Information Communication Technology (ICT) in the Educational System of the Third World Countries as a Pivotal to Meet Global Best Practice in Teaching and Development

A Kingsley *

Department of Educational Foundations, Guidance and Counselling, University of Uyo, Uyo Akwa Ibom State, Nigeria

*__Corresponding author:__ A Kingsley, Department of Educational Foundations, Guidance and Counselling, University of Uyo, Uyo Akwa Ibom State, Nigeria, Tel: +234-08137640978; E-mail: kingsmith1172@gmail.com

Abstract

The rising trend of poor performance of students and teachers on the aggregate in the third world countries have left relevant stakeholders in the educational enterprise and government little doubt of national set-back in human capital development through the leaning/teaching processes. This scenario tends to rate the third world countries as been educationally backward compare to developing and developed countries. Inspite of numerous possible steps taking by various stakeholders in the education sector to salvage the situation, little or no result has been proven to be solution insight. The innovation of the Information Communication Technology (ICT) in modern teaching, which is a pivotal for national development, has not been inculcated in third world countries. It is against this background that this paper positioned that Information Communication Technology (ICT) should be inculcated in the educational system of the third world countries for teaching and development. This will ensure that the third world countries educational system would be able to meet best global practice in teaching which is a pivotal for development.

Keywords: Information communication technology (ICT); Educational system; Teaching; Development third world countries

Introduction

Global changes put pressure on Nations of the world to constantly acquire/apply new skills and techniques in teaching through adoption of relevant technologies to cope with trends of globalization. Education, with the help of ICT is at the confluence of powerful and rapidly shifting technological and political forces that will shape the structure of educational systems across the globe.

Concept of Development

The word development is a polysemous in nature. This buttress the fact, that different people in different discipline have different connotation to the word development. Development generically refers to an institutional change which is accompanied by increase in welfare, and fall in cost of living (Akarowhe) [1]. In other word, it is a reduction in unemployment, inequality and poverty for a given nation. It can also be seen, as the later stage of growth (Akarowhe) [1]. It is a term commonly associated with the third world countries/least develops countries (LDC). Development is a term used to appreciate the need for institutional change from the primitive society to a more advance society in the less develop, least develop and even developing countries of the world.

Meaning of Third World Countries

Third world countries are often refers to least developed countries of the world whose economic, military capabilities dependent on the developed or developing countries through assistance and aid; also to a great extent their political affairs is influence by these countries. The term 'third-world-countries' is a generic term used to describe the countries of Africa, Asia and Latin America. Additionally, third world countries are countries that operate on a mono-economy, low level of skilled manpower, political instability and low standard of living (the citizens live below one dollar a day). These countries tend to experience high level of poverty, high infant mortality rate, high level disease infection, high level of hunger, low level of infrastructure, low income per-capita and high vicious circle of poverty [2-4].

The Concept of Information Communication Technology (ICT)

The term information and communication technology (ICT) is a convergence from information technology (IT) and communication technology (CT). According to Khan et al. [5], information communication technology (ICT) refers to

technologies that provide access to information through communications. Khan et al. [5] added that ICT stands for information and communications technology. Also, ICT is an umbrella term that includes any communication device, encompassing radio, television, cell phones, computer and network hardware, satellite systems and so on, as well as the various services and appliance with them such as video conferencing and distance learning. Information and communication technology (ICT) have been touted as potentially powerful enabling tools for educational change and reform. A more pertinent role of information and communication technology (ICT) is the transmitting, transferring, inculcating desirable goals and values through education that cannot be overemphasized in any society. In an educational system, ICT is a driving force in the process of transferring of worthwhile goals from a teacher to expected learners that would make them to be useful to themselves and the society at large. ICT is a new innovation that is yet to be properly unraveled in the educational system of the third world countries/least developed countries.

Concept of Educational System

Before explaining the concept of educational system, it is pertinent of pin-point the meaning of education and system. Education is an aggregate of all the positive dispositions (values, attitudes, skills, and beliefs system) an individual acquire which enable to him to contribute to the society which he live and to himself. Education is aggregate of the process, skills, depositions, and belief systems which a learner(s) acquire/achieve for his positive development and meaningful contribution to the society he/she live. Education can also be seen, as the acquisition of positive values and goals. Such values and goals are meant for self-actualization of the individual which the social system have keen interest for its attainment. These values can be transmitted, transferred, inculcated in a learner(s) through a comprehensive educational system.

A system is a body of parts working together for the purpose to achieve a predetermined set objective. Thus, an educational system is agglomeration of all stakeholders that are involved in the process of transferring and acquisition of positive dispositions, believes, values, skills and attitudes for the benefit of the society at large. An educational system is geared toward learners' productivity and nation building [4]. This is due to the fact that, learners form the basis for which the system consist, hence they are given prior attention which in the long-run lead to their meaningful contribution to the national development. Educational system encompasses the learners, teachers, non-governmental agencies and the government.

