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Towards Value Re-Orientation of Primary School Female Teachers on the Role of ICT in Teaching and Learning in Oyo Town, Nigeria

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Abstract

This study examined the perceived roles of ICT by primary school female teachers and the re-orientating of their perception on roles of ICT in teaching and learning in Oyo Township, Nigeria. To assess this, three (3) research questions were raised. A descriptive research design of the survey type was used for the study. 90 respondents were randomly selected from 12 primary schools of three each from the three LGAs in Oyo town. A questionnaire on 'Towards value reorientation of Primary School Female Teachers on the role of ICT was used as an instrument for data collection. The instrument was trial tested using test-retest reliability and analyzed which yielded 0.81 reliability index. Data collected were analyzed using mean to answer the research questions. The finding showed that the respondents accepted all the items on the roles of ICT to sustainable development with a mean of 3.21. Perceived values of ICT and strategies for enhancing value reorientation of primary school female teachers using ICT for sustainable development in Oyo town with grand means of 3.45 and 3.21 respectively. The study concludes that the value reorientation of female primary school teachers on the role of ICT in teaching and learning would enhance expected sustainable development in Oyo and Nigeria as a whole. Based on this, it was recommended that female teachers should be equipped with ICT tools and adequate training should be given to them on the use of ICT tools and the government should ensure that ICT policy is translated into reality...

Introduction

Education has been adopted by many nations of the world including Nigeria as a dynamic instrument of change. Coherently, education is one of the fundamental human rights as aggrandized in the Universal Declaration of Human Right (1948) and many other international human right instruments. The right to education is one of the key principles underpinning the education 2030 Agenda and Sustainable Development Goal 4 (SDG4) as domesticated in Nigeria. The government of Nigeria is making communal efforts towards the materialization of this goal especially with the origination of the Universal Basic Education (UBE) programme as it is believed that education prepares one for the needed behavioural change and abilities for sustainable national development (Aja, Eze, Igba, & Ukaigwe, 2017).

According to Olorundare (2014), education is a key agent of national development, either as a way of developing human capacity, increasing the skilled workforce for modernization or as a matter of personal freedom, developing capability and empowerment. A fundamental prerequisite for sustainable development is an adequately financed and effective educational system at all levels, particularly the primary (Obanya, 2008). Sustainable development can be defined as development that meets the needs of the person without compromising the ability of future generations to meet their own needs. Education for sustainable development was a United Nations program that defined as education that encourages changes in knowledge, skills, values and attitudes to enable a more sustainable and just society for all (UNESCO, 2013). According to Egana del Sol (2019) and United Nations (2017) as cited in Wikipedia, (2021a), education sustainable development (ESD) is a component of measurement in an indicator for sustainable development goal 12 (SDG 12) which has one of its targets that by 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.

All nations especially developing countries, therefore, need balanced development through the educational sector to make significant progress in terms of national development (Yusuf, 2005). The crisis of the value system in Nigeria suggests that the growth and progress of society are being retarded in many aspects, the educational sector is not an exception. Value is considered as something perceived as important, useful, significance or worth. In

this context, value refers to the principles or standard of behaviour that a particular group of people hold dearly. Whether personal or public, values can be good or bad depending on the prevailing situation. Therefore, value orientation simply means the procedure of changing an individual's, group's or societies' negative behaviour to a positive one for societal gain.

Indeed, if Nigeria is to be sustained as a viable entity there must be a very good plan to tap the energy and resourcefulness of the women to fast track economic development (Adebiyi & Ganiyu, 2016). Assessment of the economic, security and other benefits of women's participation and their need for peace operations, treaty negotiations, constitution development, and reconciliation and reconstruction efforts brought about the growing recognition of the untapped capacity and talents of women. This should be looked into in the education sector which calls for reorienting primary school female teachers on the role of ICT in teaching and learning. International, there is a growing recognition that women's representative participation in decision making is a fundamental condition of women's equality and a hallmark of an inclusive society that values capitalizes on the contributions of all its members.

