

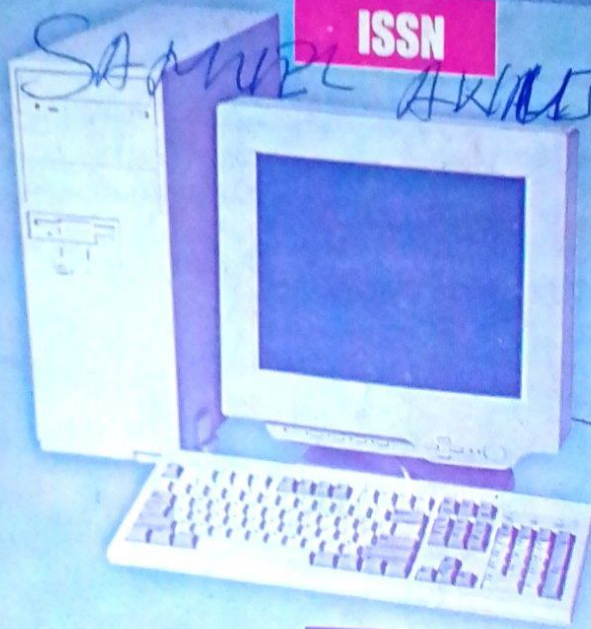
# MULTIDISCIPLINARY JOURNAL OF RESEARCH DEVELOPMENT



**MULJORED** ISSN 1596 - 974x

DR *SAMUEL AWANTA A*

**ISSN**



**PUBLISHED BY:**

**NATIONAL ASSOCIATION OF RESEARCH DEVELOPMENT**

**NARD**

Volume 20 No. 3 September, 2012

**MULTIDISCIPLINARY  
JOURNAL  
OF  
RESEARCH DEVELOPMENT**

ISSN 1596 - 974x

Volume 20 No. 3 September, 2012

*Published by*

**NATIONAL ASSOCIATION FOR RESEARCH DEVELOPMENT  
(NARD)**

*Rivers State University of Science and Technology,  
Port Harcourt*

## **Contributors**

**Prof. S. D. Nwajei, Ph.D**

Department of Physical and Health Education, Delta State University, Abraka.

**S. Awuja-Ademu, (Ph.D)**

Department of Curriculum Studies and Educational Technology, College of Education, Agbor.

**P. Kwaja**

Department of Educational Psychology, College of Education, Agbor.

**Dr. Joseph I. Uduji**

Department of Marketing, University of Nigeria, Nsukka.

**O. S. Ofotokun, Ph.D**

Department of Sociology and Psychology, Delta State University, Abraka.

**Dr. C. E. Nwafor**

Department of Science Education, Ebonyi State University, Abakaliki.

**M. O. Obinne**

Department of Integrated Science, Federal College of Education (Technical), Asaba.

**T. E. Agboghroma**

Department of Science Education, Delta State University, Abraka.

**G. O. Olodu**

Department of Integrated Science, Federal College of Education (Technical), Asaba.

**Dr. Gabriel A. Okafor**

Department of Science and Computer Education, Ebonyi State University, Abakaliki.

**L. C. Aziken**

Department of History, College of Education, Agbor.

**Ose-Lovet Osita Lokoyi**

Department of General Studies, Federal College of Education (Technical), Asaba.

**Ime Etim Akpan**

Department of Political Science, College of Education, Afaha Nsit.

**Sunday Simeon Udoh**

Department of Political Science, College of Education, Afaha Nsit.

**Patrick Patrick Ekanem**

Department of Political Science, College of Education, Afaha Nsit.

**Rowland C. Ezenwugo**

Department of Marketing, Federal Polytechnic, Nasarawa.

**Grace U. Eze**

Department of General Studies, Federal College of Education, Eha-Amufu.

**Henry Serumun Amenger**

Department of Educational Foundation, College of Education, Katsina-Ala.

**Kenneth Adangbe**

Department of Social Studies, College of Education, Katsina-Ala.

