distinguishes difference in the attributes of men and women, boys and girls and accordingly refers to the roles of men and women. Bamitale, Ajisafe, and Aribamikan (2018) stated that gender is a socio-economic variable for analyzing roles, responsibilities, constraints, and needs of men and women in a given society. It refers to the social and cultural constructs that each society assigns to behaviours, characteristics and values attributed to men and women. According to Ayoob and Bhat, (2016), the gender constructs are shaped by ideological, historical, religion ethnic, economic and cultural determinants which are translated into social, economic and political inequalities where men's activities and their gender attributes are perceived as essentially superior to women's.

In this dimension, Omosebi, and Motunrayo (2021) argues that gender inequality stemmed from colonization as an instrument to strategize the perpetuation of women subordination, subjugation and exploitation. The nature of Nigerian society is characterized with male domination, irrespective of women's effort, they seem to be always under appreciated. There are many links between gender equality and fulfillment of the human right to education.

Over the years, education has focused on closing the enrolment gap between male and female students in secondary schools while insufficient attention has been paid to the differences in their technical colleges. Adopting an approach that takes into account the relationship between male and female students in schools will not only lead to improving equality of students' enrolment, but will also address equality of educational outcomes among male and female students in technical schools. It will also ensure improved quality of both male and female students in technical schools. In line with this objective, the study therefore, seeks to investigate the effect of gender inequality in the use of ICT in technical colleges in Delta State.

Purpose of the Study

The purpose of this study is to find out if gender is a factor in the use of ICT among students in technical colleges in Delta State. Specifically, the study aims at assessing

1. The variation between male and female students in the use of ICT in technical colleges in Delta State.
2. The time duration between male and female students in the use of ICT in technical colleges in Delta State.
3. The performance between male and female in the use of ICT in technical colleges in Delta State.

Research Questions

1. Is there variation in the use of ICT among male and female students in technical colleges in Delta State?
2. Do male students spend more time than female in the use of ICT in technical colleges in Delta State?
3. Do male perform better than females in the use of ICT in technical colleges in Delta State?

Hypotheses

1. Male and female variation is not a significant factor in the use of ICT in technical colleges in Delta State.
2. Time is not a significant factor in the use of ICT between male and female students in technical colleges in Delta State.
3. There is no significant difference between male and female student's performance in the use of ICT in technical colleges in Delta State.

Method

The study adopted a descriptive survey. The population of the study was 453NTC II students from six technical colleges in Delta State. A multi stage stratified random sampling technique was used to sample 100 NTC II students from the six technical colleges in Delta State. The instrument for the study was questionnaire titled: Assessment of gender inequality in the use of ICT in technical colleges in Delta State (AGIUICTTC). The questionnaire was patterned after a Likert scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD).The instrument was validated by three research experts. The Crombach Alpha reliability test was used to determine the reliability of the instrument and a reliability coefficient of 0.79 was obtained. Data collected for the study were analyzed using mean scores and standard deviation to answer the research questions while Chi-square was used to test the null hypothesis at 0.05 level of significance. In the test of null hypotheses using the Chi-square when the p-value was less or equal to the level of significance (0.05), the null hypothesis was rejected. Also, when the p-value was greater than the level of significance (0.05), the null hypothesis was not rejected.

Results

Research Question 1: Is there variations in the use of ICT among male and female students in technical colleges in Delta State?