According to Kuara in Asaju, Arome and Mukaila (2014), value orientation is the process of creating awareness of one's temporal, practical or circumstantial condition of the societal values which at the end should result in behavioural modification. While value re-orientation on the other hand is an act of re-explore the values that appear to have been devastated. Here education is expected to play an important role. Every society is aware of the critical role of education in value orientation among its members. The national policy on education is emphatic on this as it provides that the quality of instruction at all levels of education has to be oriented towards instilling the following values.

- i. Respect for the worth and dignity of the individual;
- ii. Faith in man's ability to make rational decisions;
- iii. Moral and spiritual values in interpersonal and human relations;
- iv. Shared responsibility for the common goal of society;
- v. Respect for the dignity of labour; and
- vi. Promotion of the emotional, physical and psychological health of all children.

These are the general values the Nigeria education system strives to achieve in the entire citizenry. It's therefore, the intention of this study to explore ways it could be achieved through value re-orientation of primary school female teachers on the role of ICT in teaching and learning in Oyo town, Nigeria.

Oyo is an island state in southwest Nigeria, its capital is Ibadan, the third most populous city in the country and formerly the second most populous city in Africa. Oyo state is bordered to the north by Kwara State, to the east by Osun state, and to the southwest by Ogun state and Republic of Benin. With a projected population of 7,840,864 in 2016, Oyo state is the fifth most populous in the country (Nenge, 2019). Presently the State has 2,004 public schools, 971 private nursery/primary schools, 969 public secondary schools including 7 schools of Science and 57 private secondary schools.

Oyo metropolis comprises four local government areas namely: Atiba LGA, headquartered at Offa-Meta; Oyo East LGA, headquartered at Kosobo; Oyo West LGA, headquartered at Ojongbodu and Afijio LGA, headquartered at Jobele. But Oyo town only houses three out of the four local government areas in Oyo metropolis. The local government area excluded is Afijio LGA. Oyo is home to five higher institutions; these are the Federal College of Education, (sp) Akinmoorin, Ajayi Crowther University, Emmanuel Alayande College of Education (Erelu Campus and Isokun Campus), Federal School of Surveying (The only school of surveying in Sub-sahara Africa), and Atiba University. It houses numerous public and private secondary schools such as Olivet Baptist High School, Saint Bernardine Girls Grammar School, Ladigbolu Grammar School, Oranyan Grammar School, Emmanuel Alayande Model High School, Aatan Baptist Comprehensive High School, Shepherdsfield International College, Nesto College, SPED International College etc. there are numerous primary schools both private and public with the new crop of alleged "mushroom" private schools (Wikipedia, 2021b). Historically, Oyo town is the foundation of Oyo state which education of the place right from primary to tertiary should be paramount to any government in power among other zones of the state.

The emergence of information communication technology (ICT) recently has revolutionized teaching and learning at all levels of education (Makinde, 2017) hence educational systems around the world are under increasing pressure to use the emerging technologies to teach students 21st-century skills. Teachers and Teaching in a Changing World describe the radical implications ICTs have for conventional teaching and learning (Badmus, 2013). It predicts the transformation of the teaching-learning process and the way teachers and learners gain access to knowledge and information. Information and communication technology (ICT) holds promise in providing not

only anywhere and anytime access to knowledge, but also equal opportunities for networking and communications that allow knowledge sharing, participation, and lifelong learning (Adeyanju, 2015). In realization of the huge potentials of ICT in education, governments have heavily invested in developing their respective ICT in Education Plans and on bringing various ICT equipment and resources into schools.

Also, Makinde (2010) observed that since ICT usage in different areas of specialization in increasing worldwide, in the effort to transform the national educational system, there is an urgent need for internet resources because through this, a lot of learning resources could be accessed and sorted for classroom use. Furthermore, Makinde and Bolaji (2019) opined that teachers should not worry much about the production of learning materials for their classroom; the internet has resources/materials in numerous form that can be co-opted into their lessons for efficient communication to the whole class. This in turn breaks the workload and gives room for diversity for pupils with different interest and level of understanding to be alive in and out of the classroom environment since the channel of communication is very accommodating.