**Ezekiel Olaoluwa Akerele**

Department of Agribusiness and Farm Management, Olabisi Onabanjo University, Yewa Campus, Ayetoro.

**Chikwuo S. Udu**

School of Business Education, Federal College of Education (Technical), Umunze.

**C. A. Ejeka**

Department of Office Technology and Management, Delta State Polytechnic, Ozoro.

**B. A. Okoro**

Department of Arts and Humanities, Delta State Polytechnic, Ozoro.

**Letei R. Yekorogha**

Bayelsa State College of Education Okpoama, Brass Island.

**O. Y. Usman**

Department of Mechanical Engineering, Federal Polytechnic, Idah.

**Michael Paul C. Udomah**

Department of Mechanical Engineering, Federal Polytechnic, Idah.

**A.M. Aboh**

Department of Mechanical Engineering, Federal Polytechnic, Idah.

**Cylia N. Iweama**

School of Primary Education Studies, Federal College of Education (Technical), Bichi.

**Amidu A. G. Akanmu**

Delta State Polytechnic, Otefe - Oghara.

**Scott Ogini**

Delta State Polytechnic, Otefe - Oghara.

**Kingsley U. Orisakwe, (Ph.D)**

Department of Surveying and Geoinformatics, Federal University of Technology, Yola.

**Dennis C. Amadi, (Ph.D)**

Department of Forestry and Wild Life Management, Federal University of Technology, Yola.

## Contents

✓ Challenges of Planning and Developing Curriculum for Information and Communication Technology Education in Digital Age - <b>Prof. S.D. Nwajei, (Ph.D); S. Awuja-Ademu, (Ph.D) and P. Kwaja</b>	1- 6
Re-examining the Output Factors for Evaluating a Sales Person's Performance in the Brewing Industry in Nigeria- <b>Dr. Joseph I. Uduji</b>	7 - 17
Mass Media, Information and Communication Technologies and Sustainable Development in Africa - <b>O. S. Ofotokun, Ph.D</b>	18 -28
Effective Teaching Methods at Higher Level of Education: A Case Study of Work and Study Programme (WASP) Ebonyi State University, Abakaliki - <b>Dr. C. E. Nwafor</b>	29 -35
Effects of Laboratory Activities on the Teaching and Learning of Biology in Senior Secondary Schools in Oshimili South Local Government Area of Delta State - <b>M.O. Obinne; T. E. Agboghroma and G.O. Olodu</b>	36 -41
An Evaluation of the Procedure for Recruitment of Teachers in Enugu State Post-Primary Schools Management Board - <b>Dr. Gabriel A. Okafor</b>	42 - 45
The Evolution of the Press (Print Media) in West Africa: A Review of its Role in the Fall of the First Republic in Nigeria 1960-1966- <b>L.C. Aziken</b>	46 - 53
Repositioning Teacher Education for Effective Primary Education - <b>Paulina Obioma Agali, Ph.D and M.J.A. Abdullahi</b>	54 - 59



Globalization and the Future of Nigerian Languages - <b>Benedicta Adaeze Ogude</b>	60 - 66
Socio - Cultural Influences on Clothing Pattern of Yoruba Women- <b>Peter Oladipo Olowookere</b>	67- 73
The Place of Change Management in ICT-based Systems - <b>Marshall Chime Opone and Okerierhie Dono Okeh</b>	74 -79
Using Information and Communication Technology (ICT) for Effective Teaching And Learning in Nigerian Schools - <b>Christiana A. Onotere</b>	80 – 85
Repertoire of Yoruba Discoid Poetry- <b>Adesoye Omolasoye</b>	86 - 93
ICT Awareness and Relevance in Secondary Education Management: A Case Study of Owerri Education Zone of Imo State - <b>M. I. Onu, Ph.D; N .E. Abiahu and G, U. Amadi</b>	94 - 104
Autism Syndrome: An Educational Achievement Illusionist - <b>Ose-Lovet Osita Lokoyi</b>	105 -112
Political Education and Sustainable Democracy in Nigeria- <b>Ime Etim Akpan; Sunday Simeon Udoh and Patrick Patrick Ekanem</b>	113 -117
Problems and Prospects of Marketing in Less Developed Countries (LDCS): The Nigerian Experience - <b>Rowland C. Ezenwugo</b>	118 - 126
Promoting Language Learning through Information and Communication Technology- <b>Grace U. Eze</b>	127 - 132
Universal Basic Education Programme in Nigeria: Challenges of Implementation and Practice - <b>Henry Serumun Amenger and Kenneth Adamgbe</b>	133 – 138