The non-government agencies and the government are often added to the educational system due to the role they place in the system, which may involves the provision of funds, facilities and needed manpower to man the system. In an educational system the activities of the learners, teachers, government and non-governmental organization cannot be overemphasized.

Concept of Teaching

In simply term, teaching is an interaction between a teacher and learner(s), in which the teacher is expected on aprior to educate the learner(s) on predetermined objective(s). Teaching is the process of imparting worthwhile knowledge(s) on expected learner(s). This worthwhile knowledge(s) are also called values, which are highly needed by the society for meaningful development. In other words, teaching is a process which assists in transition of mundane society to an industrialized, through the process of imparting certain desirable skills on the learners taking into consideration modern trend of development [5-8].

Teaching can also be seen, as the act and process of preparing a learner(s) for better living standing in the larger society, through an onward transmission of positive attitudes, dispositions, values and skills by a teacher to the learners(s). Thus, in light of the forgoing teaching helps the learner(s) in self-reorientation, self-realization and self-actualization.

Phases of Information Communication Technology in an Educational System

Basically, there are two phases in which ICT can be introduced in an educational system of the third world countries, they are;

ICT for education

This encompasses different steps taking by relevant authorities (stakeholder in the educational sector) in the less developed countries to make use of ICT in their educational system. ICT for education involves organizing of workshop, symposia, and seminars for teachers; expert discussion and briefing of the government on possible steps; procedures and strategies to be taking, in the process of making ICT as a tool to be use in teaching and learning in any institution of learning in a given nation.

ICT in education

This is the process in which ICT is use by teachers in the classroom for imparting knowledge on the learner(s). ICT in education is more of teacher(s) and leaner(s) approach to ICT, in which the learner(s) are expect to gain some learning outcome at the ending of the use of ICT devices in teaching by the teacher(s), which will in the long-run assist in national development through upgrade of manpower capacity as a result of the teaching/learning process.

Relevance of Information Communication Technology to the Third World Countries Educational System

The relevance of information communication technology to the third world countries educational system includes the following.

- **It enhances the teacher(s) productivity in the classroom:** In the third world countries, were education is still in mundane scenario (using of chalk-board). With the help of ICT the classroom teacher(s) can perform better through the use of various ICT materials available at his disposal. Although in recent time, were teacher(s) performance is not only measured by student academic achievement, but also by effective use of materials which the ICT serve as a catalyst for that optimum goal. In light of the forgoing, Shamatha et al. [7] found that the use of computers give teachers an opportunity to help those students with particular needs.

- **It arouse the interest of the learner(s) in the learning/ teaching process:** In the less develop countries, learner(s) are still faced with mostly audio and quasi method of teaching in which teacher(s) use verbal expression and chalk to write/draw with low learner(s) eagerness to yield to the teaching/learning process. Through the use of ICT audio-visual material, learner(s) interest will be aroused by improved performance in the short-run and in the long-run the educational system of the nation as compare with other nations. Since it is generally believed, that learner(s) is motivated by what they see; ICT will help them to foster high and good retention process. ICT facilities such as computer, project, radio, television and internet related device aids learners' performance [9-11]. In relation to the above, Shamatha et al. [7] assert that the use of computers can help students to become knowledgeable, reduce the amount of direct instruction given to them.

- **School administrators:** With the help of ICT, school administrators will be able to plan school work effectively in a number of ways that would make learning/teaching more yielding, through learner(s) based approach to school administration. This could be done through small scale workshops, symposia and seminars at the school to the teacher(s) in making leaner(s) interest a priority.

- **School administrators:** With the help of ICT, school administrators will be able to plan school work effectively in a number of ways that would make learning/teaching more yielding, through learner(s) based approach to school administration. This could be done through small scale workshops, symposia and seminars at the school to the teacher(s) in making leaner(s) interest a priority.

Hindrance Face in the Use of Information Communication Technology in the Third World Countries Educational System

The following are some of the hindrance bedeviling the use of information communication technology in the third world countries educational system.

- **Non-cooperative attitude of teachers:** In the less developed countries, the educational system is often faced with non-cooperative attitude of teachers. Teachers' non-cooperative attitude in the form of non-adoption and non-usage of ICT facilities in the teaching/learning process even when they are provided in the school, in order to counter for the educational needs of the learners is seriously observable in the less developed countries. This scenario over time, have hinder the lantern benefit of ICT to the learner.

