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Attitude of Secondary School Students' Toward Utilization of Information and Communication Technology in North Central Zone, Nigeria.

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A B S T R A C T

This study aimed to investigate attitudes towards Information and Communication Technology (ICT) within secondary school students North Central Zone, Nigeria. The evaluation of students' attitudes was conducted in a summative manner, taking into account variables such as gender, ethnicity, and the type of school management. The study's sample consisted of 1,280 students from 24 secondary schools located in the North Central Zone, Nigeria. An attitude scale specifically designed for secondary school students was employed to gather data. Statistical tools for analyzing the data involved in the process of computations were; percentages, means, standard deviations, and conducting t-tests. The final results indicated students that generally have positive attitude towards utilizing ICT. Notably, a good significant difference in attitudes was seen between students attending government and private secondary schools regarding ICT utilization. However, the study found no significant differences in attitudes based on gender or ethnicity. Therefore, it is essential to enhance students' awareness of the advantages of integrating ICT into education by implementing innovative ICT-related programs in schools, thereby encouraging effective utilization of ICT for learning purposes.

Keywords: Attitude, Information and Communication Technology, North Central Zone, Utilization

INTRODUCTION

In the contemporary landscape of the 21st century, proficiency in Information and Communication Technology (ICT) had emerged as essential foundation for both information literacy together with lifelong teaching and learning. Based on the phenomenon of a current generation of students admitted to educational institutions had garnered significant attention and sparked discussions among educators and commentators in the field of education. Proponents of this perspective contend present generation had been raised in social-saturated digital environments, resulting in heightened interest and aptitude for utilizing information and communication technologies (Bedi and Khatkar, 2018).

The advancements in computer technology have become ubiquitous in modern society. The students equipped with ICT skills are better positioned to contribute meaningfully to their communities and to comprehend the dynamics of society in the information age. When employed effectively, ICT is posed to improve the importance of education within an increasingly interconnected society, enhancing educational quality by transforming teaching and learning environment into active procedure that is relevant actual life contexts (Torruam, 2019). It has been suggested that the utilization of ICT can foster students' innovative and creative capabilities in managing their daily academic responsibilities. The incorporation of ICT into the process of learning allows students to engage in educational activities from home or other locations outside the traditional classroom environment, thereby providing them with a level of learning flexibility that is often absent in conventional settings. This flexibility empowers students with greater autonomy over their learning approaches. (Jana and Pavol, 2019).

Attitudes towards computers are significant predictors of behavior that can affect the extent of computer usage. Consequently, students' attitudes serve as valuable indicators of their appreciation for the role of computers in their educational experiences. Thus, the primary objective of this research is to examine the attitudes of secondary school students in using ICT in secondary education. ICT can be defined as those technologies employed in managing communications, intelligent building, media, and transmission systems, also network-based system and system monitoring (Chika and, 2020). Academic performance is characterized as observable behaviors by a student following their participation in school program. Furthermore, students' performance academically is often interpreted as the last grades achieved after a thorough and systematic evaluation of the student within the educational context, aimed at making informed decisions regarding their affective, cognitive and psychomotor development (Eguavoen, *et al*, 2018). He further elaborated that while excessive computer use for entertainment may detract from the period students allocate to studying apart from school premises, activities including online research also communication can indirectly enhance academic performance. In the 21st century, ICT has become thoroughly integrated into the educational framework, supporting and enhancing traditional instructional methods while addressing the need for student-centered learning and

knowledge transfer on a global scale. Consequently, education can be seen as a crucial institution at all levels to improve the availability and integration of ICT resources for student access frequently. The rationale for ensuring the presence and incorporation of various ICT tools in schools.

Statement Of the Problem

The innovation of the ICT has brought attention to the significance of worldwide communication. Individuals, associations, and organizations are better educated and more associated with one another than ever before. Data that once takes a few cycles and methods to get is currently promptly processed to information, it is accessible to all areas of the economy including instruction. Furthermore, the rationale behind the deployment and integration of ICT resources in educational settings is closely linked to the assertion by Ikwuka and Adigwe (2017) who found out that traditional educational methodologies are insufficient in providing students with essential required skills for economic survival in the contemporary job market. Nevertheless, despite the critical role of ICT for promoting effective teaching and improving educational results, Ottensen (2018) indicated a low rate in the performance of Nigeria students. It raises the question of whether this concerning trend can be linked to inadequate access to usage of ICT in the learning and teaching process, highlighting the need to further study. Regrettably, there appears to be a scarcity of studies examining ICT on the performance of secondary school students in Rivers State, underscoring the necessity for proper investigation.

