Information and Communication Technology as a Panacea to Educational Development in Delta State

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Abstract
Education is a necessity and is as old as creation. However, not very serious taught has been given to it's development. The impact it has made to human is little compare to huge amount of resources that goes to it every year. Different methods have been employed but limited to class, teacher, and blackboard. It is expedient to know that ICT surpasses all the methods so far such that it is not classroom bounded even without human, teacher and classroom. The problems that manual or conventional education could not handle completely such as limited class room, variance knowledge of teachers, government factors e.t.c is taken care of by information and communication technology. With this, Information and communication technology had addressed learning system of employment of staff, schools, manual teaching aids etc that may not do better. This work will offer opportunity to us Deltan to see the other side of learning. In recognition of its importance, information and communication technology has become the most preferred medium of learning. The modern educationist has discovered it as quick response tool to education training and the bases of research, teaching, knowledge dissemination and transfer, using computer aided teaching tools such as software, hardware as an approach to learning which must be adopted into the curriculum. This has been felt in sciences, sports, engineering, government, businesses etc. The research tends to encourage the use of Information and communication technology for educational development in Delta State as an issue to embrace.
Keywords: manual or conventional education, teacher, backboard, information and communication technology (ICT), Panacea,

Introduction
Delta state is rapidly developing in education. State Government had over ten higher institutions across the state and establishing more in recent time. However, not much benefit has been gotten over the huge resources that are budgeted yearly.

Education is a process of learning in which the learner initiates meaning or ideas from his thought either formal or informal based on what he heard or understood.

Education is as old as creation. But when one looks at it, there seems to have been an uncanny lack of influence and far less change than expected.

There have been a number of factors impeding the uptake of ICT in education across all sectors. These have included such factors as ignorant, lack of funding to support the purchase of the technology, a lack of training among established teaching practitioners, a lack of motivation and need among teachers to adopt ICT as teaching tools (Starr, 2001).

According to Terry Lucey (2005) Information and Communication Technology is acquisition, processing, storage and dissemination of vocal, pictorial, textural and numerical information by micro – electronics based combination of computing and telecommunications. From the definition, you will discover that ICT education and its usefulness would bring a tremendous positive change to learning.

If one was to compare such fields as medicine, tourism, travel, business, law, banking, engineering and architecture, the impact of ICT across the past years has been enormous. Information and Communication Technology (ICT) is a force that has changed many aspects of life. The way these fields operate today is vastly different from the ways they operated before the introduction of ICTs.

There are many processes or methods of learning but it is expedient to know that information communication technology surpasses all the methods so far such, that it is not classroom bounded even without human, teacher and classroom. This is possible through Information and Communication Technology (ICT) tools. The most common of them all is tutorial CDs that teaches or guides learners on their choice courses.

But in recent times, factors have emerged which have strengthened and encouraged moves to adopt ICTs into classrooms and learning settings. These have included a growing need to explore efficiencies in terms of program delivery, the opportunities for flexible delivery provided by ICTs. For example, the capacity of information and communication technology to provide support for customized educational programs to meet the needs of individual learner and, the growing use of the Internet and World Wide Web (www) as tools for Information access and Communication.

Conclusively, it is necessary to dream of a state where everybody is not just a computer literate, rather a place where Information and Communication is given a priority and utilizes. Delta state should embrace Information and Communication Technology for it's overwhelming benefits. It has the capacity to transform and improve the standard of education. Moreover, it reduces cost overtime. Therefore we should strive for information (ICT) driven education. Therefore, it has become necessary to examine critically how it could bring the needed educational development in Delta state.

CHALLENGES TO EDUCATIONAL DEVELOPMENT

Teachers Qualification

The teacher qualification determines his/her performance and output. When the foundation is poorly laid it obstruct subsequent development on such foundation. Osafehiniti (1980) reported that children whose teacher had University degree in Mathematics had a better statistically significant mean score than children who studied under Teacher with Nigerian certificate in Education (NCE) or other lower qualifications. A teacher who lacks qualification and efficiency to handle the subject in terms of content and teaching strategies is inefficient and therefore contributes to poor foundation and lack of understanding. But Information and Communication Technology gives equal opportunity to all categories of people.