Table 1: Mean rating of the variation in the use of ICT among male and female students in technical colleges in Delta State

S/N	Item	Mean	SD	Decision
1	Female students are lazy in the use of ICT	2.40	1.146	Rejected
2	Female students are not regular in ICT class	1.61	.751	Rejected
3	Female students lack ICT skills	2.14	.995	Rejected
4	Female students have phobia for the use of ICT.	1.91	.965	Rejected
5	ICT tools are easily manipulated by male students than females.	2.92	.929	Accepted
6	Males are more informed and vast when it comes to ICT use.	3.30	.870	Accepted
7	ICT tools are easily manipulated by female students more than the males.	2.47	.893	Rejected
8	Females are more informed and vast when it comes to ICT use more than the males.	2.34	.945	Rejected

Table 1 showed that the respondents rejected all the items because the mean ($\overline{X}$) was below 2.50 used as the benchmark with the exception of item 5 and 6. It showed that most female students are lazy in the use of ICT, female students are not regular in ICT class, female students lack ICT skills, ICT tools are not easily manipulated by female students and females students are not more informed and vast when it comes to ICT use in technical colleges. Items 5 and 6 were accepted because the mean ($\overline{X}$) was above 2.50 used as the benchmark. It showed that ICT tools are easily manipulated by male students than females and Males are more informed and vast when it comes to ICT use.

Research question 2: Do male students spend more time than female in the use of ICT in technical colleges in Delta State?

Table 2: Mean rating of the time spent by male and female in the use of ICT

S/N	Item	Mean	SD	Decision
1	Males spend more time in the use of ICT	3.40	.791	Accepted
2	Males have more interest in the use of ICT	3.22	.860	Accepted
3	Females spend more time in the use of ICT	2.34	.855	Rejected
4	Since males spend more time for ICT use, they can understand it faster	3.15	.809	Accepted
5	Females are in minority when it comes to the use of ICT	2.83	.888	Accepted
6	Males visit the ICT laboratory for practice more than the females	3.19	.761	Accepted
7	Females have more responsibilities at home than males, this hinder the from ICT use.	3.16	.907	Accepted
8	Females visit the ICT laboratory for practice more than the males	2.20	.943	Rejected

Table 2 showed that the respondents accepted all the items because the mean ($\overline{X}$) was above 2.50 used as the benchmark with the exception of item 3 and 8. It showed that male students have more time in the use of ICT, male students have more interest in the use of ICT, since male students have more time for ICT use, they can understand it faster, female students are in minority when it comes to the use of ICT, males students visit the ICT laboratory for practice more than the female students and females have more responsibilities at home than males, this hinder them from ICT use. Items 3 and 8werenotaccepted because the mean ($\overline{X}$) was below 2.50 used as the benchmark. It showed that females does not spend more time in the use of ICT and does not visit the ICT laboratory for practice more than male students.

Research question 3: Do male students perform better than the female students in the use of ICT?

Table 3: Mean rating of the performance of male and females students in the use of ICT

S/N	Item	Mean	SD	Decision
1	Do males perform better than females in ICT use	3.17	.933	Accepted
2	Females have phobia than males in ICT use	2.30	.859	Rejected
3	Females lack ICT skills and is affecting their performance	2.62	.908	Accepted
4	Females are less exposed to ICT tools than males.	2.08	.825	Rejected
5	Females have less interest in the use of ICT than males.	2.33	.877	Rejected
6	Females lack exposure to ICT tools	2.79	.891	Accepted
7	Females see ICT tool and their uses as boring	2.36	1.030	Rejected
8	So many males see ICT use as their future carrier.	3.46	.846	Accepted

Table 3 showed that the respondents accepted items 1, 3, 6 and 8 because the mean ($\overline{X}$) was above 2.50 used as the benchmark. This implies that males perform better than females in ICT use, females lack ICT skills and is affecting their performance. Females lack exposure to ICT tools and so many males see ICT use as their future carrier. Items 2, 4, 5 and 7 was rejected because the mean ($\overline{X}$) was below 2.50 used as the benchmark. It means that females have phobia than males in ICT use, females are less exposed to ICT tools than males, females have less interest in the use of ICT than males and females see ICT tool and their uses as boring.

Hypothesis 1: There is no significant difference between male and female students in the use of ICT in technical colleges in Delta State.

