



THE ROLE OF ICT IN PROVIDING QUALITY INFORMATION SERVICES TO LIBRARY USERS/CLIENTELES IN NIGERIAN TERTIARY INSTITUTIONS

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Abstract:

Researches into libraries, (most especially academic libraries) have shown that inadequate levels of Information and Communication Technology literacy is one of the major problems facing libraries in Nigeria at this time of digital revolution. In as much as internet is designed to serve the information needs of every individual in the society has eventually given room to effective utilisation of library information resources. The world-wide network has made interaction online to be more efficient in terms of information accessibility, communication and sharing of information resources. This paper delves into the principles behind ICT, provision of immeasurable information, technology in relation to information for the development of a modern library of today and beyond. Furthermore, the paper made some valuable recommendation to all in having a befitting library development.

Keywords: ICT, information services, library users, Nigerian tertiary institution, world-wide network (internet)

1. Introduction

In the olden days, access to quality information by tertiary institution students were largely limited to books, journals, mimeographs, conference proceedings etc. However, the development and widespread use of computer network since the end of World War II and the emergence of other Information Communication Technology have widened opportunities for the students to obtain quality information for their academic progress and development. The speed with which the revolution in information technology has taken place is phenomenal.

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Nowadays, the computer serves as post office, word processor, bank window, shopping centre, CD player, photo shop, news medium and a vast library. In essence, ICT has transformed access to quality information available to higher institution students to achieve meaningful and effective learning and development. Any student who aspires to achieve academic excellence must constantly and continuously source for quality information from various Information Communication Technologies available in his or her environment. Students who wish to achieve academic excellence must be those who are well informed in the latest information ideas and must constantly look for new ideas. Quality information sourced through appropriate ICT is the best judge and is considered as part of the new value system to be adopted by tertiary institution students to achieve successful academic performance in all academic programmes.

The Internet is without doubt the fastest growing communication technology today (Diodio & Sithole, 2001). As affirmed by Molosi (2001) that internet took only four years to achieve the same mark as television revolution, which took significantly 13years to reach more than 50 million viewers. He further argued that the education sector has been playing major roles to revolutionalise information and communication Technology system, vice-versa. According to Anderson & Reed, 1998 ICT has revolutionalised educational sector in all ramifications.

2. The Concept of Quality Information

Of recent, information scientists and other professionals have identified information as an important input in any developmental project. The importance of information as a vehicle for development is increasingly becoming appreciated by planners, decision-makers and even entrepreneurs in the private sector (Nalavi, 1990). Cochrane, 1980; Aboyade, 1987; Momochi, 1988, state that it has been observed that information is part and parcel of everyday activities. This shows that information is indispensable. They said what is lacking now, is quality information, identified, acquired, repackaged, (if necessary) and delivered at the right time to all those who are involved in developmental programmes. According to Saunders (1980), information is an un-scarce resource. What perhaps is scarce is the right information in the right place and at the right time.

Despite the fact that information in printed format is still very useful and infallible, many clienteles/users of information still have deficiency in area of making decision (Burch, 1990). According to him, information satisfaction varies, in the sense that what somebody may term to be relevant information may not necessarily be relevant to another. Burch (1990) further states that "*Quality Information*" may mean many things to many people. He said that quality information rests solidly on three pillars, such as: relevancy, accuracy and timelines. He as well explained that for information to be relevant, it should specifically answers the user's questions of what, why, when, where, who and how. Similarly, he is of the view that for information to be

accurate it should be free from bias and at the same time, such information should be timely, in other words, the recipients/ information users should be able to retrieve such information when they need it.

Moreso, Salasin (1989) corroborates Burch view by saying that the value, meaning, quality of information can be defined in terms of attributes of information and factors related to the setting in which the information is used. According to him, the attributes of information also includes comprehensiveness, content for the intended user, authoritativeness, location and sustainability of form. However, he cautioned that the value of a piece of information with respects to the aforementioned attributes may vary with respects to several factors. According to him, he cautioned that *“the value of a piece of information with respect to the above attributes may vary with respects to several factors”*. The factors include the ways in which the information is used, characterised of individual seeking information, social and organisation factors and task requirement (Salasin, 1987). Camble Emmanuel (1992) cited Burch and Gary (1990), summarised that for any piece of information to be qualitative, it must be relevant, accurate and delivered at the right time. He quoted further that *“in the context of the attributes of quality information provided such as, accurate information, relevant information used interchangeably to mean quality information”*.