Teachers' Knowledge

Brilliant and knowledgeable teachers are endued with credible qualities. They teach the class with greater clarity in the presentation, produce higher learner's performance, and spend less time going over a home work and ask clever question (Groavial 1988). Teachers that cannot efficiently understand his teaching should not be in the class (Adeyemo 1999). These teachers lack confidence with which to transfer knowledge and often losses self respect in his attempt to deliver what he/she does not have. He cannot adequately plan his lectures; provide answers to question of the learners. When the teachers try to hide his inexperience is likely to teach wrong idea or overlook topic that are not familiar to him. This will result in poor performance. Research has shown that learner who study under teachers who lack knowledge or posses wrong concept are likely to fail in examination (Farrant 1930). Moreover knowledge brings boldness which is a key factor in communicating to audience.

Teachers Experience

Experience is knowledge gotten as you keep doing one thing over time. New teachers are always a victim of inexperience which is passed on to the learners. Experienced teachers are better than brilliant teachers who have not demonstrated their skills. Experience is a vital aspect of life that is why employers prefer it over inexperience.

Teachers Attitude

Teachers' attitude varies based on the background that they learned, their society and the home. These affect them, whether good or bad and the students are the recipient of the action. According to Ozigi (1997) sympathy, care, patience, orderliness, willingness to learn and ability to set good examples are qualities of a good teacher. This will eventually become his nature or his character. However, more often than not teachers are not ready to give the above listed attitude. They ought to be creative, novelty-oriented and should perform credibly well in the classroom. Teachers' attitude towards teaching profession is directly proportional to the learner's performance.

Government Factors

Education is a dynamic system for positive change. Unstable policy is a great limitation to its survivor. Lack of uniformity in textbooks and other instructional materials are challenging factors. Again, transfers of teachers who is getting used to his new place of work affects the learner's performance because it will take the students sometimes to accept and learn through the new teacher. Moreover, sometimes government makes law but cannot enforce it. Government failure to give incentive to teachers could hamper their effectiveness and productivity and constitutes a problem to effective teaching and learning.

Poor Evaluation System

Poor evaluation system prevents the teacher from getting at what the learner really knows or don't know. Poor evaluation system hinders true feedback that will help the teacher to achieve positive communication Harris (1999)

Learners' Attitude

The understanding learner has about the subject is important to themselves. Some feel they cannot learn a particular course and as such they are defeated before they could start. The explanation of teacher is meaningless when the learner has a wrong attitude towards a course. Wrong attitude hinders learning if not address (Kaejaiye

1998).

Absenteeism and Lateness
A child that is constantly absent from class work is likely to have some learning problems. Learning proceeds in a predetermined sequence and in stages. If one stage is jumped, a problem will be created. A child that is absent always misses the trend of the lesson and finds it difficult to learn. This constitutes a barrier to learning.

Conventional Learning
Conventional learning is hard to come by, the students forget so soon what they learnt. There is nothing to remind the learner of the lesson. Learning that the teacher might be wrong would affect performance in examination. This is not like an ICT based educational programmes which are built on the intelligence of expert. No doubt that the standard of education would have improved over the years in Nigeria. We were subjected to ancient learning process. Knowledge learnt in the class is soon forgotten, carrying out-group projects or discussions with the use of the internet and CD-Rom enhances learning better.

REVENTING TEACHERS' IDEAS THROUGH INFORMATION AND COMMUNUCATION TECHNOLOGY
Experienced teachers often uncover a deficiency through incorrect answers that a student gives on a test or during a recitation. Whenever a critical error appears, a perceptive teacher understands that the student missed a fundamental point.

