

achievements negatively. The findings also agreed with those of Fakomogbon, Marakinyo (2012) who noted that Basic Technology teachers without adequate instructional materials will find it difficult to impact the right type knowledge to the pupils and that some teachers made no effort to use such materials even when they were within their reach. The study also revealed that the non-availability of instructional materials as major constraints to teachers use of instructional materials to teach pupils the findings of the study were also placement with those of Sambo (2014) conducted in Nasarawa State where the result revealed that most of the facilities for teaching Basic Science were available but they were not adequate and were utilized. This will create a very big problem to the achievement of the curriculum implementation goals in the study area. Abutu (2015) revealed that infrastructural facilities, teaching methodology, instructional resources, trained teachers, the extent to which the curriculum content are taught and funds are not adequately available to a high extent for the effective implementation of UBE programme. This also agreed with the finding of this study. This would also stand as a limitation to effective implementation of the UBE programme. The findings also collaborated with those of Olajide, Adebisi and Tewogbade (2017) in a study on Assessment of Laboratory Resources, Teachers' and Students' involvement in Practical Activities in Basic Science in Junior Secondary Schools in Osun State Nigeria. Those Basic Science resources are not available for teaching in most of the schools. This they said is invariably evidence that instructional resources are lacking to teach effectively. They equally collaborated Adeogun 1990 that a low level of instructional resources are available in public schools and that our public schools are both starved of both teaching and learning resources. This will mean that even though there are adequately qualified teachers for teaching BST in the study area, the lack of adequate instructional resources will ribaldry handicap the teachers and this will in turn hinder effective teaching and learning in the study area.

Conclusion

The study revealed that Basic Science and Technology (BST) can be fully implemented only if there are enough qualified teachers and adequate instructional materials. It was also seen that the teachers were capable in their teaching but lack resources for the teaching, it was also seen that the content of the curriculum were covered by the teachers in the study area. During the research work it was seen in schools that the text supplied to them by Government were not in line with the curriculum, that was why some teachers were unable to teach what was in the curriculum directly. Some teachers did not use the right methodology to teach the pupils, which have a lot of effect on the pupils. It can be concluded that Basic Science and Technology curriculum implementations

is well implemented but can as well be easily improved on due to the qualified and adequate teachers.

Recommendations

1. Schools should be equipped by government with Standard Basic Science and Technology laboratory and other instructional facilities.
2. Government should employ more qualified teachers.
3. Curriculum developer should regularly embark on investigation on how curriculum is being implemented in order to identify places where improvements or innovations are needed.

References

- Abutu, J. D. (2015). Evaluation of the implementation of UBE programme in primary schools in Nsukka education zone of Enugu State. *Thesis in the Department of Educational Foundation, University of Nigeria, Nsukka.*
- Adejumo, C. C. (2012). Classroom Resources for Effective Communication, Ibadan, Longman Group
- Adeogun, A. A. (2001). The principal and the financial management of public secondary schools in Osun State. *Journal of educational system and development, 5(1), 1-10.*
- Fakomogbon, M. A., Morakinyo, O. K., Omiola, M. A., & Ibrahim, K. A. (2012). Assessment of facilities available for teaching Basic Technology subject in the junior secondary schools in Ilorin metropolis. *Interdisciplinary Journal of Contemporary Research in Business, 3(10), 4-5.*
- Oloyede, E. O & Bamidele, E. F (2009). Effect of Using Science & Mathematics Terminologies Interpreted into Local Language as Advance Organizers on The Achievement of Students in Junior Secondary Schools in Junior Secondary Schools in Nigeria. In S. N. Osuji, Y. A. Ajibade, E. O. Oloyede (Eds). *Education for Fullness. Ghana: Damas Education Services Limited. Pg. 131-142.*
- Etukudo, D. U. (2014). Factors affecting teaching and learning of basic science and technology in primary schools. *Journal of Educational Policy and Entrepreneurial Research, 1(1), 46-58.*
- Sambo, M. H., Kukwi, I. J., Eggari, S. O., Mahmuda, A. M., & Headquarters, J. A. M. B. (2014). Assessment of the implementation of Basic Science Programme in junior secondary school in Nasarawa West Zone. *Developing Country Studies, 4.*
- Olajide, S. O., Adebisi, T. A., & Tewogbade, T. A. (2017). Assessment of laboratory resources, teachers' and students' involvement in practical activities in basic science in junior secondary schools in Osun state Nigeria. *Journal of Educational and Social Research, 7(3), 139-*

