

USING QUALITY ICT EDUCATION FOR POWER, EMPLOYMENT AND CHANGING COMMUNITIES

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Abstract

This paper investigates into using quality ICT (Information Communication Technology) education for power, employment and for changing communities. It highlighted what information is all about, what communication is all about and what ICT on its own is all about. It further defines power and its five types which include coercive, rewards, expert, legitimate and referent power and concludes that all other types emanate from expert power since it comes from one's experiences, skills or knowledge which in turn is got from ICT education. It also goes further to explain to us what we mean by employment and how ICT could enhance it and concludes that people can be excluded from being employed if they cannot demonstrate basic ICT skills and knowledge. Finally, it highlighted how communities could be changed through quality ICT education.

Of recent, Information and Communication Technology has shown that they offer great opportunities for teachers and students in various disciplines. The use of Electronic Information ICT enables teachers access the necessary information on learning instructional materials through the internet. So in today's fast changing complex world, it would not be enough to acquire the traditional skills of reading, writing and numeracy without ICT. Developments in technology are taking place so rapidly that the perceptions about what it means to be a literate person are also changing. As the use of ICTs grow, it would be necessary for people, in communities to go beyond literacy to develop the skills that would be necessary to utilize the new technologies effectively and productively for their own empowerment and employment. The challenges for the educationists would be to constantly anticipate and to plan educational programs that would enable adults to cope with and take advantage of the rapid advances made possible by technology for the betterment of their lives and conditions. By so doing, the qualitative ICT education acquired would then help to enhance power (because as the saying goes that knowledge is power), provide employment and change communities.

What is ICT Education?

Information is knowledge and understanding that is usable by recipient, something not already known which could not be predicted. Cambridge Information Dictionary of English (2002) defines information as knowledge about something especially facts and news, if a message or report does not have these attributes as far as the recipient is concerned it contains merely data. From managerial point of view, Agoyi and Seral (2012) opined that Information is data that has been processed manually, electronically or otherwise to aid a manager in his decision making process. Continuing they stated that information refers to processed data, fact or idea ready for use. From the above reviews, it may be understood that information is complex and dynamic.

Communication on the other hand is the process of exchanging information between two or more individuals or organization. It is the process through which information, knowledge, idea or message are conveyed or transmitted from one source to another. In education, communication refers to the information transmitted from the teacher to the pupils from pupils to the teacher or even by audio visual means. <http://us.wow.com/search> pt=source285 it = aolsem&schn=498=..... Thus, it can be understood that teaching and learning process are by extension of communication. Communication is an essential instrument in all human endeavours, this essentiality has been expressed by scholars. Ogili (2004) commented on the role of communication in the society. According to him, communication is the motor that aids expression of social activity and civilization which maintain and animate life; it leads people from instinct to inspiration. Society and growth depend on a number of things among them, a system of communication.

ICT describe the term used to represent a whole range of electronic devices and techniques used in collecting, storing, retrieving, processing, presenting and transmitting data. Eriba and Adejah (2004) look at ICT as the handling and processing of information for use by means of electronic and communication devices such as computers, cameras and telephones. ICT is concerned with processing, storing, retrieving and communicating data use.

Geoffery (2004) sees ICT as a diverse set of technological tools and resources used to communicate and to create, disseminate, store and manage information. He further added that ICT is concerned with handling, manipulating and presenting information usually through text, pictures and sound using computers tape recorder, robotic devices or other forms of instructional materials.

Okoro (2004) views ICT as electronic devices that can carry out such function as receiving, storing, computing, analyzing, transmitting and retrieving information presented to it and allowing for one to one or group communication among humans. He further explains that ICT includes the use of three forms of technology; computing, electronics and telecommunication and how these technologies are used to collect, store, process and distribute any form of information in electronic means.

Hime (2007) stated that ICT is the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numeric information by microelectronic based combination of computing and telecommunication. ICT conveys the notion of application of modern technologies to information handling, or technologies which allow the various forms of information to be processed, transmitted, manipulated, and stored and retrieved with accuracy and efficiency.

Generally, the following functions of the use of ICT in education are described in literature (Moonen and Kommers, 1995).

ICT as Object: It refers to learning about ICT mostly organized in a specific course. What is being learned depends on the type of education and the level of the students. Education prepares students for the use of ICT in education, future occupation and social life.

ICT as an 'Assisting Tool: ICT is used as a tool, for example while making assignments, collecting data and documentation, communicating and conducting research. Typically, ICT is used independently from the subject matter.

ICT as a Medium for Teaching and Learning.

This refers to ICT as a tool for teaching and learning itself, the medium through which teachers can teach and a learner can learn. It appears in many different forms, such as drill and practice exercises, in simulations and educational networks.

Information and Communication Technologies (ICT) refers to the use of information and communication technologies (ICTs) in the fields of socioeconomic development, international development and human rights. The theory behind this is that more and better information and communication furthers the development of a society.

What Do You Understand By Power and How Could ICT Enhance It?

Having seen what ICT and its education are all about, it is important to note that power is the ability to cause or prevent an action, make things happen, the discretion to act or not act. There are five types of power, according to <http://www.businessdictionary.com/definition/power.htm/#1xzz472k8IL6z>.