By capitalizing on this background knowledge supplied by teachers, programmers can enable computers to identify the same difficulties. Although a computer cannot "understand," it can be programmed to recognize types of errors and thus to copy superior teachers. Then it can also apply fitting remedies. Programmers won't have to reinvent effective routines. They will be able to copy and use the skillful teaching techniques that the minds of human instructors have developed over many ages. An example of computers imitating teachers is in the analysis of errors. Analysis of errors will be one of many instances where the accumulated wisdom of teachers will aid programmers, just as the accumulated wisdom of earlier instructors has always helped new teachers. Software writers will bolster programs with ideas literally used for centuries. Almost all important techniques developed by teachers will be used by computers as educational programming matures.

When these tested deliveries have been programmed into the computer, they will be use to educate the students. Software will enable the computer itself to determine when they are appropriate. Improvements will continue by engaging other astute humans to work in ongoing endeavors with programmers to enrich teaching techniques. Human brilliance will then be extended through computers. The combination of teachers and programmers using their immense talents while taking advantage of the resources of computers will result in a continual flow of teaching enhancements. This will improve the learning process.

INFORMATION COMMUNICATION TECHNOLOGY UNIQUENESS
Computers imitate and take ideas from teachers, their speed and memory will propel them beyond the natural limitations of teachers. The machines can track multitudes of events that would be beyond human abilities. For example, computers can count and remember how often a specific mistake is made by a student and by thousands of students, and then can notify programmers that students are making a specific error or genre of error frequently. With this information, writers of software will be able to redesign the portion of the program dealing with that confusion. They will employ a different or expanded method of instruction designed to lessen the likelihood of the mistake continuing to occur. Programmers will again be informed by feedback if the student perplexity is repeated.

Software provides additional ancillary advantages. For example, when an outstanding teacher develops a new method of improving student learning, usually only the classes of that teacher is to benefit. When computer programmers working with top-notch people develop a better and enriching approach, they will make it available to every student using that software, wherever machines are located.

An additional benefit will also follow. A student, because of his or her unique weaknesses, may find a specific teacher's method difficult even if that teacher is excellent at instructing other students. Software allows the machine to use ideas of different teachers to reach diverse pupils. Every computer through its programming can mimic more than one model teacher. It can use whichever style is effective depending on needs of students. Another important educational improvement that the wonders of programming will introduce flows from the capacity of computers to control and totally integrate audiovisual presentations into the instruction of each student. In computerized education, these can be produced on computer screens of students with software that will control them completely. These audiovisual displays are called multimedia in computer terminology. More than the name has changed; the whole concept is vastly expanded. Comparing lessons stored in the machines'

memories with those found in textbooks illustrates another area where programming can improve on current teaching aids. When books are printed each copy must be identical with every other one produced at that time. Lack of absolute uniformity, however, could have advantages. For example, students might better remember history if happenings in different geographical locations were highlighted for students living in those areas. Computer programs can provide valuable variations, and they won't be limited only to past events. When scientific breakthroughs occur, updated material can be added at once over telephone lines to all copies wherever they are used.

It will even be possible for sectarian schools to have certain concepts, which they wish to stress, easily added or inserted into the software for use in their schools. Specific school districts may want some ideas to receive more attention. Software writers will be able to accommodate their wishes, often with only minimal added cost. Obviously, this may pose philosophical problems, which I cannot solve.

ICT AS A PANACEA TO EDUCATIONAL DEVELOPMENT IN DELTA STATE
Information and Communication Technology Overruled conventional learning process
ICTs would be able to provide requirements to educational development in Delta state and there are now many outstanding examples of world class settings for competency and performance-based technologies. The policies of education have been inadequate for over time and have not been able to meet its purposes due to limitation. While ICTs is better and has taken care of those limitations. This new technologies will continue to drive these forms of learning further. As students and teachers gain access to higher bandwidths, more direct forms of communication, access to sharable resources, and the capability to support these quality learning settings will continue to grow. Conventional teaching has emphasized content. For many years course have been written around textbooks. Teachers have taught through lectures and presentations interspersed with tutorials and learning activities designed to consolidate and rehearse the content. But ICT could eliminate both teacher and student in some expect. If society decides to retain both fundamental changes is possible through ICT.

