

## THE ASSESSMENT OF THE PERCEPTIONS OF SENIOR SECONDARY SCHOOLS STUDENTS ON GENDER DIFFERENCES IN THE USE OF ICT IN THE IKA SOUTH LOCAL GOVERNMENT AREA OF DELTA STATE

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### Abstract

*This study assessed the inequality between male and female students in the use of ICT in senior secondary schools in Ika South Local Government Area of Delta State. Three research questions and three null hypotheses were formulated to guide the study. A sample of 100 students was selected randomly from a population of 453 students in the local government area of study. The questionnaire titled Assessment of gender inequality on the Use of ICT in Senior Schools (AGIUSS) was used as the instrument for the study. Three research experts validated the instrument. The Cronbach Alpha reliability test was used to determine the instrument's reliability, and a reliability coefficient of 0.79 was obtained. Means and standard deviation were used to*

*answer the research question formulated for the study and t-test was used to test the hypotheses at a 0.05 significance level. The findings showed a significant difference between male and female students favoring males in using ICT in senior schools in the Ika South local government area. The findings also revealed that male students used ICT more in senior secondary schools in the Ika South local government area. Lastly, the finding revealed no significant difference in the achievement of male and female senior students in the use of ICT in senior secondary schools in the Ika South local government area. Based on the findings, the study recommends that the government encourage female students to use ICTs in senior secondary schools through incentives.*

**Keywords:** Gender, Inequality, gender inequality, Information and Communication Technology (ICT).

### Introduction

Information and Communication Technologies (ICTs), according to Etuku (2014), is a diverse set of technological gadgets and tools used to generate, process, store, retrieve, and disseminate data and information. According to Ikwuka (2012), these technologies include computers, the internet, communication technologies (radio and television), and telephony. Ozden (2007) viewed ICTs as a set of technologies facilitated by electronic means to process, transmit, and display information. Ozden added that ICTs could be the technologies people use to share, distribute, gather information, and communicate through computers and computer networks.

Ogunsola and Aboyade, (2005) stated that Information and Communication Technology is becoming popular in educational sectors due to its ability to facilitate teaching and administrative activities in schools. The reason is that ICTs play a vital role in enhancing the quality of teaching and learning. In the mid-20<sup>th</sup> century, the importance of ICT in educational institutions increased immeasurably due to social progress and the vigorous development in science and technology (Kwame, 2010). In addition, Cepni (2016) stated that because of increased expansion in mass and diversified information, which has received the name “information explosion,” the need for a scientific approach to information as well as for the elucidation of its properties has brought about the significant changes in the understanding of the concept in ICTs has arisen. Kwame 2010, stated that ICTs were first broadened to include man to man and further from machine to machine, in the

same vein extended to the exchange of signals in the animals and plant world. Kwame (2010) also stated that moving education forward through ICT in the 21<sup>st</sup> century became paramount. New and emerging technologies challenge the traditional process of imparting knowledge. According to Cepni (2016), information technology, a vital area of study in its own right, began to impact all curriculum areas significantly.

Konyehan and Osubor (2010) stated that using ICTs in the educational sector enhanced the quality of experience for staff and students. The avenue for students to study together over the internet was facilitated. Computers in education have brought immense benefits to the teaching-learning process for both teachers and students. It has enhanced creativity and thinking skills. It has also improved learning and communication between the students and their teachers. Most importantly, ICTs created free access to knowledge and enhanced both genders' lifelong activity at home, work, and educational establishments.

According to Igbo, Onu, and Obiyo (2015), gender means the biological and physiological attributes of being male or female. Igbo et al. (2015) further stated that gender is a perceived pattern of behaviour and attitude associated with masculine and feminine traits within a culture. Furthermore, Eze, Obidile, and Okotubu (2020) defined gender as the psychological term which describes behaviours and attributes expected of an individual based on being a male or female. It is a term used to distinguish the differences between the social roles and cultural attributes of men and women, boys and girls society. (Hajara., & Mustapha, Kurfi 2013).

Eze et al. (2020) opined that inequality in gender was part of a colonization plan to subdue and exploit female folks perpetually. The nature of the Nigerian nation is characterized by male domination. Irrespective of women's efforts, they seem to be always underappreciated. There are several links between gender equality and equal rights to education for all, irrespective of gender. Several national and international organizations campaign for women's and girls' child education at all levels to minimize gender inequality.

According to Konyehan and Osubor (2010), there are fewer women than men in ICT usage and decision-making. This is because of the following challenges: Inadequate access and awareness: Socialization patterns and unequal access to education and training are persistent barriers that hinder female access to and use of ICTs. Most females, especially in rural areas, are unaware of the opportunities present in using ICT. Another challenge is Illiteracy and language barriers: Illiteracy and low language training levels impede female use of ICT tools. Time is also another factor. Huge responsibilities in the home are another challenge faced by the female gender in using ICT in public secondary schools. Females have more responsibilities than males in the home, from keeping the home, preparing meals, taking care of their siblings, etc. After doing all these, they have little or no time to go into ICT use.

