ACADEMIC 'INFORMATION TECHNOLOGY' LIBRARY: A DRIVER FOR GREEN TRANSFORMATION IN EDUCATIONAL AND NATIONAL DEVELOPMENT: CASE STUDY OF THE FEDERAL POLYTECHNIC ILARO LIBRARY

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Abstract

Technology impacts on academic libraries have a role in driving the destiny of this nation in the provision of information that inform leadership on pertinent issues. In contemporary time, the well-being of humanity and social equity is threatened as a result of the imbalance created by the economic system against the earth's capacity. An IT academic libraries has immense potentials to position itself as a driver of change in the strive for green transformation, educational and national development. This paper used the Federal Polytechnic Ilaro library to expound on the relevance of IT academic libraries to green transformation and national development. The library housed two hundred internet enabled systems and can accommodate four hundred users at once. The paper examined the Federal Polytechnic Ilaro library through the administration of questionnaire and simple random sampling method of analysis was used. The target population is 800 (eight hundred) library users, staff and students included. 350 questionnaires was distributed but only 330 were retrieved, the outcome indicated the immense contribution of library towards green transformation, educational development, among others. It is the finding of this study that, challenges such as improper funding of the academic libraries, ICTs, computer/information illiteracy, etc. have undermined the smooth running of the IT library. This study thus opined that the library should be adequately funded to enable necessary infrastructure for knowledge acquisition and provision of services. This, the paper concludes will promote green transformation, educational, and national development.

Keywords: IT, ICT, Academic Libraries, Green Transformation, National Development.

Introduction

The challenges and opportunities brought about by technological developments such as e-journals and broadband Internet Access in households with the added pressures from cuts to public services are well known. Many of these developments have called into question; what the roles of physical libraries are (or should be) in the twenty-first century. For example, the concept of the "library without walls" has been mooted whereby patrons can utilize the services of the library irrespective of the physical location, (Weiss 2004; Bilandzic & Johnson, 2013). The dire predictions of the death of the physical library has not come to pass. However, visits to public libraries have declined while visits to academic libraries have remained steady.

Computing technology, communication technology, and mass storage technology are some of the areas of continuous development that reshape the way academic libraries access, retrieve, store, manipulate, and disseminate information to users. Every day, new subjects and disciplines evolve as the world faces emerging new challenges. Those who record the knowledge, history and the changes that are taking place add new responsibilities on librarians and information repositories to adopt to the new paradigms. Not only in the way in which acquisition, organization and dissemination of information is done but also in the manipulation of the whole infrastructure, structures and skills in the new knowledge domains, (Achieng 2015).

With the paradigm shift in academic library services through the advent of Information and Communication Technology's (ICT), the role and position of libraries have dramatically changed. Etim (2004) cited in Okon (2005) observes that the rapid pace of development in the field of information technology and the advent of networked information services have prompted a comprehensive review of the Library and Information Sciences (LIS) profession.

The global trend is now characterized with a fundamental shift from traditional information environment to an e-environment, where emphasis is placed more on the acquisition of e-resources such as e-books, e-journals as well as online databases. However, traditional library and information services and functions are still relevant.

The present-day academic library services is focusing more on the area of digital, virtual or libraries without borders; all of which have transformed academic libraries and led to transition and transformation in the academic library environment. The transition and the transformation are accompanied with sophistication in the changing pattern in the information needs of users which is growing rapidly. Singh and Kaur (2009) observe that there is a paradigm shift from stand-alone libraries to library and information networks; from printed publications to digital documents; and from ownership to access. The transition according to them is as a result of the impact of ITs, the Internet and the web which is affecting all types of libraries.

The United Nations Development Programme Report (2004) placed Nigeria among the poorest nations of the world in terms of human development. How did they arrive at this result, one may ask? According to the report, one criteria used in the assessment is knowledge; i.e. the level of adult literacy. This translates that, Nigeria is the giant of Africa, only in name and not in human development. Countries like the United States of America, Britain, France, Japan, and Germany are leading the world today because of what they know that other nations do not know and not because of what they have. Therefore, in assessing the preparedness of Nigerian polytechnics libraries in adapting to the contemporary demands for IT oriented library, this study adopts the library of Federal Polytechnic Ilaro as the study area. The Library started operation since the inception of the school in 1979.The library formally took off with the recruitment of professional librarians, procurement of about 4,000 volumes

if books, 1,000 journal titles and provision for sitting accommodation for about one hundred readers. Presently, the library can conveniently sit four hundred users. The Information and Communication Technology (ICT) section of the library housed two hundred internet enabled computers; and the section has been functioning for over five years now. Based on this, the primary goals and objectives of the paper are stated below:

1. To investigate the Federal Polytechnic Ilaro library's involvement in providing relevant and timely educative information on green economy, educational, and national development.