2.1 Concept of Information Communication Technology

The American Library Association (1983) defined Information Communication Technology as the application of computer and other technologies to the acquisition, organization, storage, retrieval and dissemination of information. Margbalani (1987) states that ICT has to do with how information resources are acquired, organised, stored, retrieved and disseminated among individual users/clienteles. With the advent of internet and ICT, the libraries have been revolutionalised for better information delivery. In support of the above view, Oketunji (2002) said that Information Communication Technologies found in the libraries can be divided into three categories: such as (i) Telecommunication: This facilitates the transfer or communication of data and information. (ii) Computers: This is used to process data, store and retrieve information. (iii) Storage of media facilities: Since the Central Processing Unit (CPU) of a computer has a definite amount of data capacity; it needs additional storage media, for examples, magnetic disc and tape. A disc is the most common auxiliary storage device.

According to Oni (2000), Information Communication Technology comprises all electronic facilities and infrastructure that are employed by libraries to improve and provide efficient services. To corroborate the above statement, it is a well-known fact that the objectives of any library are to collect, organise, store/preserve and disseminate information to users/clienteles. Definitely, this information that is made available to users/clienteles could be in form of printed text, pictures/animations, graphics and sound etc. Such presentation could be enhanced by the right and up to date Communication Technology. In a broad term, Information Communication Technology

facilities consist of firstly, Communication links between the service outlets of different libraries to facilitate the sharing of common resources of library networks. One of the advantages of ICT is that it helps the growth and development of libraries in different direction. Secondly, the provision of information becomes flexible for information seekers/users according to their need. Madu and Disiru (2002) opined that Information Scientist, Academic Staff, Librarians, University administrators, Policy Makers, Archivists etc believe in the efficacy of Information Communication Technology, which has come to stay. This has resulted in various changes in virtually all the Library Departments/Units.

2.2 ICT in African Libraries in this Modern Age

African Countries are set to empower and to effectively use and manage information to increase technological advancement and transfer to promote research, teaching, learning, and further enhance African's achievements and performances for mutual benefits and to the rest of the world (Nwalo, 2000). In Africa and the rest of the world, it is imperative to invest and plan for a reasonable proportion of the national wealth to generate, manage and utilise quality information for effective development of information. Information is described by Aiyepoku (1991) as peoples' accumulated knowledge, acquired through all subjects that would be of benefit to its users to avoid uncertainty. Nwalo (2000) asserts that African Countries have had a catalogue of short and long term development plans as far back as independence days, the failure of which is largely attributed to lack of proper information management and utilisation.

Information wealth is now a new type of capital that is made known as knowledge capital (Bandin and Harrison 1987). Information is one of the major factors of production which could not be said to be substandard to labour, entrepreneur, land and capital. According to Emeagwara (2007), Information Communication Technology and lack of it in some nations of the world has made wider the gap between the rich and the poor nations including the citizens of the world. Moreso, Drucker (1969) states that, systematic and purposeful acquisition of information rather than science and technology is emerging as the new formation for productive, work and effort throughout the world. In addition, Bergdahi (1989) opines that information has become such precious resource that is connected with their capacity to develop and exploit it.

To further explain on the importance of information, Emeagwara (2007) pointed out that despite the fact that oil plays important role in humans life, it has also becomes the major problem of our existence. In order words, it has caused corruption and poverty. While others believe that it is an essential source of untold power and wealth. He as well buttress his point by saying that as the gap between the rich and the poor countries continues to expand, it is clear that intellectual capital and technology rule the world and that natural resources such as oil, diamonds and gold are no longer the primary determinant of wealth. The internet facility though designed to serve the information needs and interests of all facets of the society worldwide. The world-wide network as well fasters an unequal degree of communication, information access,

resource sharing and collaboration. According to Compton (1994) there are six reasons why CD-ROM technology could be a very good requirement for libraries: it is easy and accurate for budgeting; it is durable; there is no communication needed; it has storage capacity; it can be used directly by end-use i.e. the clientele/user that actually needs such information. Finally, it has a low mailing cost. CD-ROM database can hold that pictures (graphics and images), and sound.