Effectiveness of Cooperative Credit in Profitable Poultry Production in Yewa Division, Ogun State - <b>Ezekiel Olaoluwa Akerele</b>	139 - 149
Re-structuring Vocational Education towards Acquisition of Skill for Self Reliance - <b>Chikwuo S. Udu</b>	150 - 155
The Secretary and Minutes Writing - <b>C. A. Ejeka and B. A. Okoro</b>	156 - 162
Social Reconstruction of the Nigerian Society: The Imperatives of Art- <b>Letei R. Yekorogha</b>	163 - 169
A Survey of Energy Consumption Pattern at Idah Rice Mill in Idah L.G.A., Kogi State, Nigeria- <b>O. Y. Usman; Michael Paul C. Udomah and A.M. Aboh</b>	170 - 176
Implications of Low Funding of Education on the Quality of Education in South-East Nigerian Universities - <b>Cylia N. Iweama</b>	177 - 185
Sustainability of E-Commerce Prospects for National Development- <b>Amidu A. G. Akanmu and Scott Ogini</b>	186 - 191
Application of Remote Sensing and Geographic Information System Technologies to Wild Life Management in Adamawa State, Nigeria - <b>Kingsley U. Orisakwe, (Ph.D) and Dennis C. Amadi, (Ph.D)</b>	193 - 196



# CHALLENGES OF PLANNING AND DEVELOPING CURRICULUM FOR INFORMATION AND COMMUNICATION TECHNOLOGY EDUCATION IN DIGITAL AGE

*Prof. S. D Nwajei, (Ph.D); S. Awuja-Ademu, (Ph.D) and P. Kwaja*

## **Abstract**

The paper describes the ICT curriculum as an effort to determine the nature, organization and orientation of curriculum design within the internet environment. ICT curriculum is an application of IT to collect, store, handle, display and process information via electronic internet devices. ICT curriculum development calls for teachers, administrators, technologists, telecommunication experts, students, medical scientists and the wider society to make their own input. Curriculum development originates from what society wants. Hence, ICT is meant to transform the content and mode of curriculum delivery but many challenges confront ideal ICTE. These include illiteracy, ignorance, lack of experts, lack of standardization and others. Therefore, regular training and ICT/ computer education need to be incorporated into the teacher education programmes.

Curriculum planning can be referred to as a decision-making process which focuses on the determination of the nature, organization and orientation of curriculum design (Awuja-Ademu, 2005). It is considered as choice oriented making process of arriving at decision leading to the building of desirable programmes of learning experiences to enable learners within the school system attain stated objectives. Embedding the application of information communication technology (ICT) into the curriculum planning has to be considered a key priority and part of the national strategy for learning by developing countries around the world in an online setting (Tella and Adu, 2009). Technological advancement has ICT intertwined knowledge, making it stably dependent upon the technology innovations through the medium of an abstract method of acquiring knowledge to replace traditional concrete ways of acquisition of knowledge and skills via the marriage of computer science and telecommunication equipment (Molina, 2006).

Curriculum consists of the entire learner's (planned and unplanned) needs to develop to his or her full potential by using available learning experiences (Biodun, 2009). Though, Doll (1978) points out that not all the learning experiences a child receives are planned. The hidden curriculum emerges from the unplanned aspects of learning experiences which nevertheless result in behaviour changes in the learners. The issue of ICT education is introduced here.