Despite the huge benefits of ICT in teaching and learning, research shows that many teachers in higher institutions, secondary schools are still not embraced it talk less of primary school teachers. To effectively harness the power of the new information and communication technologies (ICTs) which improves learning as enumerated by the United Nations Educational Scientific Cultural Organisation (UNESCO), the following essential conditions must be met:

- Students and teachers must have sufficient access to digital technologies and the Internet in their classrooms, schools, and teacher education institutions.
- High quality, meaningful, and culturally responsive digital content must be available for teachers and learners.
- Teachers must have the knowledge and skills to use the new digital tools and resources to help all students achieve high academic standards (UNESCO, 2013).

Taking into cognizance the veracity that ICT offers an important strategy to train skilled workers for the employment market and sustainable livelihoods, there is an urgent need for value reorientation of these primary school female teachers to make ICT attractive to them (Olasedidun, 2014).

Statement of the Problem

The teaching profession has embraced ICT like other institutions hence; female teachers most especially in primary schools must be re-orientated towards ICT utilization and role in teaching for the effective performance of pupils in primary schools since they take the larger percentage of the teachers' population in primary schools in Nigeria. For sustainability and a good foundation for our children, the female teacher needs total re-orientation on the role of ICT in teaching because of its vast benefits. Makinde (2020) believed that ICT should be encouraged in primary schools to enlighten primary school children about the adverse effect of social/mass media on their social pedagogy. This cannot be done if teachers are not acquainted with the knowledge of ICT and give necessary value re-orientation of the role of ICT in schools especially the female teachers that stand as second mothers to the pupils in primary schools. To the best of researchers' knowledge, few or no research seems to have been carried out in this area of study in Nigeria. This study is, therefore, design to determine the effect of value re-orientation of the primary school female teachers on the role of ICT in teaching and learning in Oyo town.

Purpose of the Study

The purpose of this study is to investigate the effect of value re-orientation of the primary school female teachers on the role of ICT in teaching and learning. It will reveal to the teachers most especially the females how to arouse pupils' interest by using ICT to boost their performance for sustainable development. It will also encourage primary school teachers especially females towards the values of ICT in their chosen profession. Likewise, the approaches to value re-orientation of primary school female teachers on ICT integration in teaching were also examined.

Research Question

Based on the research purpose, the study seeks to provide the answer to the following questions.

- RQ1. What are the roles of information and communication technology (ICT) plays in sustainable development?
- RQ2. What are the perceived values of ICT by primary school female teachers?
- RQ3. What approaches can be adopted for value re-orientation of primary school female teachers on information and communication technology integration in teaching?

Methodology

The design of this study is a descriptive survey research design. The descriptive survey research involves collecting data from a representative sample of the population and then generalizing the findings to the entire population. The population of this study comprises all primary schools teachers in three local government areas (Atiba LGA, Oyo East LGA, and Oyo West LGA) of Oyo town. The sample of the study comprises 90 primary school female teachers in twelve public primary schools across the three local government areas in Oyo town. Three primary schools were selected from each of the three local government areas sampled. A simple random sampling technique was used to select 10 female teachers from sampled schools which summed to 30 female teachers sampled from each local government area of the town. After taking permission from the headteacher, the researcher was allowed to pick 10 female teachers at random in each school of 12 primary schools, of 3 each from the three local government areas under survey. A total of 90 female teachers were eventually sampled for the study. A structured questionnaire titled, Value Reorientation of Primary School Female Teachers on the Role of ICT in Teaching Ouestionnaire" (VROPSFTORICT), was the instrument used to collect data for the study. The instrument had two sections A and B. Section A sought information on selected personal data of the respondents, sections B consisted of 20 - items relevant for answering the research questions raised in the study. The response format of the instrument was a four-point Likert scale of Strongly Agree, Agree, Disagree and Strongly Disagree with corresponding values of 4, 3, 2, and 1 respectively. The instrument was validated by four experts in the Departments of Educational Technology and Primary Education.