There are thousands of CD-ROM titles available, holding a variety of information. Most CD-ROM titles carry bibliographic data. Researchers, students, other library users now have their choice of CD-ROM products holding secondary information relevance to their discipline. To run a CD-ROM in a library, all that is needed is a micro-computer (i.e. P.C), a printer and at least a CD-ROM drive. A network is another technology through which information can be accessed. Akanbi (1995) explained that a network has to do with connecting computers so that they could communicate, share resources like printers and storage space. To corroborate Akanbi statement, Oketunji (2000) states that network comes in all shapes and sizes. He further explained what they are and do.

“Network allows the computer user to share expensive computer equipment. For example, it would be costly to buy a separate laser printer for every personal computer in an office. Instead, equipment like printers or very large storage discs can be shared by networking”.

“Certain types of networks also allow users to share programmes between computers and to talk to each other using computerised message called electronic mail. A person on one computer can send mail to one or more people on other computers within the same small office. He can also use the network to move files from one computer to another. This type of set up is called a Local Area Network (LAN)”.

“Larger offices or office building may have more than one Local Area Network. These separate networks can be connected with cables so that computers on one network are free to exchange information with computers on the other network. The company can connect these local networks using special high-speed telephone lines; thus forms a Wide Area Network (WAN)”.

“International companies with offices in different countries can also be connected. Satellites and Special telephone connections allow these companies to have Global Wide Area Networks (GWAN) such a network allows offices in a place like New York, the computers in Tokyo will seem to be in the same office. The internet is accessible to anyone with personal computer and a modem”.

Library network applications will enable resource-sharing, communication and data exchange. Since libraries have identical functions structure and operate on similar

patterns, it goes to say that the urge to introduce some element of telecommunications (network) should be paramount (Oketunji, 2002). This development will bring in place a dial-up communication network that can connect libraries and information centres. Some of the services that can be rendered under this arrangement include full text searching capabilities. Thus, libraries at state or national level can then search access and retrieve information stored in the network.

According to Awe (2007), the Internet is world-wide connection of computers to computers. A network made up of networks linked together by the international telephone system such high level of connectivity fosters an unparalleled degree of communication, collaboration, resource-sharing and information access. Internet access is usually arranged through an organisation that has established the necessary physical connections and equipment to offer an internet connection. The organisations involved are referred to as internet service providers (ISPs) for every level of service from expensive dedicated internet connections to inexpensive dial-up connections for home users (Daraman, 1997).

2.3 Problems of ICT Adoption/Management in Nigerian Libraries

Bensons (2001) enumerates the problems of Information Communication Technology (ICT) adaption or management in Nigerian libraries. He further explained that internet by itself does not create changes in libraries but that the libraries do. Libraries need more than a simple internet connection to utilise the power of the internet (Bensons, 2001). It takes creative librarians to remove technological barriers and design innovative systems that make it easier for patrons to find and retrieve the information they need. Although, librarians have made remarkable progress in integrating the internet into their core operations, they are beginning to understand the applications that enhance productivity and the tools that effectively distribute situation in most third world countries like Nigeria where we are faced with manpower or human resources problem due to lack of training facilities and course funding. The state of library development in Africa is reminiscent of the general climate of under-development in the region.

Three and a half billion people, three quarters of all humanity live in the developing countries (Hamburg, 1998). By approximation, in the year 2000, the proposition will probably have risen to four fifths. In addition, it was stated that the developing countries accounted for more than two-third of the earth surface, referred to as the third world or south. By the gains of prosperity and progress, they are abode on the periphery of the developed countries of the North while most of the North are in luxury, most of the people of the South are in penury. Similarly, in terms of economic situation, the economies of the North are generally strong and healthy. On the other hand, those in the South are mostly inactive and not adequately protected. The Northern part of the countries does control their destinies while the Southern part is widely opened to external factors and lack behind in functional sovereignty.