Former United Nations Secretary-General Kofi Annan, at the World Summit on the Information Society (WSIS), 2003, had this to say, "There is a gender divide, with women and girls. They are enjoying less access to ICT than men and boys. Fewer females are accessing and using computers and the internet compared to males. The United Nations Division for the Advancement of Women's September 2005 publication, "Women 2000 and Beyond", confirms that "females are in the minority in the use of ICT, especially the computers, android phones and their applications in almost all developed and developing countries. The International Telecommunication Union reports that in most countries, the participation of women in higher-

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skilled, higher-ranking, and higher-paid positions remains very low. These patterns are significant for gender in development: where few female programmers exist, women's perspectives and needs are less likely to be integrated.

In line with the above, this study deemed it necessary to assess the perceptions of senior secondary school students on gender differences in the use of ICT in the Ika South Local Government Area of Delta State.

### **Purpose of the study**

This study aims to investigate if gender is a factor in the use of ICT in senior secondary schools. Specifically, the study aims to assess the perceptions of the students on:

1. The variation between male and female use of ICT
2. The time duration between male and female use of ICT
3. The performance between male and female use of ICT

### **Research questions**

1. Is there variation in the use of ICT by male and female students in public senior secondary Schools in the Ika South local government area of Delta State?
2. Do male students spend more time than females using ICT in public senior secondary Schools in the Ika South local government area of Delta State?
3. Do males perform better than females in the use of ICT?

### **Hypotheses**

1. There is no variation between male and female use of ICT
2. There is no significant difference between the time spent by both male and female students in the use of ICT tools.
3. There is no significant difference between male and female performance in the use of ICT.

### **Methods**

The study adopted a descriptive survey design to assess gender inequality in the use of ICT in senior secondary schools in the Ika South Local Government Area of Delta State. The study population was 453 students from 22 public senior secondary schools in Ika South Local Government Area of Delta State. A sample of 100 teachers was purposively selected using a purposive sampling technique. The instrument for the study was a questionnaire titled: Assessment of gender inequality in the use of ICT (AGIUICT). The questionnaire was patterned after a Likert scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The questionnaire has three sections: The variation between male and female use of ICT, The time duration between male and female use of ICT, and the performance between male and female use of ICT. Each section has eight (8) items. Three research experts validated the instrument. The Cronbach Alpha reliability test was used to determine the instrument's reliability, and a reliability coefficient of 0.79 was obtained. Means and standard deviation were used to answer the research question formulated for the study at 2-50 bench mark and t-test was used to test the hypotheses at a 0.05 significance level.

## Results

**Research question 1:** Are there variations in the use of ICT by male and female students in public senior secondary schools in Ika South Local Government Area of Delta State

**Table 1**

**Mean rating of the variation in the use of ICT by male and female students in public schools**

| S/N | Item   | Mean ( $\bar{X}$ ) | SD    | Decision |
|-----|--|--------------------|-------|----------|
| 1   | Most female students are lazy in the use of ICT              | 2.40               | 1.146 | Rejected |
| 2   | ICT use is not for female students                           | 1.61               | .751  | Rejected |
| 3   | Females lack ICT skills                                      | 2.14               | .995  | Rejected |
| 4   | ICT skills and use are only restricted to male folks.        | 1.91               | .965  | Rejected |
| 5   | Male students more easily manipulate ICT tools than females. | 2.92               | .929  | Accepted |
| 6   | Females find ICT use difficult.                              | 2.47               | .893  | Rejected |
| 7   | Females lack ICT awareness.                                  | 2.34               | .945  | Rejected |
| 8   | Males are more informed and faster when it comes to ICT use  | 3.30               | .870  | Accepted |

Table 1 showed that the respondents rejected all the items because the mean ( $\bar{X}$ ) was below 2.50 used as the benchmark, except for items 5 and 8. It showed that most female students are lazy in the use of ICT, ICT use is not for female students, females lack ICT skills, and use is only restricted to the male folks, and females find ICT use complex. Lack of ICT awareness. Items 5 and 8 were accepted because the mean ( $\bar{X}$ ) was above 2.50 and used as the benchmark. It showed that male students more easily manipulated ICT tools than females, and Males are more informed and faster regarding ICT use.

**Research question 2:** Do male students spend more time than females using ICT in public senior secondary schools in Ika South Local Government Area of Delta State?

**Table 2**

**Mean rating of the time spent by males and females in the use of ICT**

| S/N | Item  | Mean ( $\bar{X}$ ) | SD   | Decision |
|-----|---|--------------------|------|----------|
| 1   | Males have 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   | Since males have more time for ICT use, they can understand it faster.    | 3.15               | .809 | Accepted |
| 4   | Females lack information on the use of ICT                                | 2.34               | .855 | Rejected |
| 5   | Females are in the minority when it comes to the use of ICT.              | 2.83               | .888 | Accepted |
| 6   | Males enjoy more access to ICT tools                                      | 3.19               | .761 | Accepted |
| 7   | Females have a fear of ICT tools and equipment.                           | 2.20               | .943 | Rejected |
| 8   | Females have more responsibilities at home than males, hindering ICT use. | 3.16               | .907 | Accepted |

Table 2 showed that the respondents accepted all the items because the mean ( $\bar{X}$ ) was above 2.50 and used as the benchmark except for items 4 and 7. It showed that males have more time in the use of ICT; males have more interest in the use of ICT; since males have more time for ICT use, they can understand it faster. Females are in the minority when it comes to the use of ICT; males enjoy more access to ICT tools, and females have more responsibilities at home than males, which hinders them from ICT use. Items 4 and 7 were accepted because the mean ( $\bar{X}$ ) was above 0.05 and used as the benchmark. It showed that females lack information about ICT use and fear for ICT tools and equipment.