These are:

Coercive Power

This type of power uses fear to control, it punishes the ones who don't do things accordingly and therefore, employees will be motivated to do their work properly due to the fear of being punished. An example of this could be a manager that gives mostly disciplinaries, or suspends their staff when they do something wrong due to the fear of having a disciplinary or being suspended which will give the employee a bad record, this will motivate them to do better.

Reward Power:

Reward power is when management gives out rewards for achieving goals, and therefore this will motivate employees to achieve goals or objectives expecting a reward. Example of this type of management could be companies that give bonuses or when managers give rewards such as wine or chocolate to the employees for hard work.

Expert Power

Expert power comes from one's experiences, skills or knowledge. As we gain experience in particular areas, and become thought leaders in those areas, we begin to gather expert power that can be utilized to get others to help us meet our goals. For example, the Project Manager who is an expert at solving particularly challenging problems to ensure a project stays on track.

Legitimate Power

Legitimate power comes from having a position of power in an organization, such as being the boss or a key member of a leadership team. This power comes when employees in the organization recognize the authority of the individual. For example, the CEO who determines the overall direction of the company and the resource needs of the company.

Referent Power

Referent power comes from being trusted and respected. We can gain referent power when others trust what we do and respect us for how we handle situations. For example, the Human Resource Associate who is known for ensuring employees are treated fairly and coming to the rescue of those who are not.

From the five different types of power discussed above, one can see that the one that concerns us most is the expert power since it comes from one's experiences, skills or knowledge. These experiences, skills and knowledge are what one gains from ICT education. This is because from the functions of the use of ICT in education as described abinitio, ICT provides education that prepares students for its use in future occupation and social life, ICT as an assisting tool which help student to do assignment, collect data as a medium for teaching and learning among others. It is clear that ICT education is for power and all other types of power like the coercive power, reward power legitimate power and referent power emanate from that (expert power).

What Do You Understand by Employment and How Could ICT Enhance Employment

Employment is an agreement between an employer and an employee that the employee will provide certain services on the job, and in the employer's designated workplace, to facilitate the accomplishment of the employers' organization's goals and mission, in return for compensation. The agreement can be verbal, implied, or an official employment contract.

In employment, the employer determines the where, when, how, why, and worth of the work that is performed by the employee. The degree of input, autonomy and self-directedness that an employee experiences on the job is a by-product of an employer's philosophy of management and employment.

In the United States, much of an employment relationship between an employer and employee is governed by the needs, profitability, and management philosophy of an employer as well as the availability of employees.

Over the last decade, information and Communication Technologies (ICTs hereafter) have been widely acknowledged as essential resources for socioeconomic development. In the information and globalization era, ICTs provide developing nations with an unprecedented opportunity to meet vital development goals, such as poverty reduction, basic healthcare, education, and democratic enhancement, among others. Additionally, acquisition of ICTs skills, both at a country and individual level, can boost the inclusion of marginalized groups. This inclusion can happen through different channels, such as improving these groups participation in democratic processes (otherwise inaccessible for them); providing them with basic healthcare and better life conditions, allowing them to participate in the labor market, etc. It is well known that basic ICT skills can play a relevant role in increasing employability. People can be excluded from consideration for employment just by virtue of not being able to write a resume, or receive assistance in other areas will make a noticeable difference. Thus, ICT skills might be often a gateway that enables the possibility of employment.

From the writer's view point, one can see that ICT education is very necessary in the society because of what it provides for people in terms of enhancing power as can be seen from expert power that comes from one's experience, skills or knowledge.

Also from the write-up, ICT education provide developing nations like Nigeria with an unprecedented opportunity to meet vital development goals, such as poverty reduction, basic healthcare, education, and democratic enhancement, among others. If anyone can acquire the skills provided by ICT, then the person can gain employment in any field be it firm, higher institution of learning or private companies to mention but a few since it is written here that ICT skills might be often a gateway that enables the possibility of employment.

Having known all these, the next question should then be; how could quality ICT change communities?

How Could Quality ICT Change Communities?

Information and communications technology (ICT) impacts on the communities in which we live and the way individuals, business, government and civil society interact and develop. Simultaneously, all sectors have shown increased interest in the concept of social capital and the role it can play in building stronger communities, increasing economic productivity and contributing to rural and regional rejuvenation. As the use and impact of ICT increases, so does the prospect that ICT can play a role in

shaping the nature of community development and contributing to the building of social capital. The idea of building social capital contains within it the implication that the process takes place within a community of some description. This raises some issues. Firstly, what is ‘community’ and how do we define it?

Communities are dynamic and their development is affected by the wider social and political and economic environment. The increasing impact of ICT means that communities are likely to be shaped by it and in turn they will influence the uptake and application of ICT. There is great variation in the needs and demands of communities and the role of ICT in meeting these.

ICT is changing the way that individuals within communities interact, expanding the community to those groups that are not bounded by geography, i.e. so-called virtual communities. Exploration of the concept of community leads to a framework that incorporates both the geographic and the virtual. [http://www.social-capital.net/does/the Role of ICT in Building Communities and Social Capital](http://www.social-capital.net/does/the_Role_of_ICT_in_Building_Communities_and_Social_Capital).