Application of ICT as a tool for learning in curriculum delivery enables all learners to have the opportunity to become competent, creative and productive which removes obstacles to traditional concrete learning in our curriculum implementation. The national policy on information technology (IT) recognized that IT is the bedrock for national survival in a rapidly changing global environment in which the experience of information communications technology is one (Egede, 2011). ICT is a

---

*Multidisciplinary Journal of Research Development Volume 20 No. 3, September, 2012*

shorthand for the computers, software networks, satellite links and related systems that allow people to access, exchange, and use data, information and knowledge in ways that until recently, were almost unimaginable. ICTE has to do with creating, sharing and accessing information by many people (Tella and Adu, 2009).

The adoption of ICT in curriculum planning is an application of hardware, software, and network links by ways of logic and possibilities of the internet facilities for interacting with many curriculum contents elsewhere across the globe which enables one access current information using a personal computer, CD-ROM and internet (Awuja-Ademu and Kwaja 2010). Information technology (IT) refers to the creating, collecting, storing, displaying, handling and processing of information or body of knowledge during curriculum planning, organizing and orientation to arrive at decision making by curriculum experts via electronic devices.

Curriculum development involves continuous identification, selection and arrangement of learning opportunities using a suitable instructional method which fits the challenging conditions to ensure achievement of stated objectives. Development means to build, evolve, interpret, structure or create curriculum materials used for the preparation of a lesson plan (Obiefuna, 2009).

Curriculum development requires the participation of experts, administrators, teachers, students, medical scientists, technologists, engineers, market women, government officials and the wider society. Each of them has a vital role to play either in providing funds, knowledge, materials or organizing learning experiences within curriculum content and how it should be taught. In modern curriculum development, the collection of information for decision-making is very vital. Curriculum development is a process which entails planning and actual construction of the document based on one or more designs such as the broad fields curriculum, the core curriculum, the subject pattern, integrated curriculum and others

In Nigeria in the 21st century, there are emergent educational issues such as ICT, HIV/AIDS, population education, digital age and environmental education which learners need to be acquainted with to face globalization challenges (Obiefuna, 2009). Curriculum planning and development involves a series of activities whose complexity depends on the country in question and approaches adopted for curriculum development according to Biodun (2009). This is so because every curriculum originates from what society wants. Hence, four possible levels of applying curriculum concepts are societal, institutional, instructional and experiential. It is significant to briefly explain each of these levels of applying concepts of the curriculum.

1. Societal level of curriculum development reflects on its societal philosophy, priorities and general modus operandi according to interest group which the curriculum would serve. For instance, the national policy on education represents a societal level of curriculum development as it spelt out how educational philosophy and goals should be directed towards the objectives of Nigeria as a nation. The societal curriculum covers pre-primary, non-formal and adult literacy levels. It addresses core-none-vocational/vocational and elective areas of school subjects.

## ***Challenges of Planning and Developing Curriculum for Information and Communication Technology Education in Digital Age***

---

2. Institutional curriculum level has its many activities dependent on the national framework for curriculum planning which considers the roles of an agency of the federal government like the Nigeria Educational Research Development Council (NERDC), Comparative Educational Study and Adaptation Centre (CESAC) and so on.
3. Instructional curriculum level refers to aspects of the curriculum process which fall within-subject teacher's authority to translate pedagogic curriculum content and syllabus into learning experiences beneficial to learners, By so doing, teachers should be conscious of their pedagogic instructional orientation in playing the roles of curriculum developers, implementers and evaluators too.
4. Experiential curriculum level according to Biodun (2009) refers to the meaning learners make out of the teaching-learning activities. Experiential curriculum level can equally be called the "received curriculum".