- **Lack of supervision and implementation of ICT projects:** Relevant agencies set up by the government or Ministry of Education in the third world countries often show apathy in the process of supervision of ICT facilities in most institutions of learning, to ensure that ICT is embed in the educational system these third world countries. Lack of supervision has over time make some ICT facilities and equipment in most institution of learning to lie waste. The light of the forgoing has often hindered ICT to make a substantial success in the third world countries.

- **Lack of sufficient financial:** Finance is often regarded as the power house for any project or obligation that is of prior importance. Financial constraint in terms of low budgetary provision has over time hinders the ICT introduction to the educational system of the third world countries. Lack of sufficient finance hinders ICT as a tool new innovation to be introduced in the educational system of the third world countries, in order for it to yield the expected outcome(s). Due to insufficient finance the acquisition of ICT related facilities such as computers, projectors, and smart-boards has been impossible, this often tends to make ICT not to utilize its mandate in nation build through development [12]. This makes teachers to complain about how difficult it was to always have access to computers (Sicilia) [8].

- **Inadequate knowledge of the teacher(s) on how manned ICT equipment:** Most teacher(s) in the third world do not have adequate skill to use ICT materials for effective teaching and learning. This is mostly due to lack of in-service training for teacher(s) and it result in minimal utilization and fulfillment of the ICT as a tools for effective teaching/ learning. In same vein, Beggs [3] opine that one of the top three barriers to teachers' use of ICT in teaching students was the lack of training. In same similitude, Pelgrum [6] and Al-Oteawi [2] submitted that teachers' lack of technological competence is the main barrier to their acceptance and adoption of ICT.

- **Political instability:** Due to frequent change of government, ICT in the education of the third world countries is experiencing a serious set-back. This is often due to the fact that as new government comes into power new policies are to be implemented, without considering the policies of their predecessors most time, which may have a little bearing with the adoption of ICT related devices or facilities for educational institutions. Due to political instability, government is often faced with unresponsive attitude to implement of stated ICT project.

Possible Solutions to Some the Hindrances Facing in the Use of Information Communication Technology

in the Third World Countries Educational System

In light of the hindrances, the following are some of the possible solution to some of the hindrance facing the use of information communication technology in the third world countries educational system.

- **On-the job training:** On-the job training is an avenue for teachers' upgrade of skills and knowledge. In on-the-job training, teachers will be train on how to adopt and use relate ICT facilities for effective and efficient teaching/learning in the classroom. For ICT to witness its massive success, in the educational system of third world countries, on-the-job teaching should be giving to teachers that will help to enlighten them on how to effectively use of ICT facilities and equipment for teaching when they are provided in an institutions of learning. This will to enable them to upgrade their technical-know-how on ICT facilities in course of teaching the anticipated learners for improved academic achievement. On the aggregate, on-the-job training involves the process of an instructor who is versatile with ICT appliances educating the teachers on the possible ways of using ICT related facilities in order to make teaching more interesting and more learners centered [13]. Bingimlas supplemented that schools need to provide training courses for teachers to gain experience in dealing with the new devices, modern technologies, and new pedagogical approaches [4].

- **Organizing of awareness programmes:** Awareness programmes such as workshop, seminars, and symposia if organized for teachers by governments and relevant authorities in the educational system will help to enhance teachers' efficiency and effectiveness in the use of ICT related facilities in the process of teaching. This awareness programmes will enlighten teachers on why they should use and how to use ICT facilities in the course of lessons delivery, for the lantern benefits of ICT to be yielded in the teaching/learning process.

- **Proper supervision of ICT projects/programmes:** Supervision of any project/programme is of prior important for such a project/programme to yield its' anticipated benefits for which it was established/setup. In the light of this, ICT projects/programmes should be given prior attention in terms of their supervision by government, ministry of education or other stakeholder in the third world countries by ensuring that teachers on their parts are committed to adopting and using of ICT related equipments/facilities in the process of teaching the learners. Additionally, supervision will ensure that a particular project/programme is not abandoned by key stakeholders in the educational system and most official who are given funds to complete a given ICT project/programmes.

- **Provision of ICT facilities:** Government of the third world countries should endeavour to provide ICT facilities such as projectors, computers, internet connector and smart-boards to schools and institutions of learning, this will enhance teaching/learning process and on the aggregate academic performance in that country. It is worth noting that, when ICT facilities are provided by the government there is always a high tendency for teachers to adopt and use these facilities to enhance their productivity, which is expected to have a positive impact on the learners' performance. Additionally, Bingimlas [4] contended that schools must provide teachers with the necessary ICT resources including hardware and software. It is important for schools to cooperate with ICT teachers by providing sufficient time to implement new technologies in the classroom.