A successful mediation process by an effective and local intermediary is required so that ICTs can contribute in a meaningful way to improve the livelihoods of the poor;

- ii) ICTs have to be locally appropriated by poor communities, in order to facilitate their empowerment; and
- iii) ICTs have to build on and strengthen existing social and organizational community structures, so that they can lead not only to the individual, but also the collective empowerment of poor communities.

There are Many Important Dimensions to ICT Education, Including:

ICT/Digital Literacy – Today, everyone needs a basic understanding of ICT and how to make productive use of it, just to be good students, workers and citizens. Teaching people how to be competent basic users of ICT technologies is an important role of ICT education, so that they will be successful in their academic and work careers, and so that they can efficiently participate in modern technical society.

❖ Information and communication technologies (ICT) competencies are increasingly important for most of the employers, regardless of role. If there was an agreed-upon standard for “digital literacy”, or ICT competencies expected of all workers, regardless of workplace role, organizations would value a credential based on that standard as a way of validating ICT skills for non-ICT workers.

❖ “In the 21st century, an ability to work with information and communication technologies is becoming essential to education, life and workplace success as “reading, writing and arithmetic”. ICT Digital Literacy should be considered a basic skill by educational systems, something taught to and assessed for all students.

❖ **ICT Infrastructure and Support Applied Technologists** – Beyond a basic user competency, our society also needs more knowledgeable and capable technical people to deploy, manage and maintain ICT equipment, software and systems, so they

work well for users. In all industries, these people manage computer and communication hardware, software and applications; networked systems; online information sharing, communication and commerce systems; business processes making use of these systems; and user support.

❖ **Specialized Business Industry Uses of ICT** – As enabling technologies, ICT is used strategically in almost all businesses and industries. Many have developed specialized systems and uses of ICT, and many have specialized legal and regulatory requirements; quality control systems; integrations with production and research equipment and systems; security requirements; and software applications. For example:

* Bioscience industries rely on specialized ICT systems and applications to conduct research, analyze organic materials, produce biotech products and do required reporting;

* Financial services industries rely on ICT to maintain customer records, do business, conduct trades, do financial reporting, secure proprietary information and comply with regulations;

* Manufacturing industries use specialized computer controlled systems and robotics to design, produce and test products.

* Property management operations use ICT to network and control heating and cooling, lighting and building access systems.

* Electric utilities use ICT to monitor and manage electricity distribution, customer billing and smart metering systems.

* Telecommunications, cable TV and other entertainment industries use ICT to store content, manage customers and deliver their services.

We need to develop a competent workforce that understands not only relevant technologies, but also specialized business and industry environments and operations, to meet these specialized needs,

❖ **ICT Research and Development Scientists**

ICT fields themselves are under constant pressure to evolve and improve. We need people who deeply understand the science and technologies underlying ICT and who can work to advance the fields.

In virtually all modern businesses and industries and in modern society in general, ICT has key strategic roles. It is strategically important to develop citizens and workers who can competently and efficiently operate and add value in these systems and environments. http://www.mpict.org/ict_education_defined_importance.html

World wide research has shown that ICT can lead to improved student learning and better teaching methods. A report made by the National Institute of Multimedia Education in Japan, proved that an increase in student exposure to educational ICT through curriculum integration has a significant and positive impact on student achievement, especially in terms of “**Knowledge • Comprehension**” “**Practical skill**”

and “**Presentation skill**” in subject areas such as mathematics, science, and social study.

However, you can see that there are many education technology solutions provided in the world which may cause confusion among educators about how to choose the right ICT solution. Let’s have a look at the advantages and disadvantages of ICT tools for education and discover what kind of education ICT solution is suitable for your school needs.

3 Main Advantages Of ICT Tools For Education

- Through ICT, images can easily be used in teaching and improving the retentive memory of students.
- Through ICT, teachers can easily explain complex instructions and ensure students’ comprehension.
- Through ICT, teachers are able to create interactive classes and make the lessons more enjoyable, which could improve student’s attendance and concentration.

3 Main Disadvantages Of ICT Tools For Education

- Setting up the devices can be very troublesome.
- Too expensive to afford
- Hard for teachers to use with a lack of experience in using ICT tools

Integrating ICT into education seems to be a necessary issue for educators / education administrators in the world. However, if teachers cannot make good use of the ICT tools, the money and time spent on the ICT is going to be a waste. Also, if the educational budget is limited, looking for a cost-effective and high-performance ICT tool can be the first priority.

It is clear from what is seen here that quality ICT can enhance power, provide employment and change communities.

Conclusion

In conclusion therefore, there is vast potential to use quality ICT education because it can contribute to community development and formation. A successful mediation process by an effective and local intermediary is required so that ICTs can contribute in a meaningful way to improve the livelihoods of the poor; ICTs have to be locally appropriated by poor communities in order to facilitate their empowerment; and have to build on and strengthen existing social and organizational community structure so they can lead not only to the individual, but the collective empowerment of poor communities.

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