A curriculum is an embodiment of all the knowledge, skills and attitudes that a nation, through her schools imparts knowledge to her citizens (Dike and Eze, 2009). Knowledge can be described as all the facts, theories, principles and rules needed to be acquired by the student/pupil to be certified as competent in a field. Skill means the ability to expertly utilize one's hands, legs and entire body system combined with knowledge acquired in the brain to perform the desired task prescribed in the curriculum contents as learning experiences. Attitudes as an embodiment of curriculum refer to the acquisition of pre-conditions, interests, motives, feelings or aspirations towards oneself, a profession, others and environment. For example, a certain profession requires some mental fitness for an individual to successfully practice them. In psychology for instance, the use of words such as knowledge, skills and attitudes can simply be adopted as cognitive, psycho motive and affective domains. In practice, a teacher needs to specify instructional objectives suitable for expected behaviour of the learners to produce evidence of acquisition of any one of the domains mentioned earlier. Apparently, the issues surrounding curriculum development and ICT education as an offshoot of curriculum planning may be incapacitated without mission, vision and are forms for ICT curriculum implementation in the 9-year Basic education programme geared towards the attainment of the Millennium Development Goals (MDGs) by 2015.

### **Information Communication Technology Education (ICTE)**

The individual seeks to use ICT for personal growth, creativity, joy, peace, security, new decision-making, consumption and wealth creation (Oyunboyede, 2010). ICTE has become a great help today in E-learning, E-classroom, E-assessment, E-commerce, E-trading, E-mail, E-conferencing, E-library and E-teaching. The application of ICT as a tool for curriculum planning and development creates a better opportunity to achieve curriculum objectives. Curriculum implementation becomes easier to develop the knowledge, skill and capacity to use ICT to communicate with one another effectively (between the teacher and the learners). ICTE generates active participation among learners through the understanding of the impact on society with its potential risks and safety codes.

No doubt, ICTE cannot be separated from the process of curriculum planning, innovation and development as it helps to achieve intended curriculum development goals by providing learner-centred conducive virtual-learning environment. Tella and Adu (2009) believed that ICTs have transformed the contents and modes of curriculum delivery because of the provision of means for overcoming historically intractable problems of isolation and lack of access to knowledge crucial to implementing curriculum in schools. ICTs have reshaped educational landscape by transforming methods of acquisition of knowledge as well as how schools should operate in recent times. As a key to pedagogical methods conducive to education for sustainability, an ICT curriculum can be designed to provide classroom-based activities, promotion of collaborative internet curriculum development technologies and "real-world" experience. These issues indicate that not much is available to date on ICT curriculum planning and development paradigms probably because of re-adjusted educational systems in developing nations like Nigeria whose curriculum contents via learning experiences are tailored directly at primary, secondary and tertiary levels of education.

ICT Curriculum implementation has grown beyond environmental education that is aimed at getting learners outside to learn about the natural world because of real-time real-world learning experiences and systems thinking (Tella and Adu, 2009). This is made more complex and challenging since learners of the "digital age" have varied needs than previous learners. For example, the usual way curriculum experts teach curriculum development studies is to pick a model such as Tyler's model, Kerr's model, Wheeler's model and so on for description but the modern approach seems to use ICT to develop digital-age curricula making the world a global village via internet accessibility.

### **Challenges Confronting ICT Curriculum Planning and Development**

There are several challenges confronting the introduction of ICT into curriculum planning and development in many developing countries, particularly in Africa (Green and Hannon, 2007). Such challenges include:

- a. Lack of technical know-how: Many curriculum experts still do not know how to apply ICT while planning and developing curricula. They are bound to face challenges of reality of time. Such challenges hinder the attainment of objectives of curriculum development because ICT is fundamental to most curriculum activities, Indeed, human resources are lacking in the areas of technical know-how to utilize ICT for the sole purpose of developing curriculum.
- b. Lack of standardization which limits curriculum contents and learning experiences directly tailored at primary, secondary and tertiary levels. Lack of standardization also limits and poses challenges in language usage to develop an ICT curriculum. Accascina (2006) noted that China faced similar challenges in 1998 when effort was made to boost internet connectivity and encourage the creation of curriculum content in Chinese leading to drastic demand decrease for international access to their network.
- c. Derivation of ICT curriculum planning and development of the appropriate objectives focusing on desirable contents, learning opportunities, curriculum materials and suitable instructional

## ***Challenges of Planning and Developing Curriculum for Information and Communication Technology Education in Digital Age***

---

methods are lacking presently, Awuja-Ademu and Kwaja (2010) stated three prominent impediments which trigger off ICT curriculum development challenges that:

1. Some teachers/curriculum experts are completely computer illiterate.
2. Some experts/teachers are semi-computer literate and
3. Lack of computer and ICT tools in schools. Igbemi (2010) points out some constraints in the uses of ICT to be illiteracy, inadequate electricity supply, ignorance, poverty, lack of internet services and connectivity.