2. To investigate the involvement of the Federal Polytechnic Ilaro library's in educating its immediate environment and how it promotes green transformation.

To achieve the objectives of this study, the following research questions were asked:

1. What are the roles of information technology oriented academic libraries in promoting green transformation in education and national development?

2. What are the challenges facing information technology oriented academic libraries in their attempt to promote green transformation in education and national development?

3. What are the possible solution to the challenges facing information technology oriented academic libraries in their attempt to promote green transformation in education and national development?

Educational Development via IT Oriented Academic Libraries

Effective use of IT in libraries increase efficiency in operations, eliminates repetitive nature of works, improves the quality and range of services, facilities easy and wider access to all kinds of information sources, facilitates faster information communication, increase moral and motivation of library staff, facilitates cooperation and resource sharing, save time, space, improves productivity and image of library, (Venkataramana 1998). The electronic resources that are available in libraries are an outcome of the advances in both computer technologies,

including information storage, delivery mechanism and software that provide user friendly interfaces. In most of the libraries in the western countries, Online Public Access Catalogues (OPAC) have almost replaced card catalogues. The OPAC offers enhanced search capabilities and ensures better access to collections of libraries. Many libraries also make provision for web interface, information system and direct links to electronic journals, books and internet resources, (Cholin 2005).

Education is the process of developing an individual physically, spiritually, socially, mentally, emotionally and orally for the well-being of the individual and that of the society in which he belongs. Ifidon and Ifidon (2007) define education as the process of training the mind, acquiring skills and developing a refined culture which prepare the citizenry to meet life challenges and teaches them how to solve problems. It is not mandatory that knowledge should be disseminated in the lecture room, it can be done anywhere, anytime, and through any means. Libraries ensures lifelong education by providing various information resources. They also support education by providing supplementary textbooks, reference materials and even non-print materials. With the age of technologies, a lot has changed in regards to academic library usage. Users tends to have more interest in deriving information and materials in soft form, easy and safe to carry around than going to the library every day in order to gain access to the required information and materials other areas of technological change for academic libraries include the use of mobile technologies and particular "smart" devices of different types, utilized by both students and faculty, such as iPads, Kindles, smartphones, or other mobile devices. In an information world of instant solvability of information problems with access to easy to use web search engines, social media and mobile technologies, and Wi-Fi access to the Internet, the expectation is that it is possible to find information for immediate use at anytime and anywhere with less need to be educated how to develop information skills and use quality-controlled information sources, (Wilder 2005).

IT Oriented Academic Library and Education for National Development

One of the key areas that information technologies have positively impacted national development through academic library is via the progressive growth of its citizens through timely and prompt educative information delivery. Academic library fosters self-education and stimulates education growth. All effective and qualitative education depend on the library for their teaching, learning, research, consultation and expansion of knowledge. Similarly, Edom (2007) stated that effective use of library is the bedrock of academic excellence. Thus, the library is the most important resource in the pursuit of the broad goals and objectives of any educational institution. On the other hand, education is the most sociological tool for national development in any nation. It is on this platform that the Federal Republic of Nigeria (FRN) in her National Policy on Education states that:

Education shall continue to be highly rated in the national development plans because education is the most important instrument of change; any fundamental change in the intellectual and social outlook of any society has to be preceded by an educational revolution, (FRN 2004).

Challenges Faced by IT Oriented Academic Libraries

Smooth sailing of information and communication technology in an academic library requires proper and efficient source of maintenance. However, several academic libraries in Nigeria are at a crossroads. This is because they are operating in an era of dwindling finances where resources (financial and materials) are not forthcoming. Nigerian academic libraries derive the greater part of their funds from the government (both Federal and State). Okiy (2005) notes that of all the different types of libraries in Nigeria, only university libraries have a clearly defined policy of funding because they are allocated 10% of the recurrent annual budget of their parent institutions. However, it is regrettable that such monies are not

forthcoming as most university administrators tend to flout that decision, (Okiy 2005; Yetunde 2008).