- **Adequate budgetary provision:** Government of the third world countries should make adequate fund available through her yearly budget. This will help in building of ICT laboratories, acquisition and dispensation of ICT facilities to schools/institution of learning that are in need of them for effective and efficient teaching/learning by both the teachers/learners. Additionally, adequate budgetary provision will help in replacing worn-out/depreciating values of ICT facilities in these institutions of learning and acquiring better facilities. Sufficient fund will help to smoothen the process of using ICT related facilities in an institution of learning/schools.

- **Proper remuneration of teacher:** Proper remuneration of teachers is a motivating factor for the teachers, which will propel them to be committed in using ICT facilities for teaching of the anticipated learners. Proper remuneration of teachers involve giving the teachers their allowances, infringe benefits and salaries as at when due. When teachers are properly remunerated in terms of increase in their take home at the end of the month, they tend to map-out or innovate ways of using ICT facilities to increase their productivity which will have a long-run positive impact on the educational system of the third world countries.

- **Government policies:** Government should adopt suitable policies that will favour ICT for and in educational purpose given the fact that education is a tool for national development. Policies make by government of the third world countries should be such that will help manpower development with emphases on ICT as the drive to actualize the objective. Additionally, government policies concerning ICT in third world educational system should be free from political biases.

Recommendations

Based on the findings of this study, the following recommendations are made:

- International organizations such as UNESCO should assist the third world countries in terms of providing of finance and technological support as at when necessary, which will help to propel the less developed countries for a competitive development in raising manpower index.

- Develop and developing countries of the world should endeavour to grant aid and assistance to the third world countries in the area of ICT teaching/learning facilities. This will in the short-run helps to erode the problem of illiteracy concerning ICT and in the long-run raise human capital index in these third world countries.

Conclusion

Informational communication technology (ICT) is a tool of global educational development. The use of information communication technology in the third world countries has witness a number of pitfalls, despite relevant educational stakeholders' effort to savage the situation. Some of the possible solution insight as exaggerated by the researcher will serve as benchmark for ICT to be fully optimized in the educational system of these third world countries, for it to yield its lantern benefit in terms of making teaching/learning more efficient/ effective which is a pivotal for manpower and national development.

References

1. Akarowhe K (2017) Benchmarks for Business Administration for Sustainable National Development. Arabian J Bus Manag Review 7: 323.

2. Al-Oteawi, S M (2002) The perceptions of Administrators and Teachers in Utilizing Information and Technology in Instruction, Administrative Work, Technology Planning and Staff Development in Saudi Arabia. Doctoral dissertation, Ohio University, Ohio.

3. Beggs, Thomas A (2000) Influences and Barriers to the Adoption of Instructional Technology. Mid-South Instructional Technology Conference, Murfreesboro, TN.

4. Bingimlas A K (2009) Barriers to the Successful Integration of ICT in Teaching and Learning Environments: A review of the Literature. EURASIA J Math Sci Tech 5: 235-245.

5. Khan M S, Khan I, Din S, Ismail H M, Rafid K, et al. (2015) The Impacts of ICT on the Students' Performance: A Review of Access to Information. Res Human Soc Sci 1: 2224-5766.

6. Pelgrum W J (2001) Obstacles to the Integration of ICT in Education: Results from a Worldwide Educational Assessment. Computers and Education 37: 163-178.

7. Shamatha J H, Peressini D, Meymaris K (2004) Technology-Supported Mathematics Activities Situated within an Effective Learning Environment Theoretical Framework. Contemporary Issues in Technology and Teacher Education 3: 362-381.

8. Sicilia C (2005) The Challenges and Benefits to Teachers' Practices in Constructivist Learning Environments Supported by Technology. Unpublished master's thesis, McGill University, Montreal.

9. Chen Y, Shu L, Li M, Fan Z, Wang L, et al. (2011) The Insights of DV-Based Localization Algorithms in the Wireless Sensor Networks with Duty-Cycled and Radio Irregular Sensors. International Conference on Communications (ICC), Kyoto 1-6.

10. Fan Z, Haghdoost A, Du D H C, Voigt D (2015) I/O-Cache: A Non-volatile Memory Based Buffer Cache Policy to Improve Storage Performance, IEEE 23rd International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems, Atlanta, GA 102-111.

11. Fan Z, Du D H C, Voigt D (2014) H-ARC: A non-volatile memory based cache policy for solid state drives, 30th Symposium on Mass Storage Systems and Technologies (MSST), Santa Clara, CA 1-11.

12. Fan Z, Wang L, Wang X (2011) Predictive-TDMA: A Markov Chain Based MAC Protocol for Mesh Networks IEEE 73rd Vehicular Technology Conference (VTC Spring), Budapest 1-5.

13. Fan Z, Chen Y, Wang L, Shu L, Hara T (2011) Removing Heavily Curved Path: Improved DV-hop Localization in Anisotropic Sensor Networks, Seventh International Conference on Mobile Ad-hoc and Sensor Networks, Beijing 75-82.