(Nutakor, 2019) stressed in his work the students' difficulties in exploring ICT; he elaborated those students confronted with high pressure and cost of Data and information search and recovery in the retrieval in the offline library system (OLS) where no PC exists. Student s' attitudes to the Utilization of ICT in Schools in North Central Region of Nigeria. Subsequently, the time it will take a Secondary School researcher to explore in the disconnected mode ranges from 1 to 2 years. The method of teaching and experience today is supposed to growing from the regular strategy to a more powerful and adaptable, the student focus on the detailed of 75% of educators in Nigerian Schools have practically no required experience as with regards to ICT in training. Moreover, the handling of student's results physically has been the significant challenges affecting some certain teachers of our secondary schools which cumulate to poor students‟ result processing.

Purpose and Objectives of the Study

The main purpose of the research is to assess attitude of secondary school students toward utilization of ICT and the specific objectives are to:

I. assess secondary school students' attitude towards ICT utilization.

II. examine the difference in attitudes between male and female students in secondary school towards ICT utilization.

III. examine the difference in attitudes between North Central Schedule Tribe (NCST) and Non-North Central Schedule Tribe Non-NCST secondary school students towards ICT utilization.

IV. determine the difference in attitude between government and private secondary school students towards ICT utilization.

Hypotheses

I. There is no significant difference between the attitude of male and female students towards ICT utilization.

II. There is no significant difference between the attitude NCST and Non-NCST secondary school students towards the ICT utilization.

III. There is no significant difference between the attitude of government and private secondary school students towards ICT utilization.

Methodology

The descriptive survey technique was used for the research. It was targeted at senior secondary school student's attitude towards ICT utilization in North Central zone of Nigeria. This technique was considered appropriate for this research because it comprises of choosing sample from a large population. The target population for this research consists almost 14,332 of all the students in the chosen secondary schools in North Central Region, Nigeria. However, the researcher employed a random sampling technique to select a sample of 1,2980 students from 24 secondary schools, which included 12 government and 12 private institutions. This sample accounts for 7.8% of the total secondary school student population and 33% of the secondary schools within the region.

The researcher developed an attitude scale as tool used, specifically designed to assess attitude of secondary school students' towards ICT utilization. This scale comprises 15 items and is based on a five-point Likert scale, offering respondents five response options: Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (SD). The scale includes 12 positively framed statements and 3 negatively framed statements. Positive responses are assigned scores of 5, 4, 3, 2, 1 for SA, A, U, D, SD, respectively, while the scoring for negative statements is reversed. The scale's with lowest score was15, and the highest score recorded was 75. The reliability of the attitude scale was assessed using the test-retest method, yielding a reliability coefficient of .88, while its validity was confirmed through evaluations by content experts. To analyze the collected data, various statistical techniques were employed, including percentage calculations, mean, standard deviation, and t-tests

Results And Discussion

I. Objective I: To assess secondary school students' attitude towards ICT utilization.

Table I: Frequency distribution table of Secondary School Students Attitude Scores towards ICT utilization.

Class Interval	**69 – 75**	**62 – 68**	**55 – 61**	**48 – 54**	**41 – 47**	**34 – 40**	**27 – 33**	**Sum**
Frequency	34	267	553	304	105	20	7	N=1290
x	2	1	0	-1	-2	-3	-4	
fx	68	267	0	-304	-210	-60	-28	Fx=(-239)
Fx^2	136	267	0	304	420	180	112	Fx^2 =(1419)
Fin%	2.64	20.69	42.8	23.57	8.14	1.55	0.54	100%

Table I reveals mean of secondary school students attitude score towards ICT is 56.70. The attitude scale ranges from a lowest of 15 to a highest of 75, with an average score established at 45. The analysis of 1,280 secondary school students yielded a mean attitude score of 56.70, which exceeds the average score of the attitude scale (45). This finding suggests that a significant majority, specifically 89.77%, of students of secondary school exhibit a good attitude towards ICT utilization across North Central Region, Nigeria. Conversely, the data indicates that 10.23% of students demonstrate an unfavourable attitude towards ICT utilization. Furthermore, the calculated standard deviation of 7.23 indicates considerable variability in students attitude scores. Consequently, conclusion can be drawn that students in the North Central Region, Nigeria possesses a positive attitude towards ICT utilization.

Objective II: To examine the difference in attitudes between male and female students in secondary school towards ICT utilization.

Hypothesis I: There is no significant difference between the attitude of male and female students towards ICT utilization.

Table II: Calculated Mean Attitude Scores, Standard Deviation (SD) and t-value of the Attitude Scores of Male and Female Secondary School Students towards ICT utilization in North Central Region.