Information Literacy
Another way in which emerging ICTs are impacting on the content of education curricula are from the ways in which ICTs are dominating so much of contemporary life and work. Already there has emerged a need for educational institutions to ensure that graduates are able to display appropriate levels of information literacy, "the capacity to identify and issue and then to identify, locate and evaluate relevant information in order to engage with it or to solve a problem arising from it". The drive to promote such developments stems from general moves among institutions to ensure their graduates demonstrate not only skills and knowledge in their subject domains but also general attributes and generic skills.

Traditionally generic skills have involved such capabilities as ability to reason formally, to solve problems, to communicate effectively, to be able to negotiate outcomes, to manage time, project management, and collaboration and teamwork skills. The growing use of ICTs as tools of everyday life have seen the pool of generic skills expanded in recent years to include information literacy and it is highly probable that future developments and technology applications will see this set of skills growing even more.

ICT AS AN INSTRUCTIONAL MEDIUM
Just as technology is influencing and supporting what is being learned in schools and universities, so too it is supporting changes to the way students are learning. Moves from content-centred curricula to competency-based curricula are associated with moves away from teacher-centred forms of delivery to student-centred forms. Through technology-facilitated approaches, contemporary learning settings now encourage students to take responsibility for their own learning this is supported by the education policy (NPE 2004:3). In the past, students have become very comfortable to learning through transmassive modes. Students have been trained to let others present to them the information that forms the curriculum. But ICT has made student to understand their studies in their own way which make them to understand better. The growing use of ICT as an instructional medium is changing and will likely continue to change many of the strategies employed by both teachers and students in the learning process. Technology has the capacity to promote and encourage the transformation of education from a very teacher directed enterprise to one which supports more student-centred models. Evidence of this today is manifested in the proliferation of capability, competency and outcomes focused curricula and moves towards problem-based learning. The use of ICT in educational settings, by itself acts as a catalyst for change in this domain. ICTs by their very nature are tools that encourage and support independent learning. Students using ICTs for learning purposes become immersed in the process of learning and as more and more students use computers as information sources and cognitive tools, the influence of the technology on supporting how students learn will continue to increase.

Use of ICT Tools for Knowledge Construction

The emergence of ICTs as learning technologies has coincided with a growing awareness and recognition of alternative theories for learning. The theories of learning that hold the greatest sway today are those based on constructivist principles. These principles posit that learning is achieved by the active construction of knowledge supported by various perspectives within meaningful contexts. In constructivist theories, social interactions are seen to play a critical role in the processes of learning and cognition.

In the past, the conventional process of teaching has revolved around teachers planning and leading students through a series of instructional sequences to achieve a desired learning outcome. Typically these forms of teaching have revolved around the planned transmission of a body of knowledge followed by some forms of interaction with the content as a means to consolidate the knowledge acquisition. Contemporary learning theory is based on the notion that learning is an active process of constructing knowledge rather than acquiring knowledge and that instruction is the process by which this knowledge construction is supported rather than a process of knowledge transmission.

The strengths of constructivism lie in its emphasis on learning as a process of personal understanding and the development of meaning in ways which are active and interpretative. In this domain learning is viewed as the construction of meaning rather than as the memorisation of facts. Learning approaches using contemporary ICTs provide many opportunities for constructivist learning through their provision and support for resource-based, student centered settings and by enabling learning to be related to context and to practice. As mentioned previously, any use of ICT in learning settings can act to support various aspects of knowledge construction and as more and more students employ ICTs in their learning processes, the more pronounced the impact of this will become.

Class Unbounded Learning

The concept of flexibility in the delivery place of educational programs is not new. Educational institutions have been offering programs at a distance for many years and there has been a vast amount of research and development associated with establishing effective practices and procedures in off-campus teaching and learning. Use of the information and communication technology, however, has extended the scope of this activity and whereas previously off-campus delivery was an option for students who were unable to attend campuses, today, and many more students are able to make this choice through technology-facilitated learning settings. ICT applications provide many options and choices and many institutions are now creating competitive edges for themselves through the choices they are offering students. These choices extend from when students can choose to learn to where they learn.