The reliability of the instrument was established using the test-retest reliability method on data collected through a pilot test on 20 primary school female teachers from the Iseyin local government who were not part of the sample. The reliability coefficient of 0.81 was obtained using Cronbach's Alpha. A total of 90 copies of the instrument were distributed to the respondents directly by the researcher with the help of two research assistants. The total number of copies retrieved was 88 representing a 97.8% return rate. The number was considered adequate and was used for the analysis of the study. The descriptive statistics of mean was used to answer the research questions.

Results

The results of the data analysis of the study are presented in Tables 1 to 3 below.

Research Ouestion 1

What are the roles of Information and Communication Technology for sustainable development?

Table 1: Roles of information and communication technology for sustainable development

S/N	Item	$Mean(\overline{x})$
1.	ICT makes learning more permanent	3.40
2.	ICT supplies a concrete base for conceptual thinking	3.33
3.	ICT stimulates a high degree of interest in learners	2.95
4.	ICT improves pupils' communication	3.15
5.	ICT facilitates pupils' motor skill development	2.88
6.	ICT guides peer interactive effectively	3.72
7.	ICT provides the pupils with basic tools for further educational advancement.	3.05
	Grand Total	3.21

Table 1 showed that the respondents accepted all the items as roles of ICT to sustainable development considering the mean benchmark of 2.5. The majority of the respondents agreed that ICT makes learning more permanent; supplies a concrete base for conceptual thinking; stimulate a high degree of interest in learning; and improves pupils' motor skill development with a mean of 3.40, 3.33, 2.95, 3.15 and 3.15 respectively. Similarly, the respondents also believed that ICT provides pupils with basic tools for further educational advancement and guides peer interactive effectively with a mean of 3.05 and 3.72 respectively. Item number six which stated that ICT guides peer interactive effectively has the highest mean score of 3.72 and item number five which stated that ICT facilitates pupils' motor skill development has the least mean score of 2.88. Following the grand mean of the items to be 3.21. The items mean ranged from 2.88 to 3.72, suggesting that the respondents were close in their opinions.

Research Question 2

What are the perceived values of ICT by primary school female teachers?

Table 2: Perceived values of ICT by primary school female teachers

S/N	Item	$Mean(\overline{x})$
1.	Using ICT will make my lesson difficult	3.25
2.	Using ICT will reduce pupils seriousness as a result of eye contact elimination	3.89
3.	I can never use ICT to teach because of its complexity	3.60
4.	Teaching with ICT is time taking and energy-sapping	2.95
5.	Utilizing ICT in teaching will be too complex and jeopardize teachers' efforts	3.55
	Grand Total	3.45

Table 2 revealed that the respondents accepted all items as perceived values of ICT. Item number two which stated that using ICT will reduce pupils seriousness as a result of eyes contact elimination has the highest mean score of 3.89, followed by I can never use ICT to teach because of its complexity with a mean score of 3.60 while item four that says teaching with ICT is time taking and energy-sapping have the lowest mean score of 2.95, signifying that the respondents were close in their opinions.

Research Question 3

What approaches can be adopted for value re-orientation of primary school female teachers on information and communication technology integration in teaching?

Table 3: Value re-orientation of primary school female teachers on information and communication technology integration in teaching

S/N	Item	$Mean(\overline{x})$
1.	Incessant power supply hinder the use of ICT in primary schools	3.40
2.	Lack of ICT infrastructure in almost all primary schools pose a challenge to ICT usage	3.33
3.	Primary school female teachers should be well educated on the usefulness of ICT	2.95
4.	Increased funding for primary school ICT project will enhance its uses	3.15
5.	The curriculum should be redeveloped to meet the current challenges of 21st-century job trends	2.88
6.	Appropriate training and retraining should be given to primary school female teachers to meet present-day challenges	3.72
7.	Favourable policy and legislative platforms of ICT should be fully adopted by the government	3.05
8.	Adequate tools and equipment should be provided to primary schools	3.21
	Grand Total	3.21