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

**Table 3**

**Mean rating of the performance of male and female students in the use of ICT?**

| S/N | Item  | Mean<br>( $\bar{X}$ ) | SD    | Decision |
|-----|---|-----------------------|-------|----------|
| 1   | Males perform better than females in ICT use.               | 3.17                  | .933  | Accepted |
| 2   | Females have more phobia than males in ICT use              | 2.30                  | .859  | Rejected |
| 3   | Females' lack of ICT skills 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 career.           | 3.46                  | .846  | Accepted |

Table 3 shows that the respondents accepted items 1, 3, 6, and 8 because the mean ( $\bar{X}$ ) was above 2.50 and used as the benchmark. This implies that males perform better than females in ICT use, females lack ICT skills, which affects their performance, Females lack exposure to ICT tools, and so many males see ICT use as their future career. Item 2, 4, 5, and 7 was rejected because the mean ( $\bar{X}$ ) was below 2.50 and 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 dull.

**Hypothesis 1:** There is no significant difference between male and female students in the use of ICT in public senior secondary schools in Ika South Local Government Area of Delta State.

**Table 4: Mean, standard deviation, and t-test of male and female students in the use of ICT in public senior secondary schools in Ika South Local Government Area of Delta State**

| Variables | N  | Mean ( $\bar{X}$ ) | 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 that males had a mean value of 21.08 and a standard deviation of 4.289, while females had a mean value of 17.02 and a 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 a significant difference between male and female students in the use of ICT in public senior secondary schools in Ika South Local Government Area of Delta State.

**Hypothesis 2:** There is no significant difference between the time both male and female students spend using ICT tools in senior secondary school in Ika South Local Government Area of Delta State.

**Table 5: Mean, standard deviation, and t-test of male and female students on time spent in the use of ICT in public senior secondary schools in Ika South Local Government Area of Delta State**

| Variables | N  | Mean ( $\bar{X}$ ) | 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 that males had a mean value of 24.61 and a standard deviation of 3.371, while females had a mean value of 22.33 and a 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 a significant difference between male and female students on time spent using ICT in public senior secondary schools in Ika South Local Government Area of Delta State.

**Hypothesis 3:** There is no significant difference between male and female students' performance in the use of ICT in public secondary schools in Ika South Local Government Area of Delta State.

**Table 6: Mean, standard deviation, and t-test of male and female students' performance in the use of ICT in public senior secondary schools in Ika South Local Government Area of Delta State**

| Variables | N  | Mean ( $\bar{X}$ ) | 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 that males had a mean value of 21.37 and a standard deviation of 3.039, while females had a mean value of 20.84 and a 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 equal performance in ICT use in both genders in public secondary schools in Ika South Local Government Area of Delta State.

### Discussion of findings

The findings of this study revealed that there is a gender difference in the perceptions of students on the use of ICT in public senior secondary schools in Ika South Local Government Area of Delta State. This is because the data analysis showed a significant difference between students' perceptions of ICT use in public senior secondary schools in the Ika South Local Government Area of Delta State. This finding aligns with the findings of Omorogbe and Aghagboren (2010) and Cepni (2016), which revealed a significant disparity in the use of ICTs between male and female students at the senior secondary school level.

Also, the study's findings revealed a significant difference in the perceptions of male and female students in favour of male students on time spent using ICT in public senior secondary schools in Ika South Local Government Area of Delta State. From this finding above, it can be said that male students spent more time using ICT tools in secondary schools.

Lastly, the study's finding revealed no significant difference between the perceptions of male and female students' performance in the use of ICT in public senior secondary schools in Ika South Local Government Area of Delta State. This finding is in line with that of Etuku (2014) and Eze, Obidile, and Okotubu (2020), which states that students, irrespective of gender, performed better when instructional media like ICT tools (computers, phones, projected and non-projected media) that can motivate the learning are used in the teaching-learning process.

### Conclusion

From the findings above, it is concluded that there is a gender difference in the use of ICT in public senior secondary schools in the Ika South Local Government Area of Delta State. Females are lagging in the use of ICT. For our education to advance in this 21<sup>st</sup> century and the future, females should make themselves available and key into these new technologies to make themselves relevant.

### Recommendation

From the findings of this study, both genders should be involved in using these new and emerging technologies for teaching today and in the future, especially the female folk. Thus, female students should be highly motivated to use ICTs in schools by giving awards and

scholarships to the best female students in using ICTs in every class and every school. Adopting this approach could encourage more female students to use ICTs in schools, thereby taking education to a higher height.

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