E-Learning:

We learn by experience, by watching others in person and via media like television and movies. Some learning has always taken place without teachers; legend has it that Abraham Lincoln studied law while reading by lamplight. Since learning has always happened and will happen without schools and without teachers, neither schools nor should teachers be considered as indispensable, despite their long use. Modern technology could probably eliminate both teachers and schools (Bennett 1996). In their brief time, computers have driven, with blazing speed, radical upheavals everywhere. These machines have literally upended traditional practices. Hence, E-Learning is a process of learning through computer systems that are connected to the Internet or LAN. This method provides materials via a computer. The student may be expected to have WEB CAM that will make the instructor to see him or her. The Examination is done via the computer network; which also stop at the same time to the entire student due to computer programmed. The results are to be fed back to students immediately or later, Federal University of Petroleum Resources, Warri, Delta {Fupre} Post UME (2009). Studying online has removed the barrier of time and size of class. The student can study at anytime convenient and anywhere provided he is on the WEB. As such, there is need to build infrastructures for a successful E-learning in Nigerian schools.

The Virtual Library

A library is a place where books are kept for readers to make use of them [read, study and research]. Library can be classified into two categories, digital library and conventional library. Virtual library gives access to users via a network or World Wide Web. This has a computerized reference or catalogue of books. University of Abuja Nigeria has online Web Resource Library, a subscription service providing an up-to-date catalogued database of educational books. The Web Resource Library provides access through the spectrum on-line catalogue. The sites cover curriculum area including science, maths, language, arts, social studies, geography and the arts. Each web site record contains the [Uniform Resource Locator] URL multiple, subject entries, title, author (if available), a complete notes field, curriculum topics, and age level information

Education Online Resources Centre

Education resources centres have been created by some computer expert that make current information available to educationalist. For example, Sagebrush cops had announced the launch of Ednow.com, an Internet portal designed to serve as an on-line education center exclusively for grade 12 teachers, librarians, administrators and other education professionals (Ushadevi 2001). Ednow.com gives educators access to current education news and trends, lesson plans, curriculum tips, book reviews, and more. It also provides links to industry-specific press releases, trade shows, and a variety of education resources, such as magazines, educational associations and suppliers. The portal also offers search tools for books, software and video's, an on-line encyclopaedia and dictionary, and free discussion groups that enable educators to share ideas.

Computer Aided Instruction:- Computer has brought a great revolution in the educational sector such that every aspect of learning process has been computerized. There are several initiatives that have taken over the traditional teaching skills. These are CAI, computer aided instruction, drill, and practice, tutor software, simulation software etc.

Computer aided instruction [CAI] are tutorial video CDs presentation that interact with tutorial software through the computer input device. Computer Aided Instruction [CAI] is used in teaching and receiving lecture. Good CAI software is designed to be users friendly and motivate to succeed in learning. CAI are equipped to do the following; asking the user questions, keeping track of answers by the users, illustrating point and adjusting its presentation of information to a student demonstrated knowledge and level experience. There are types of CAI software; these are Drill and Practice, Tutorial and Simulation.

DRILL AND PRACTICE: This is a process that enables you to provide answer to question through the computer. When a wrong answer is given, the computer will give chances of providing another answer. Otherwise, you will be congratulated for choosing the right answer. Moreover, you can quit the program. SIMULATIVE PROGRAM:Is designed to teach user by creating a model. In this use the computer software accepts the user's decisions, performs computations using the software model, and then responds to the user with the amount of profit or loss for the time period considered. Some educators are using the computer's capacity for simulating real-life situations to teach such subjects as anatomy and genetics.