- d. Over dependency on lesser available information makes people become creative thinkers and producers of knowledge whereas more online users in environments create information explosion problems.

### **Conclusion**

The paper described curriculum planning as a decision making process that focuses on determination of the nature, organization and orientation of its design while the curriculum consists of the entire learner's needs for all-round development by using available learning experiences. The study has dealt with the current concern issues of ICTE curriculum planning and development in our schools (primary, secondary and tertiary) levels. Challenges confronting ICT curriculum planning and development include lack of ICT technical know-how on the part of curriculum experts, illiteracy, ignorance, lack of computers with internet facilities and over-dependency on few available information via online users in the environment. The essence of integrating ICTE with curriculum development is to enhance the transformation of desirable learning activities. The conclusion is that ICT curriculum planning and development at all levels of education should be targeted at sustainable desirable all-round child's educational development in this digital age.

### **Recommendations**

As a result of the foregoing, the following recommendations are put forward that:

1. ICT curriculum planning and development should be systematically geared towards achieving its purpose.
2. Computer with internet facilities should be made available to all schools irrespective of location (urban or rural)
3. Regular power supply should be put in place for proper ICT curriculum implementation.
4. Curriculum planners and developers in collaboration with the Ministry of Education should enforce full implementation of ICTE in all school subjects to enable it to attain its set goals.
5. In-service training needs to be organized for teachers who are already serving in the field.
6. ICT education should be incorporated into teacher education programmes as a compulsory course to boost student teachers' knowledge, skills and attitudes towards ICT application.

**References**

- Accascina, G. (2006) *Information and communication technology for development in the Arab state*. UNDP Available: [http://www.ictdar.org/ICT in the Arab states](http://www.ictdar.org/ICT%20in%20the%20Arab%20states) (accessed 27 May, 2008).
- Awuja-Ademu, S. (2005). *Curriculum, principles and methods*. Agbor Progress Printing Associates.
- Awuja-Ademu, S. & Kwaja, P. (2010), Application of information and communications technology in curriculum delivery: Issues and challenges in physical education. *Approaches in International Journal of Research Development*. 2 (1),154- 158.
- Biodun, O. (2009).Some key concepts for understanding curriculum. In *Curriculum Theory and Practice*, Abuja, Curriculum Organization of Nigeria (CON).
- Curriculum Corporation (2006). Statement of learning for information and communication technology (ICT) Australia, *Curriculum Corporation*.
- Dike, H.I. & Eze, G.O (2009). Designing curriculum. In *Curriculum Theory and practice*, Abuja, CON.
- Doll., R.C. (1978). *Curriculum improvement: Decision Making and Process* (4th edition) Boston: Georgian Court College.
- Egede, B.A.J. (2011). *Teaching basic science and technology: Policy, Concepts and Methods*, Agbor: Progress Printing Associates.
- Igbemi. M.J. (2010). Usefulness of ICT to the homemaker. *Approaches in International Journal of Research Development*. 2 (1), 143 – 147.
- Green. A. & Hannon, G. (2007). *Their space: Education for a digital generation*. London SELTTU 136.
- Molina, A. (2006). Is ICT-based innovation in education systems truly important? Overview of key development trends and policies shaping education in the 21 century. *A report*.
- Obiefuna, C.A. (2009). Models of curriculum development. In *Curriculum Theory and Practice*, Abuja: CON.
- Ogunboyede, M.O. (2010) Application of ICT based classroom, assessment in Nigeria Secondary schools. *Approaches in International Journal of Research Development*. 2 (1), 123- 130.
- Tella, M . & Adu, G (2009). Information communication technology and curriculum development: The challenges for education for sustainable development, *Indian Journal of Science and Technology*. 2 (3)