Table 4: Mean, standard deviation and t-test of male and female students in the use of ICT in technical colleges Delta State

Variables	N	Mean ($\overline{X}$)	SD	df	t	Sig. (2-tailed)	Decision
Male	51	21.08	4.289	98	4.906	.000	Rejected
Female	49	17.02	3.982				

Table 4 showed male had a mean value of 21.08 and standard deviation is 4.289 while female had a mean value of 17.02 and standard deviation of 3.982. It also showed a t-value of 4.906 and a p-value of .000. Testing at an alpha level of .05 the p-value is less than the alpha level. Therefore, the null hypothesis is rejected. This implies that there is a significant difference between male and female students in the use of ICT in technical colleges in Delta State.

Hypothesis 2: There is no significant difference between male and female students on time spent in the use of ICT in technical colleges in Delta State.

Table 5: Mean, standard deviation and t-test of male and female students on time spent in the use of ICT in technical colleges in Delta State.

Variables	N	Mean ($\overline{X}$)	SD	df	t	Sig. (2-tailed)	Decision
Male	51	24.61	3.371	98	2.895	.005	Rejected
Female	49	22.33	4.418				

Table 5 showed male had a mean value of 24.61 and standard deviation is 3.371 while female had a mean value of 22.33 and standard deviation of 4.418. It also showed a t-value of 2.895 and a p-value of .005. Testing at an alpha level of .05 the p-value is less than the alpha level. Therefore, the null hypothesis is rejected. This implies that there is a significant difference between male and female students on time spent in the use of ICT in technical colleges in Delta State**.**

Hypothesis 3: There is no significant difference between male and female students' performance in the use of ICT in technical colleges in Delta State

Table 6: Mean, standard deviation and t-test of male and female students' performance in the use of ICT in technical colleges in Delta State

Variables	N	Mean ($\overline{X}$)	SD	df	t	Sig. (2-tailed)	Decision
Male	51	21.37	3.039	98	.869	.387	Accepted
Female	49	20.84	3.125				

Table 6 showed male had a mean value of 21.37 and standard deviation is 3.039 while female had a mean value of 20.84 and standard deviation of 3.4125. It also showed a t-value of .869 and a p-value of .387.

Testing at an alpha level of .05 the p-value is greater than the alpha level. Therefore, the null hypothesis is accepted. This implies that there is no significant difference between male and female students' performance in the use of ICT in technical colleges in Delta State

Discussion of the Findings

The finding of this study revealed that there is gender difference in the use of ICT among students in technical colleges in Delta State. This is because the analysis of data showed that there is a significant difference between male and female in the use of ICT in technical colleges in Delta State. This finding is in line with the findings of Cepni (2016), Omosebi and Motunrayo (2021) as well as David-West and Akameze (2022) which revealed that there is a great disparity in the use of ICTs between male and female students.

Also the finding of the study revealed that there is a significant difference between male and female students in favour of male students on time spent in the use of ICT in technical colleges in Delta State. These findings corroborate with the findings of Basavaraja and Kumar (2017) and Chika (2018) which stated that male students spent more time in use of ICT in secondary schools.

in the use of ICTs in technical colleges.

Lastly the finding of the study revealed that there is no significant difference between male and female students' performance in the use of ICT in technical schools in Delta State. These findings is in line with that of Omosebi, and Motunrayo (2021) and Eze, Obidile and Okotubu (2020) which states that students irrespective of gender performed better when instructional method that motivate the learners is used in teaching learning process.

Conclusion

Base on the finding on the study it was concluded that there is gender difference in the use of ICT among students in technical colleges in Delta State. It was also concluded that male students spend more time than the female students in the use of ICT in technical colleges. Lastly the fining concludes that both male and female students performed better when ICT is used in the instructional process to facilitate learning.

Recommendations

From the findings of the study it was recommended that, everybody should be involved in the use of new technologies for learning, especially the female folk. Thus female students should be highly motivated in the use of ICTs in schools by way of giving awards and scholarships to female students in technical colleges. Adopting this approach could encourage more female students

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