ASSESSMENT OF INTERNET USAGE AMONG SCIENCE STUDENTS AND ITS IMPLICATION ON BASIC EDUCATION: A CASE STUDY OF MICHAEL OTEDOLA COLLEGE OF PRIMARY EDUCATION, NOFORIJA – EPE, LAGOS STATE, NIGERIA

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Abstract

This study assessed the extent of internet usage by science students and its implications on basic education taking a case study of Michael Otedola College of Primary Education, Noforija - Epe, Lagos. Sample comprised of 253 students who were selected using stratified random sampling technique from the departments of Computer Science, Mathematics, and Integrated Science in the school of sciences of the college. The instrument used for data collection was a questionnaire designed by the researchers with a reliability co-efficient of 0.91. Data analysis was done using frequency counts and t-test. Results indicate no significance difference in the extent of usage of internet based on gender and that science students have sufficient access to the use of internet. Consequently, it was recommended, among others, that government should provide sufficient computers and related computer resources with which to adequately access the internet in all teacher-training institutions in Nigeria.

Keywords: Internet usage, gender, students' achievement, information technology

Introduction

World over, the level of acquisition of western education has become one of the most important instruments for the attainment of national development. Consequently, governments all over the world had continued to place preference on the development of education (Idowu, 2021). In recent times, more attention had been placed on science and technology education because of its role in political, social and economic development. It is however important to note that the internet had played very prominent roles in western educational practice. In contemporary educational practice, the internet which had been regarded an integral component of Information Technology (IT) had, within a very short

time become one of the basic building blocks of modern societies. The rapid rate at which IT had evolved since the mid twentieth century, its vast and unprecedented applications had given it a strong role in contemporary development and globalization (Salawu, 2019).

The place of science and consequently technology in the overall development of modern societies cannot be under-estimated. As a result, government at all levels in Nigeria had given preference for science subjects and consequently its teaching in our schools right from primary to tertiary level of education. This is necessary so that Nigeria will not be left behind in the realm of scientific and technological developments that had characterized the twenty-first century

Abubakar and Uboh (2018) have reported significant difference in the extent of use of computers and associated devices among male and female college students. However, Olonade (2018) have reported significant difference in the achievement of science and non-science secondary school students in Mathematics. In recent times, students' academic achievement in science is observed to dwindle. This was corroborated in Akinyemi (2020) and Adekanbi (2019) as both authors in different studies expressed the fact that students' achievement in Basic Science and Mathematics are deteriorating and that the trend needs to be corrected in order for Nigeria to meet up with the challenges of the twenty-first century. In addition, recent advances on social media usage coupled with proliferation of internet-ready mobile phones, i-pads, palmtops, etc had negatively influenced the academic achievement of many students as many of these students now devote more time to social media usage at the expense of their studies. Considering the fact that science teachers have significant roles to play in the school system,

then it becomes important for a study of this nature to be carried out. This is because while the internet is a universally acknowledged tool of instruction, the skills required by science teachers to properly harness its potentials for the purpose of facilitating instruction is another integral part of the instructional process.

The National Commission for Colleges of Education (2012) while identifying the objectives of its teacher education programme stated that at the end of the programme, students should be able to:

- a. discuss intelligently the main ideas that have affected and still affect the development and practice of education generally, and in Nigeria in particular;
- b. examine the main psychological, health and socio-economic factors that may help or hinder a child's educational performance;
- c. study learners appropriately to determine the most effective ways of relating to them to ensure their maximum achievement;
- d. professionally combine use of conventional and ICT or other innovative instructional/learning strategies in generating, and imparting knowledge, attitudes and skills at Basic Education level;
- e. develop, select, and effectively use appropriate curriculum processes, teaching strategies, instructional materials and methods for maximum learners' achievement;
- f. broaden their intellectual perspective through the General Studies Education programme for Basic Education;
- g. demonstrate desirable attributes in moral and character development;
- h. discuss intelligently major issues affecting teacher education and the teaching professional in Nigeria;
- i. identify major problems of education in Nigeria, and their corresponding solutions;
- j. demonstrate proficiency in measuring and evaluating learning outcomes, as well as in carrying out appropriate research on educational problems in Nigeria particularly at Basic Education level.

The internet is the global system of interconnected computer networks that uses protocol suite to communicate among networks and devices. It is a *network of networks* that consists of private, public, academic, business, and government networks of local to global scope, linked by a broad array of electronic, wireless, and optical networking technologies. The internet carries a vast range of information resources and services, such as the inter-

linked hypertext documents and applications of the world-wide web, electronic mail, telephony and file sharing.