Table 3 shows that the respondents accepted all the items raised as strategies for enhancing the value reorientation of primary school female teachers toward ICT for sustainable development. The respondents agreed that incessant power supply and lack of ICT infrastructure post problems to ICT usage in primary schools with the mean of 3.40 and 3.33 respectively. However, they thought that primary school female teachers should be well educated on the usefulness of ICT; increased funding for primary school ICT project; redeveloped curriculum to meet current challenges of 21st-century job trend; training and retraining of primary school female teachers to meet present-day challenges; adoption of favourable policy and legislative platform of ICT by the government; and provision of adequate tools and equipment in primary schools with mean scores of 2.95, 3.15, 2.88, 3.72,3.05 and 3.21 respectively. Item number five which stated that curriculum should be redeveloped to meet current challenges of 21st-century job trends has the least mean score of 2.88 while item number six which stated that appropriate training and retraining should be given to primary school female teachers to meet present-day challenges has the highest mean score of 3.72. The grand mean was found to be 3.21. Implying that the respondents were close in their opinions.

Discussions

The finding of the study in Table 1 shows that ICT as innovation is well established with the significant role played by its adoption in teaching and learning in achieving sustainable development and economic growth of a nation. This finding supported the claim by Fakinlede (2015) that ICT is intended as a bold and courageous step to undertake, with the changing scenario for economic life by developing human capital. Also, the finding is in agreement with the contention of Carson (2012) that ICT adoption has a role to play in helping society to respond to environmental and development issues as they work between nature, technology, economy and society.

ICT as an innovation, therefore, is an indispensable tool for personal, community and human development for active citizenship building and for improving the lives of people. Thus it is important to recognize that the desired outcome of ICT adoption is an indispensable tool for social, economic and environmental sustainability within local and global communities.

The results in Table 2 indicate that in the opinion of female teachers, many of them hold a negative value orientation towards ICT adoption. The findings corroborated the observation of UNESCO (2012) that female teachers and even their managements have a poor perception of ICT adoption with the fear that it may replace them. Their predominant perception of ICT not as valuable as the talk and chalk method that has been known for years.

The findings further showed that female teachers agreed with all the suggested strategies as imperative for the value re-orientation of female teachers on the relevance of ICT for sustainable development in Nigeria. This is in line with the views of Olumorin (2008) and Ali (2012) that provision of training and retraining, provision of infrastructure, increased funding and provision of stable power supply as well as designing curriculum that will enhance the image of ICT in primary schools. There is therefore an urgent need for value re-orientation of the primary school teachers and the primary school female teachers in particular on the significance of ICT for sustainable development.

Conclusion

Information and Communication Technology (ICT) has been used by several developed countries as an instrument of national and sustainable development. Thus far, the value attached to ICT is not good enough as teachers continue to perceive ICT as not as valuable as the conventional method. To provide an ICT program that can create an impact on the development of human resources for sustainability, the female teachers need to embrace approaches aimed at value re-orientation of ICT in the country. The researchers are of the view that if these strategies identified in this study are given attention, the fortune of ICT role in primary schools in the country will change for better because primary school is the foundation of any development and the majority of the teachers were females which must not be neglected.

Recommendations

Based on the foregoing, the paper recommends the following:

- 1. The government should mount a favourable policy and legislative environment to change the perception of primary school female teachers about ICT.
- 2. The government should also provide a platform for primary school teachers especially females to access sustainable development grants (SDG) as applicable to tertiary institutions to encourage primary school female teachers towards ICT utilization.
- 3. Increasing funding by the government for the purchase of facilities and tools needed for ICT adoption in primary schools in Oyo town.
- 4. There should be an adequate power supply in primary schools.