Providing current awareness services to an ICT driven target academic community requires dynamic, innovative, timely and adequate communication technologies, (Fatoki 2005). However, most academic libraries in Nigeria are severely constrained by a number of factors that includes erratic internet services, lack of hardware and software and in most instances the non-availability of ICT in most academic libraries. Other challenges faced in an academic library for efficient functionality of information and communication technology are:

- ❖ Digital and information divide

- ❖ Epileptic power supply at the library

- ❖ Computer /Information illiteracy

- ❖ Technological obsolescence

- ❖ Neglect of ICT resources

- ❖ Insufficient bandwidth

- ❖ Constant change of software and hardware

- ❖ Copyright and intellectual property rights management.

- ❖ Inadequate technical IT knowledge by library staffs

- ❖ Technological dependency as technology begets more technology.

Solutions to the Challenges Faced by IT Oriented Academic Libraries

In order to subdue the challenges discussed above and for Nigerian academic libraries to provide the desired information services to their respective communities, that will heighten the educational standard and thus positively impact national development, emphasis should shift towards the following:

- ❖ Academic libraries should explore more alternative sources of funding as over reliance on the government on monies that are not forthcoming may not provide the desired solutions.

- ❖ New initiatives are required in the form of consultancy services, marketing of information products as well as other income generating services.

- ❖ The need for the committees of polytechnic librarians, and their counterparts in universities and colleges to sensitize their respective institution's administrators on the central role of academic libraries in teaching, learning and research activities in academic communities.

- ❖ Improvement in ICTs such as the Internet, Intranet, hardware and software as well as Internet bandwidth.

- ❖ Availability of power supply at the library.

- ❖ More emphasis should be placed on the provision of online access and services such as OPAC, e-journals, e-books, and networked information services.

- ❖ Transformation of traditional libraries to digital libraries.

- ❖ Print on paper to digital information.

- ❖ Print journals to online or electronic journals.

- ❖ Improvement in ICT training for academic librarians.

Methodology

The research was carried out among the staff and students of the Federal Polytechnic, Ilaro. This research study is to measure the contributions of academic 'information technology' library towards green transformation, educational, and national development as perceived by the Federal Polytechnic, Ilaro Library users. The target population is 800 (eight hundred) library users, staff and students included. The study has a total sample of 330 from 350 questionnaires administered among 150 members of staff and 200 students. The samples

were randomly selected from the regular users of the Federal Polytechnic, Ilaro library. The advantage of a random sampling method is that the results can be analyzed staff-wise and student-wise, drawing certain conclusions from each category of respondents. Out of the 350 questionnaires distributed, 180 responses were received from the students (i.e. 90% of the total 200 questionnaires) and 140 responses from the staff (i.e. 93.3% of the total 150 questionnaires). Out of the 350 questionnaires that were distributed, 91.7% were retrieved for the analysis. Frequency tables and percentages are used to analyze the data retrieved.

Table 1: Frequency of individuals that responded to the question whether IT oriented academic libraries are drivers for green transformation, educational and national development.

Frequency	Total	Percentage
Yes to the Statement	300	90.9%
No to the Statement	30	9.1%
Total	330	100%

Information on Table 1 indicates that 90.9% of the sample acknowledged IT oriented academic libraries as drivers for green economy, educational, and national development while 9.1% users is against the notion. The statistical data (Table-1) has proved that IT oriented academic libraries are drivers for green economy, educational, and national development.

Table 2: Frequency of users in support that the, Federal Polytechnic Ilaro's library promotes education of their immediate environment and green transformation among others.

Frequency	Total	Percentage
Users in support	300	90.9%
Users against	30	9.1%
	330	100%

Table 2 shows that 90.9% of the users opined that the library, federal polytechnic Ilaro promotes education of their immediate environment and green transformation among others while 9.1% opined against the notion.

Table 3: Do the challenges identified below capture the problems facing the Information Technology Oriented Academic Libraries in promoting green transformation in education and national development?