However, as of the time this information was brought up, the third world of which is Africa is at the centre stage made a decade ago when the economies of most

African countries were flourish. Some years past, Africa economies have suddenly becomes much lower (plummet) owing to bad governments, military dictatorship, armed conflicts and general restiveness of the population and national calamities, including ritual killings, kidnapping, desertification, armed robbery, flooding, epidemic and global inflation and global information. A close investigation through monitoring of foreign and Africa based mass media reports, documents and news that has to do with hunger, poverty and disease in parts of Africa would be surprised how some people have managed to survive in such region.

According to Nalo (2000), many new democracies are pulled down in Africa because people are no longer patient with the political class and their fake promises of a better tomorrow. However, for a better tomorrow in this dwindling socio-economic climate the libraries should be mandatory made to strive in Africa. Moreso, they should be effectively managed as the library in every society is the most dependable source of information for development. The attitude of the government towards library development will chart a path for the libraries for a better performance or for the worse. This is because the government is the prime mover for a better tomorrow and development. As opined by Kaye (1995) good information improves decision making, enhances efficiency and provides a competitive edge to the organisation or institution which knows more than competitor.

The situation in Africa is somehow strange and difficult to explain. The problem here has to do with computer hard ware and software. This is as a result of the application of computer to various human endeavours in Africa is relatively new. Economic meltdown most especially in Africa has weakened currency of African countries in the foreign exchange market. It has well made the price of computer hardware and software skyrocketed that many libraries find it difficult to acquire them. Secondly, the matter becomes worsened due to many middlemen in the local computer market who try to maximise profit. Another problem is the issue of shortage of Technology manpower to maintain automated library system.

Manpower in the field of Computer Engineering and Information Communication Technology are still very few in Africa in term of demand. This has also brought about the problem of shortage of Technological specialist to maintain automated library system. The effect of this is that the cost of maintenance of automated library systems will be officially stopped as libraries compete for the services of the few Technical manpower available in their environment to maintain automated library system.

3. Conclusion

As said earlier on, there can be little doubt that the future of library and information services in our society is bound up closely with the development of Information Communication Technologies (ICT) as many of the activities performed by libraries and the services they offer can be enhanced and many new services developed using

suitable information technologies in an appropriate way. The libraries in Africa are to be identified with the new revolution in Information Communication Technology in reducing the problem it might have on the world and human development, their services will be more preferred and appreciated.

Quality information is an essential tool for development, hence, there is the need to invest a significant proportion of our national wealth to generate, manage and utilise this information appropriately. Information is personified as mankind's accumulated knowledge, derived from all subjects that could help its users to reduce their levels of uncertainty (Aiyepoku, 1991). He further asserts that since independence, many African countries have had a catalogue of long and short-term development plans which had failed simply because of lack of proper information management and utilisation. Nalari (1990) states that the importance of information as a vehicle for development is increasingly becoming appreciated by planners, decision-makers, and even entrepreneurs in the private sector.

Indeed, development planners and information experts have argued that there is no scarcity of information for development purposes (Cochrane, 1980; Aboyade, 1987; Momodu, 1988); what is lacking (according to them) is quality information, identified, acquired, repackaged and delivered at the right time to all those who are involved in developmental programme. Sanders (1980) corroborated thus by submitting that what is actually scarce is the right information in the right place and at the right time. Burch (1990) observed that quality information rests on three pillars – accuracy, timeliness, and relevance. This is no way the traditional and way of getting information in the library, can help us deal with our information needs, management and utilisation except we go in the ICT way which will definitely settle the issue of accuracy, timeliness and relevancy.

The world economy is now experiencing a transformation or a sort of metamorphosis from natural resources to intellectual capital. As the gap between the rich and poor countries continues to expand, it is clear that intellectual capital and technology rule the world, and those natural resources such as oil, gold, and diamonds are no longer the primary determinants of wealth. Intellectual capital drives prosperity and not money while poverty is driven and sustained by lack of intellectual capital. Similarly, as illustrated by the parable from the ancient Babylon (modern day Iraq) affirmed that the intimate relationship between intellectual capital and economic growth is as old as humanity itself. This further brought about the analogy of a man who asked his children that, if they had a choice between the clay of wisdom or a bag of gold, which one would they choose? It was gathered that the naïve children believed that the wisdom of bag of gold had potential to earn them many more bags of gold in the future. It was as well said that seven thousand years later, the ancient Babylon (Iraq), the cradle of civilization, has its own private bag of gold as it sits perched atop the world's third largest oil reserves.