The use of internet in schools assists students in accessing digital information efficiently and effectively. The internet can be used as a tool by students to discover learning contents, solve problems and provide solutions to the problems in the learning process. This is possible because the internet makes knowledge acquisition more accessible. Consequently, when students learn through internet, they have access to information and data from various sources, they can therefore assess the quality of the learning materials available to them which could be e-books which may come with some reading applications to offer a reading-aloud interface, relevant vocabulary-building activities, games related to reading skills and vocabulary acquisition, and more (Osunmakinde, 2020).

Considering the importance of science and technology in the overall national development in the twenty-first century, it is obvious that the training of science teachers who will teach at the basic level of education is of paramount importance. This is because science teachers who are vast in the use of computer technology in solving instructional problems are better prepared for the challenges ahead. Since science and technology play prominent roles in the educational practice nowadays, a study of this nature is inevitable.

Purpose of the Study

The place of science and technology in the overall development of any nation cannot be under-estimated. However, with the dwindling trend in students' performance in science courses in recent times, it is important to investigate the extent to which science students in teacher-training institutions use the internet and consequently suggest modalities through which this can be explored at maximizing school achievement of the students. The specific objectives are to:

- i. identify the sources of internet available to science students at Michael Otedola College of Primary Education, Noforija-Epe, Lagos;
- ii. identify the extent to which science students at Michael Otedola College of Primary Education, Noforija-Epe, Lagos use the internet for private studies; and
- iii. determine if there is any difference in the extent of usage of internet by male and female science students of Michael Otedola College of Primary Education, Noforija -Epe, Lagos.

Research Questions

The study was guided by the following research questions:

- a. What are the sources of internet available to science students at Michael Otedola College of Primary Education, Noforija – Epe, Lagos?
- b. To what extent do science students at Michael Otedola College of Primary Education, Noforija -Epe, Lagos use the internet for private studies?
- c. Is there any difference in the extent of use of internet by male and female science students of Michael Otedola College of Primary

Education, Noforija–Epe, Lagos?

Methodology

Michael Otedola College of Primary Education, Noforija-Epe, Lagos is a state-owned teacher-training institution basically for the basic level of education. It comprises of five schools, including the school of sciences. The sample comprised of two hundred and fifty-six (256) students who were selected using stratified random sampling technique from the three departments constituting the school of sciences. This includes the departments of Computer Science, Mathematics, and Integrated Science. The population is made up of all students in the school of sciences of the college for the 2018/2019 and 2019/2020 academic sessions. The distribution of sample by

Table 1
Sample Distribution by Departments in the School of Sciences of the College

Departments	Sample (2018/2019 session)	Sample (2019/2020 session)	Total Sample
Computer Science	67	79	139
mathematics	23	29	52
Integrated Science	26	39	65
Total	116	140	256

The variation in the number of samples by department is based on the percentage of the number of students that were available in each department of the school of sciences.

Data collection was done using a questionnaire designed by the researchers. The questionnaire was titled 'Assessment of Internet Usage by Nigeria Certificate in Education Science Students' (AIUNCESS). It had two parts, viz: A and B. While Part A elicits demographic information of the

respondents such as department and gender, Part B elicits responses bordering on the assessment of the level of internet usage by science students and the sources. It was validated by a Tests and Measurement expert in the school of education of the college. Data collected were analysed using frequency counts and t-test analysis. A total of 256 copies of the instrument were distributed. However, out of this number, only two hundred and fifty-three (253) copies were properly completed and returned for analysis.

Results

The results from the study are presented below.

Table 2
Demographic Profile of Respondents

Gender of respondents	Frequency	Percentages (%)
Female	139	54.9
Male	114	45.1
Total	243	100.0

Table 2 reveals that 139 (54.9%) of respondents were female while 114 (45.1%) were male.

Research question one: What are the sources of internet available to science students at Michael Otedola College of Primary Education, Noforija – Epe, Lagos?

Table 3
Sources of Internet used by Science Students

Source of Internet	Number of respondents	Percentage (%)
Personal computers, desktops, palm tops, etc	63	24.9
College e-library	27	10.7
Departmental Computer room	32	12.6
Personal mobile phones	131	51.8
Total	253	100

Table 3 reveals that 63 (24.9%) of respondents access the internet on their personal computers, desktops, palm tops, etc while 27(10.7%) access the internet using the college e-library. Similarly, 32(12.6%) access the internet using departmental computer rooms (facilities) while 131(51.8%) access the internet on the personal mobile phones.

Research question two: To what extent do science students at Michael Otedola College of Primary Education, Noforija – Epe, Lagos use the internet for private studies?