S/N	Challenges Facing IT Oriented Academic Libraries	Not Sure		No		Yes	
1	Improper funding of the academic libraries for ICT	50	15.1%	30	9.1%	250	75.8%
2	Computer /Information illiteracy	50	15.1%	30	9.1%	250	75.8%
3	Digital and information divide	26	7.9%	46	13.9%	258	78.2%
4	Neglect of ICT resources	36	10.9%	30	9.1%	264	80%
5	Technological obsolescence	19	5.8%	39	11.8%	272	82.4%
6	Insufficient bandwidth	15	4.6%	35	10.6%	280	84.8%
7	Inadequate IT technical knowledge by library staffs	19	5.8%	31	9.4%	280	84.8%
8	Epileptic power supply at the library	20	6.1%	30	9.1%	280	84.8%

From Table 3, it is observed that the respondents perceived the same challenges as opined in this study. With challenges such as, improper funding of the academic libraries ICTs, computer /information illiteracy, digital and information divide and neglect of ICT resources having response rate of 75.8%, 75.8%, 78.2%, and 80% respectively. The other challenges include technological obsolescence, insufficient bandwidth, inadequate IT technical knowledge by library staff, epileptic power supply at the library having response rate of 82.4%, 84.8%, 84.8%, and 84.8% respectively. The high support rate indicates the need for immediate attention by the government and planning agencies/committees on allocation of funds and necessary aid to the academic library.

Table 4: Do the following enumerated points proffer solution to the challenges facing Information Technology Oriented Academic Libraries.

S/N	Solution to Challenges Facing IT Oriented Academic Libraries	Not Sure		No		Yes	
1	Academic libraries should explore more alternative sources of funding	15	4.6%	27	8.2%	288	87.3%
2	Improvement in ICTs such as the Internet, Intranet, hardware and software as well as Internet bandwidth	16	4.9%	30	9.1%	284	86.1%
3	Availability of power supply at the library	12	3.6%	26	7.9%	292	88.5%
4	More emphasis should be placed on the provision of online access and services such as OPAC, e-journals, etc.	13	3.9%	28	8.5%	289	87.6%
5	Transformation of traditional libraries to digital libraries	7	2.1%	25	7.6%	298	90.3%
6	Print on paper to digital information.	11	3.3%	31	9.4%	288	87.3%
7	Print journals to online or electronic journals	11	3.3%	29	8.8%	290	87.9%
8	Improvement in ICT training for academic librarians	11	3.3%	23	7%	296	89.7%

Table 4 indicates an absolute adoption of the enumerated solution towards solving the challenges facing information technology oriented academic libraries in the face of promoting green transformation in education and national development in Nigeria. The respondents opined that academic libraries should explore more alternative sources of funding, improvement in ICTs such as the internet, intranet, hardware and software as well as internet bandwidth. They called for availability of power supply in the library and also laid emphasis on prioritizing online OPAC, e-journal, e-books, and networked information services. Furthermore, transformation of traditional libraries to digital libraries, print on paper to digital information, print journals to online or electronic journals and improvement in ICT training for academic librarians received a massive supports from the respondents.

Findings and Conclusion

Through the overall assessment conducted in this study it our finding that, IT oriented academic library as drivers for green transformation in education and national development is moderate. This indicates a great need for improvement. Challenges such as improper funding of the academic libraries ICTs, computer/information illiteracy, technological obsolescence, insufficient bandwidth and inadequate IT technical knowledge by library staffs, epileptic power supply at the library among others are found to be the reasons, IT has not been properly functioning in the academic library. The discovered challenges tend to affect its contribution towards green transformation, educational and national development in Nigeria. It is however the conclusion of this study that academic libraries should explore more alternative sources of funding, improvement in ICTs such as the internet, intranet, hardware and software, internet bandwidth as well as laying emphasis on prioritizing online OPAC, e-journal, e-books and networked information services. The study also concludes that, transformation of traditional libraries to digital libraries, print on paper to digital information, print journals to online or electronic journals, and improvement in ICT training for academic librarians among others should be given serious consideration.

Recommendations

Digital revolution has dramatically changed the face of academic libraries and the paradigm shift have been of great impact on green transformation, educational, and national development in Nigeria. Nevertheless, some challenges bedeviling our academic libraries ICTs in the face of promoting green transformation, educational, and national development needs the following recommendations:

1. Government must realize the central role of academic libraries to educational and national development which requires provision of more funds for academic library development in the country.

2. Provision of stable power supply at the academic libraries in order to facilitates smooth running of the ICTs.

3. Provision of adequate IT equipment and other educational facilities in the academic libraries.

4. Training and Retraining of academic library staff on development concerning ITs.

5. Academic library should be made to acquire and store modern information technological resources while the librarian should master the art and science of the profession in their work environment.

6. There is necessity for more IT savvy librarians to be employed at Federal Polytechnic Ilaro library.

7. The internet connectivity at the library should be upgraded and given a proper facelift.

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