References

- Adebiyi, M. E. and Ganiyu, R. S. (2016), Female teachers' disposition to value reorientation using ICT tools in primary schools in Oyo town.
- Adeyanju, L. O. (2015). College of education lecturers' attitude and proficiency in the use of information and communication technology in south-west, Nigeria. Doctoral Dissertation, Department of Educational Technology, University of Ilorin, Nigeria
- Aja, S., Eze, P. I., Igba, D. I., Ukaigwe, P. C. (2017). Promoting Leadership, Value Re-orientation and Sustainable Development through Functional Secondary School Education. *International Journal of Applied Environmental Sciences*. Research India Publicationshttp://www.ripublication.com 12(12), 2095-2106. Retrieved 2021-03-11
- Ali, A. (2012). Faculty adoption of technology: the end user as the determinant. In Proceedings of the world conference on e-learning in corporate, government, healthcare and higher education 2002. Chesapeake, VA: AACE. http://www.editlib.org/p/9315
- Carson, S. (2012). What we talk about when we talk about automated assessment. Retrieved from: http://www.tofp.wordpress.com
- Egana del Sol P.A. (2019) Education for Sustainable Development: Strategies and Key Issues. In: Leal Filho W., Azul A., Brandli L., Özuyar P., Wall T. (eds) Quality Education. Encyclopedia of the UN Sustainable Development Goals. Springer, Cham

- Fakinlede, C. O. (2015). Evaluation of stakeholders readiness for e-learning in selected university in the southwest zone of Nigeria. Doctoral Dissertation, Department of Educational Technology, University of Ilorin, Nigeria.
- Makinde, S. O. & Bolaji, H. O. (2019). Appraisal of Internet Services Usage by Secondary School Teachers for Professional Development in Lagos, Nigeria. *International Journal of Indonesian Education and Teaching*, 3(2), 138-148.
- Makinde, S. O. (2010). Effect of availability and level of use of internet services on professional development of academic staff in tertiary educational institutions in Lagos State, Nigeria. *Unpublished Master degree (M. Ed.) Thesis, Science & Technology Education Department, University of Lags*, 2.
- Makinde, S. O. (2020). Influence of Social/Mass Media as a Change Agent on Childhood SocialPedagogy and Achievement. *Indonesian Journal of Early Childhood Education Studies*, 9(1), 1-7. http://dx.doi.org/10.15294/ijeces.v9i1.36259
- Nenge, K. (2019). "Which is the largest city in Africa: Lagos vs. Ibadan city". Legit.ng Nigeria news. Retrieved 2021-03-07
- Obanya, Pai. (2008). Reforming educational reforms in Lawal, R. A., Jimoh, S. A., Olorundare, S. A., & Ijaiya, N. Y. S., *Education Reforms in Nigeria, Past, Present and Future;* Ilorin: the University of Ilorin, Faculty of Education. Sterling-Horden publishers Ltd.
- Olasedidun, K. O. (2014). Relationship among college lecturers' perceived usefulness, ease of use, attitude and intention toward social media in south-west, Nigeria. A Ph.D. Thesis, Department of Educational Technology, Faculty of Education, University of Ilorin, Ilorin. Nigeria.
- Olorundare, S. A. (2014). *Curriculum development, research priorities and national NEEDS assessment.* A lecture delivered at symposium at University of Ilorin, Nigeria. March 4, 2014.
- Olumorin, C. O. (2008). Lecturers' attitude to, competence in, and use of computer in tertiary institutions in Kwara State, Doctoral Dissertation, Department of Educational Technology, University of Ilorin, Nigeria.
- UNESCO, (2013). Next generation of teachers' project. Retrieved from: http://www.unescobkk.org/education/ict/ict-in-education project/training of teachers/next generation of teacher project/
- UNESCO (2012). Next generation of teachers' project. Retrieved from:

 http://www.unescobkk.org/education/ict/ict-in-education project/training of teachers/next generation of teacher project/
- United Nations (2017) Resolution adopted by the General Assembly on 6 July 2017, Work of the Statistical Commission pertaining to the 2030 Agenda for Sustainable Development (A/RES/71/313
- Wikipedia, (2021a). Sustainable Development. https://en.wikipedia.org/wiki/Sustainable_development. Retrieved on 10/03/2021
- Wikipedia, (2021b). Oyo Education, Local government Areas and Location. https://en.wikipedia.org/wiki/Oyo, Oyo Retrieved 2021-03-15.
- Yusuf, M. O. (2005). Information and communication technology and education: Analyzing the Nigeria national policy for information technology. *International Education Journal*, 6(3), 316-321.

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