Table 4
Frequency of Level of Internet Usage by Science Students

Frequency	Number of respondents	Percentage (%)
Very Occasionally	11	4.3
Occasionally	29	11.5
Often	62	24.5
Very Often	151	59.7
Total	253	100

Table 4 reveals that 11(4.3%), 29(11.5%), 62(24.5%) and 151(59.7%) uses the internet 'very occasionally', 'occasionally', 'often' and 'very often' respectively.

Research question 3: Is there any difference in the extent of use of internet by male and female science students of Michael Otedola College of Primary Education, Noforija – Epe, Lagos?

Table 5
T-test Analysis of Extent of Use of Internet by Male and Female Science Students

Group	N	Mean	SD	df	t-cal	t-table
Female	139	14.72	0.84	179	4.14	3.76
Male	114	10.13	0.73			

Level of significance at 0.05, SD = standard deviation, df = degree of freedom

Table 5 reveals no significant difference in female (N = 139, Mean = 14.72, SD = 0.84) and male (N = 114, Mean = 10.13, SD = 0.73). The obtained t-cal value (4.14) is greater than the table t-value (3.76). This implies that there is no difference in the extent of use of internet by male and female science students

Discussion of findings

Regarding the sources of internet used by science students, it was revealed that the main source of internet used by students is their mobile phones, followed by their personal computers, laptops, palm tops, Other sources include departmental computer facilities and the college e-library. In addition,

findings reveal that majority of the students use the internet more often. This finding revealed the growing relevance of internet for school activities and that students are seemingly taking more advantage of it as this finding indicates a widespread acceptability of the internet and related technologies among science students.

On the extent of use of internet and male and female science students, it was discovered that there was no difference in the extent of use of internet by male and female science students. This is probably because since majority of the students now rely on the use of their mobile phones to access the internet, it is more

accessible to them than ever. In addition, it is more convenient taking the mobile phones from one place to another since they are very handy. This finding runs contrary to that of Salawu (2019) in a related study on the extent of utilization of computer technology resources (such as internet, facebook, twitter, etc) among medical and law students in three federal universities in southwest Nigeria where he discovered that these resources are much more utilized by male students than their female counterparts. This finding is an indication that gender is not an important factor in the extent of use of internet by students.

The latest reform on the Universal Basic Education (UBE) programme of the Federal Government of Nigeria was the promulgation of UBE Act 2004. This made the provision for basic education consisting of pre-primary education, primary and junior secondary education. This is because basic education is seen as the foundation upon which other levels of education are laid. Consequently, the implications of the findings of this study on basic education include the following, among others:

- The use of internet by science teacher-trainees for instructional purposes prepares them better for challenges ahead in the teaching profession.
- It exposes the student-teachers to a plethora of knowledge on contents development and pedagogy which are aimed at improving their classroom performance.
- The teaching and learning of Basic Science and Technology is further advanced for the overall development of Nigeria.
- The students will have all that is required for them to cope with that the task of instruction dissemination in the twenty-first century.

Conclusion

The place of the internet in instructional processes cannot be over-emphasized. Consequently, science students in our teacher-training institutions should be better prepared to meet up with the challenges of instructional dissemination using internet resources.

Recommendations

The following recommendations are made, based on the findings of the study.

- Both federal and states' ministries of education should make acquisition of adequate

computer skills as part of the conditions for recruiting of

- Government should ensure continuous training and re-training of science teachers in schools to improve their productivity through the use of the internet.
- Governments should make and implement policies that will ensure steady power supply in schools to facilitate the use of computer and related technologies by teachers as this will enhance the optimal usage of these facilities in schools.
- Government should make policies to encourage local production of computers and related accessories in order to make the facilities more affordable.

References

- Abubakar, R. B. & Uboh, V. (2018). *Breaking the Gender Variation in Enrolment and Academic Achievement of Science and Mathematics Students*. Akoka Journal of Pure and Applied Science Education 10(1). 203-209
- Adekanbi, W. (2019). *Problems facing the Teaching of Basic Science and Technology in Ibeju-Lekki Local Government Area of Lagos State*. A.B.Sc. (Ed.) Project in the Department of Integrated Science, Directorate of Degree Programmes, Michael Otedola College of Primary Education in affiliation with the University of Ibadan, Ibadan
- Akinyemi, S. F. (2020). *Appraisal of Junior secondary School Students' Achievement in Mathematics in Ijebu-Ode Local Government Area of Ogun State*. A B.Sc. (Ed.) Project in the Department of Mathematics Education, Tai Solarin University of Education, Ijebu-Ode, Ogun State. 23 - 25.
- Idowu, F. U. (2021). *Western Education in Nigeria: Historical Perspectives*. Lagos: Prudent Books. pages 111
- National Commission for Colleges of Education. (2012). *Nigeria Certificate in Education: Minimum Standards for General Education*. Federal Republic of Nigeria.
- Olonade, P. O. (2018) *Developing Students' skill in Mathematics Education*. Akoka Journal of Pure and Applied Science Education 10(1). 230-235.
- Osunmakinde, Y. A. (2020). *Extent of Use of Information and Communication Technology by Mathematics Teachers in Senior Secondary*