Emeagwali (2007) explained further that Israel, tricked away in the hostile terrain of barren desert, has the clay of wisdom, which signifies the weightless wealth of

intellectual capital embodied in the collective mind of its people. Information has become very significant as it is believed to be a fifth factor of production. This has equally made information not to be inferior to Land, Labour, Capital and Entrepreneur. Information wealth is now a new type of capital described as “Knowledge Capital” (Brandin and Harison, 11987).

In addition, Drucker (1969) predicted that the systematic and purposeful acquisition of information rather than science and technology is emerging as the new foundation for work, productivity and in reality; it is not the money but intellectual capital that drives prosperity. More important is the reality that poverty is driven and sustained by a lack of intellectual capital. The intimate relationship between intellectual capital and economic growth is as old as humanity itself and is well illustrated by this parable from ancient Babylon (modern day Iraq). A man asked his children: “*If you had a choice between the clay of wisdom or a bag of gold, which would you choose?*” “*The bag of gold, the bag of old*” the naïve children cried out realizing that wisdom had to the potential to earn them many more bags of gold in the future”.

Seven thousand years later, Iraq – the cradle of civilization, has its own private bag of gold as it sits perched atop the world’s third largest oil reserves. Meanwhile, Israel, tricked away in the hostile terrain of a barren desert, has the clay of wisdom – the weightless wealth of intellectual capital embodied in the collective mind of its people (Emeagwali, 2007). Information is at present believed to be a fifth factor of production which is by no means inferior to land, labour, capital, and entrepreneur. Infact, Brandin and Harison (1987) observe that “*information wealth is now a new type of capital described as knowledge capital*”. In the same vein, Drucker (1969) alerted us that the systematic and purposeful acquisition of information rather than science and technology is emerging as the new foundation for work, productivity and effort throughout the world and in what sounds like confirmation of Drucker’s prediction, Bergetahl (1989) posits that information has become such a precious resource that the fate of modern nations is essentially connected with their capacity to develop and exploit it.

3.1 Recommendations

The following recommendations would assist library users/clienteles in Nigerian tertiary institutions on the role of ICT in the provision of quality information services:

- Gaining the competitive edge is the key to our world today, hence, individual human beings, organisations like schools, industries, and libraries require a vast mix of skills and knowledge to stay ahead of others. Throughout the world, people are using a wide variety of information technologies to understand problems and create solutions. Today, these technologies – from sensing devices to product scanners, telephone networks, fax machine, and computers of all kinds are permitting us to reshape our lives, job, businesses and the entire societies. To really satisfy the information needs of our numerous patrons; all libraries must key into the current revolution any trend of the new information age provided by information technology.

- With the emergence of the Internet, the world has been truly reduced to a global information village thus world-wide network, though designed to serve the information needs and interests of all facets of the society, has provided a great boost to library services worldwide. It is now well-known fact that internet connectivity fosters an unparalleled degree of communication, collaboration, resources sharing and information access.
- A fairly well developed information infrastructure, most especially electricity and telecommunication are required by modern information managers to effectively perform their duties. These basic infrastructures are poorly provided in African countries which are already taken for granted in the developed world. Despite the fact that internet connectively fosters an unparalleled degree of collaboration, information access, communication and resources sharing nonetheless Africa is still backward in the provision of adequate and reliable information.
- That notwithstanding, electronic publishing of some important journals and books on the internet has reduced the need to acquire physical materials by libraries. This has enhance efficiency of libraries with internet access to satisfy their users/patrons rather than those without internet facilities. Africa and the third world lose the benefit of making such electronically published works available to their user through journal and book subscription channel.
- Many stakeholders in the field of education, most especially parents and children are already accessing internet services at schools, work and expected from their libraries. It will be a viable resource for them as the library will be an extension of their home information systems. Finally, on this note, a sort of revival in the supply of energy (Electricity) is mandatory to improve productivity.

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