Students Group	**N**	**Mean**	**SD**	**SE_D**	**t-value**	**Remark**
Male Students	607	56.92	7.42			P< .05
				0.4	1.35	Not Significant
Female Students	683	56.18	7.04			

The data presented in Table II shows that the computed t-value is 1.35, which is lower compare to the critical t-value of 1.96 at a 0.05 significance level with 1288 degrees of freedom. Consequently, the stated hypothesis, "There is no significant difference between the attitude of male and female students towards ICT utilization" is accepted. This finding suggests that there is no significant disparity in the attitudes of secondary school student's male and female towards ICT utilization across the region, as both groups exhibit a similarly positive attitude mean scores towards ICT utilization

Objective III: To examine the difference between North Central Schedule Tribe (NCST) and Non-North Central Schedule Tribe Non-NCST secondary school students' attitudes towards ICT utilization.

Hypothesis II: There is no significant difference between the attitude NCST and Non-NCST secondary school students towards the ICT utilization

Table III: Attitude Mean Scores, Standard deviation and t-value of the Attitude Scores of Secondary school students NCST and Non-NCST towards ICT utilization

Students Group	**N**	**Mean**	**SD**	**SE_D**	**t-value**	**Remark**
NCST Students	1092	56.70	7.20			P< .05
				0.56	1.02	Not Significant
Non-NCST Students	198	56.03	7.14			

The data presented in Table III indicates that the computed t-value is 1.02, which is lower than the critical t-value of 1.96 at a 0.05 significance level for 1289 degrees of freedom. Consequently, the calculated t-value of 1.02 is not deemed significant, leading to acceptance of the stated hypothesis that "There is no significant difference between the attitude NCST and Non-NCST secondary school students towards the ICT utilization." This finding suggests that no notable difference between the attitudes of secondary school NCST and Non-NCST students towards ICT utilization across the region, the calculated mean scores show both groups exhibiting similarly positive attitudes.

Objective IV: To determine the notable difference, between government and private secondary school students' attitudes towards ICT utilization.

Hypothesis III: There is no significant difference between the attitude of government and private secondary school students towards ICT utilization.

Table IV: Attitude Mean Scores, Standard Deviation and t-value of the Attitude Scores of Governments and Private Secondary School Students towards ICT utilization**.**

Students Group	**N**	**Mean**	**SD**	**SE_D**	**t-value**	**Remark**
Govt School Students	726	54.90	7.42			P< .001
				0.39	10.53	Significant
Govt School Students	564	58.81	6.42			

Table IV illustrates that the computed t-value as 10.53, which went beyond the critical t-value of 2.58 at a 0.01 level of significance for 1288 degrees of freedom. Given that the calculated t-value of 10.54 was deemed significant, the null hypothesis stating, "There is no significant difference between the attitude of government and private secondary school students towards ICT utilization." is rejected. This indicates a notable difference in attitudes towards ICT utilization between the government and private secondary school students. Furthermore, the results reveal that mean score of private school students' attitudes (58.81) is significantly more than that of government school students (54.90), suggesting on private school students exhibit a more favourable attitude towards ICT utilization compared to their government school counterparts.

Discussion And Conclusion

The research indicates that secondary school students in North Central Region, exhibit a favourable attitude of utilizing of ICT. The results align with previous studies done by Adesoji, Nutakor (2019) presented that the effective application of ICT can enhance both attitudes and computer skills, thereby fostering a positive feedback loop that further enhances ICT effectiveness. Additionally, the study found that there was no notable significant differences in attitude of students towards ICT based on gender or race, corroborating the findings of Chika and Wale (2020) also, Bedi and Khatkar (2018), which opined that attitude of students in using technology are generally consistent across genders. However, a notable difference in attitudes was observed between students from government and private secondary schools regarding ICT usage, which contradicts the conclusions drawn (Kubiatko, 2017). Furthermore, students who recognize the utility of computers and possess confidence in their usage tend to exhibit more favorable attitudes towards ICT, leading to increased computer utilization (Mayah and Mayah, 2021). Hence, it is a well-known fact that non-ICT inclined gadget cannot be used for good teaching and learning in most public secondary schools since they have not been satisfactorily impacted by the feature of ICT. As for public secondary schools, there are arrangements of ICT resources and equipment, however they are not functional, in this manner making them underutilized, while a few funded states schools do not have them in any form. The researchers is concerned on the scarcity of this ICT hardware for teaching and learning and degree of accessibility and usage in public secondary schools in North Central, Nigeria (Timothy and Sani, 2020). Therefore, it is essential to enhance students' familiar with the advantages of ICT integration and utilization in education sector, implementing innovative ICT-related programs in schools, thereby encouraging effective utilization of ICT for learning purposes in North Central Region, Nigeria secondary school.

Recommendations

Good ICT facilities that will offer great opportunity to students such as a well-equipped computer laboratory

Well-equipped workshop and robust ICT tools for adequate teaching and learning should be provided by Federal Government to all students and staff of senior secondary schools in North Central Region

Federal Government and educational stakeholders should provide a robust internet facility across the secondary school in North Central region

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