Schools in Eti-Osa Local Government Area of Lagos State. A B.Sc. (Ed.) Project in the Directorate of Degree Programme, University of Ibadan in affiliation with Michael Otedola

College of Primary Education, Noforija- Epe, Lagos.

Salawu, F. (2019). *Extent of Utilization of Computer Technology Resources among Medical and Law Students in three Federal Universities in*

PERCEPTION OF PRE-SERVICE TEACHERS IN COLLEGES OF EDUCATION ON BASIC EDUCATION AND VALUE SYSTEM IN OSUN STATE, NIGERIA

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Abstract

The study examined the perceived relevance of value in the contemporary society. It also investigated the perception on the appropriateness of teaching of value education at basic level and finally determined the challenges confronting teaching of value at basic education level. The study employed descriptive survey research design. The population for the study consisted of final year pre-service teachers in Colleges of Education in Osun State. The sample size was made up of 300 pre-service teachers selected from the existing five Colleges of Education using proportionate sampling technique. Three research questions emanated from the study. An instrument tagged 'Basic Education and Value System Questionnaire' (BEVSQ) was used to collect data for the study. The data were analyzed using frequency counts, simple percentages, means, standard deviation and rank. The study revealed that value is a basic ingredient for the existence of any society and for effective living, hence a high perception. It was also revealed that value should be taught at basic level of education. Also, value disorientation ($M=3.62$, $SD=0.65$), home background ($M=3.55$, $SD=0.77$), misconception of ideas ($M=3.53$, $SD=0.75$) are the major challenges confronting the teaching of value at basic level of education. The study concluded that Education will surely be incomplete if it didn't involve the study of human values that can help every child become a kinder, compassionate and empathetic individual thus nurturing emotional intelligence in every child. The study therefore recommended that essential values for basic living should be inculcated and taught at basic level of education which will serve as basic foundation for future development of a child.

Keywords: Basic education, Pre-service teacher, Value system, Perception

Introduction

Education is an age-old concept that has existed since man inhabited the universe. It is a process of transmitting what is worthwhile from generation to generation. The primary purpose of education is to produce effective members of the society whose three 'Hs' – head, heart, and hands have been well developed to enable them to live as effective and acceptable human beings. Effective education should prepare members of the society to be able to fulfill their personal needs and to perform their civil obligations

(Ajayi & Adegbesan, 2011). Education as an instrument of change seeks to change the environment through the thoughts of human beings and events in the environment (Ayeni & Adelabu, 2020). It is a process by which the individual is enabled to develop his knowledge, skills, values, and attitudes both for his benefit and for the benefit of society. Despite the myriad importance of education, it is believed that basic education is part of the bedrock of education because it entails the pre-primary education through the junior secondary education (Federal Republic of Nigeria, National Policy on Education (NPE) (2013). The importance of basic education is vital because it occupies a unique position in the educational system of Nigeria. After all, this level of education determines the academic and holistic development of pupils. Basic education provides an opportunity for a child to acquire additional knowledge, skills, and traits. In Nigeria, basic education aims at preparing an individual for useful living within the society and higher education (Alam & Farid, 2011). The primary educational system offers the child several concentrated knowledge responsible for nurturing him/her for the secondary and post-secondary (tertiary) level. The primary school has been considered a prerequisite for other levels of education such that no one can proceed to secondary school without passing through primary school, this is an establishment that forms the bedrock for the different other grades of educational achievements (Sherif, 2018).

Moreover, the primary level of education prepares the mind of the learner ready for more complex academic quests- and this is the stage where they can learn the right set of values. Furthermore, it equips the children with the basics of reading, writing, acquisition of skill and creativity, behaviour, and knowledge crucial for the necessary integration into the society. Regrettably, not every participant in primary school education advanced to the higher grades in the system. Basic education is like a precondition that every child must successfully satisfy in a bid to move a step higher. The essential training is known as the establishment of the instructive framework because a child who evades this level of education is considered unschooled. After all, basic education that can assist the child in advanced levels is provided at such a primary level (Sherif, 2018).