Tutorial and Training Software: The computer displays text and graphics and sometimes uses sound to teach user concepts about subjects of their choice. This may quiz the user with true/false or multiple choice questions to help ensure that the concepts being taught are understood with these computer applications packages. Systematic learning is made possible by questions, problems, tests and animations. The answers are corrected automatically and in the case of mistakes, help is given or a possible solution is suggested. There are online tutorial for student to learn on the internet or pursue academic careers. The interactive and adaptive multimedia program, which has met great acceptance, has been developed together with the pedagogic University of Freiburg. As soon as the user has entered his online student identification and a password at *http://www.incorps.de*, the system starts with the current level of the student, which is retrieved on the basis of data stored earlier. The software can also be adapted to other Internet based courses.

Resources on CDs
Multimedia Encyclopedia

Grolier Interactive Inc. has announced the release of a school edition of its 2000 Grolier Multimedia Encyclopedia complemented by an all-new 125 paged teachers guide (Ushadevi 2001). The Grolier Multimedia Encyclopedia school edition CD-ROM contains over 37,000 authoritative, timely articles with 6,000 new and revised entries, Highlights of the product include a 250,000 word dictionary, 1,200 maps, 14 hours of sound, 7,000 images and more than 150 video's New features this years include the Curriculum-based Research starters to help students with their Research assignments, and a Millennium feature that traces and elucidates 1,000 years of the most developments of world history. The title also includes the proprietary Grolier Internet Index, which provides more than 26,000 article-to-Internet links. My only objective is to point out what can be done.

Recommendations

During the course of this research, some recommendations that were made by the researchers are as follows:
A) Government should develop strategies to help fund ICT integration in the Nigeria educational system such as CANi as well as provide information and infrastructures of these new technologies – bearing in mind that educational reforms do not come about with just the provision of ICT equipments such as computers in schools.
b) Staff professional development programs should be organized as we are often and sometimes caught up in "blame the teacher" syndrome- even when adequate schemes for professional development have not been put in place to help equip these teachers as well as redirect their steps towards the emancipation of these students. Most teachers are mentally prepared to take the student to the next level and these schemes will provide them the

opportunities that will effective support the new ICT teaching/ learning process.

c) Educational reforms must be made that to reflect integration of ICT into school curricular. Report and reviews are to be presented to the government for proper assessment and implementation.

d) School boards and administrators should provide professional development plans and training to aid teacher better understand their new role and is expected of them as well as how they can navigate the system as ICT is fully integrated into the school curricular.

e) There should be uniformity of teaching approach which can be made possible through ICT.

f) Learning should become more relevant to stakeholders' needs and learning outcomes should become more deliberate and targeted.

CONCLUSION

The heart of learning process is the negotiation of meaning. Education is to provide experience which enable the learner interact with his environment. Developing suitable answers for today's dilemmas in schools requires an examination of the essentials of education. Whenever an attempt is made to make any profound change, a disguised danger hides as efforts begin. Authorities responsible for developing a new direction may believe it necessary to continue whatever is being done if it has an extensive history however scrutiny of basics will provide a foundation for a true overhaul, and will show what can be changed and what must be kept intact.

Education involves transference to others of knowledge and values accumulated by humans. It also means the development of skills that allow students to integrate this knowledge and those values into their lives. Schools and teachers have been part of education for thousands of years. Everyone, however, has gained knowledge outside school. Since learning has always happened and will happen without schools and without teachers, neither schools nor must teachers be considered as indispensable, despite their long use. Modern technology could probably eliminate both teachers and schools. Even if society decides to retain either or both, fundamental changes are possible. Computer and Information Technology could only achieve this. And there must be an appropriate funding and available human resources that bring this world-class technology into better use. However, new technologies present daunting challenges for educators. Software has moved rapidly beyond "drill and kill" programs to interactive simulations, hypermedia, and virtual reality explorations.

In all the institution, there should be a digital cloud. If you do not have computer training, you do not have a passport to digital economy. All that one needs to do is to take a system into the environment, probably stay under a tree and get connected to information super highway. New technology has broken the barriers classroom size and location. People are no more looking at faces or largeness of an institution. People are looking for the content (ie. the infrastructure development and human resources).

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