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USE OF DIGITAL FRONTIERS FOR LIBRARY AND INFORMATION COOPERATION AND CULTURAL INTEGRATION

BY

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Abstract

The study assesses the role of digital frontiers in library and information cooperation as well as cultural integration in the university libraries in South Eastern Nigeria. Using questionnaire instrument, data was collected from 64 librarians in six university libraries in South Eastern Nigeria. The study had two research questions. Data was analyzed using descriptive statistics. Findings showed that librarians in the zone appreciated ICTs as media for information and cultural integration. Suggestion was made to censor the programmes being fielded in the ICTs, especially in the Internet.

Introduction

The word digital refers to data, consisting of a series of discrete numeric values, (Guton, 1993). In this article, digital frontiers and ICTs are used interchangeably. ICTs can be applied in various ways to boost library cooperation. Some of the facets of ICTs include data information systems, data bases, internet, CD-ROM, online union catalogues, online journals and e-prints to name but a few. The involvement of some of the ICT facets in library cooperation could be fascinating. Library cooperation could be exemplified by the activities of International Federation of Library Association (IFLA)

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The International Federation of Library Association (IFLA) runs a programme for Universal Availability of Publications (UAP) such as Interlibrary Lending services (ILL). In this process, requested journals or articles could be scanned and sent to requesting libraries through e-mail services as attachments. Documents could be sent through fax also. Another area in which ICT is indispensable is in Twinning Database. This is an IFLA coinage. It could also be dubbed “dating agency for libraries”. It was set up to provide a focal point for libraries, which are interested in forming a twinning link with another library. Documents have been produced by UNESCO on how to establish and maintain a twinning relationship for libraries looking for a suitable partner. The database is maintained at Boston Spa and is funded by UNESCO with additional funding from Library Association in the United Kingdom (Gould and Watkins, 1998). Some of the reasons and benefits behind the desire to twin are ILL services, document exchange, staff exchanges and professional development (Gould and Watkins, 1998).

Another type of digital frontiers is the union catalogue. It can be physical or virtual but virtual union catalogue is our concern. However, whether virtual or physical its functions are generally seen as the collecting together of entries for the holdings of more than one library predominantly for the purpose of item location (Hartley and Booth, 2006). Other functions are the coordination of library resources and the provision of bibliographic information. Developments in distributed searching especially through the implementation of the Z39.50 standard have enabled the concept of the virtual union catalogues. According to Stubley *et al* (2001) as contained in Hartley and Booth (2006), a number of experimental virtual regional union catalogues or “clumps” have been set up. In realization of the auspicious role that ICT plays in library cooperation, the Nigerian Federal Government created the Nigerian Universities Network (NUNET) e-mail linkage and the Nigerian Virtual Library (NVL). With the latter, a researcher can obtain information on the topic and title of any research done in any Nigerian university, as well as the author, location, and type of publication. Linkage between researchers is also one of the benefits of NVL.

ICTs play vital role in cultural integration. Many libraries, all over the world, including museums and cultural associations have made their presence felt in IT-driven information environment through digitization. Interested members of the global village created by the new information order are busy savouring the resources made available in the global networks. Culture generally is not static but dynamic. This creates opportunity for cultural diffusion, assimilation and adaptation. Hale

(2000) says that the modern communication technology in general and the Internet in particular strongly affect the rate of cultural change in USA and the world in general. The Internet is a vital instrument to globalization. Globalization has itself affected the nature of nationalization and governments. It has imposed national and international culture on local culture and also regulated economies (Tucker *et al.*, 2002).

One of the most outstanding features of the digital revolution is its ability to convert textual, audio, video, sound, photographic and graphics to computer, readable and storable formats. By this means, it can capture cultural trait and disseminate same to millions of people at the same time. It makes it the more interesting and effective for assimilation. It enables combination of various information media in one carriage with all the colours and graphic designs. Archival and cultural artifacts of several countries that are already brittle and decaying can be digitally preserved and transmitted.

Nevertheless, despite these noble features of the new information technology frontiers, they also exhibit negative influences in the process of cultural integration. It gives room for manipulation, corruption, fraud and other forms of social malaise.

Research Questions

1. How do digital frontiers enhance information cooperation?
2. How do ICT bring about cultural integration?

Objectives of the Study

The study seeks to:

- (i) Identify the role of digital frontiers in information cooperation
- (ii) Identify the roles of ICTs in cultural integration.

Significance of the Study

The study is significant because it will reveal the roles of digital frontiers in information cooperation among library and information scientists globally as well as reveal the good, the bad and the ugly roles of ICT in cultural integration. The findings will ginger up library and information scientists, especially in developing countries to embrace digital frontiers enthusiastically. Exposition of the bad and ugly roles of ICT in cultural integration will appeal to the conscience of legislators worldwide to effect censorship in some programmes being fielded in some ICTs.

Scope of the Study

The scope of the study is Limited to Library and Information Scientists/ Librarians in Federal and State University Libraries in the South Eastern Zone of Nigeria. The chosen university libraries must have existed for at least five years and they include university library/libraries of:

- University of Nigeria, (Nsukka and Enugu Campuses)
- Nnamdi Azikiwe University, Awka
- Imo State University
- Enugu State University of Science and Technology
- Abia State University and
- Federal University of Technology Owerri.

Literature Review

ICT and Library Cooperation.

Online union catalogues play significant roles in library and information cooperation. EL Sherbini (2007) showed how Online Cataloguing Library Centre (OCLC) struggled to remain relevant in world information delivery and created the WorldCat. She chronicled how the WorldCat database was opened to Google and other search engines and how WorldCat latter offered to merge with Research Library Group (RLG), thereby championing the cause of ICT in library and information cooperation. In her survey on open WorldCat and its importance on Academic Libraries, involving 123 directors and deputy directors of Technology services of 123 Association of Research Libraries member institutions, El Sherbini (2007) discovered that 59.2% of the respondents indicated that they were contributing authority records to the Name Authority Cooperative Programme of the Library of Congress Cooperative Cataloguing Programme.

Omona and Ikoja-Odongo (2006) revealed that ICT has helped to foster healthy information and library cooperation in Uganda. He said that before now Albert Cook Medical library in Makerere University Medical School Uganda had fewer than 100 volumes of medical journals, which were being received through subscriptions, donations and exchanges. However, recently, the World Health Organization (WHO) through HINARI programme now provides free access to nearly 3000 journal titles online to the library. Rowley (1993) also ascribed resource sharing and interlibrary cooperation to some of the benefits derivable from ICT.

Digital frontiers do not only span and influence library and information cooperation, they also permeate cultural integration.

Digital Frontiers and Cultural Integration

Libraries all over the world including museums and cultural institutions have developed web pages. They spend time and money to digitize their resources to enable as many people as possible to have access to their collections. According to a 2002 report from the Research Libraries' Group in Bradley (2005).

*The development of national and increasingly,
international systems of digital repositories
that are or will soon be responsible for*

*long-term access to the world's social,
economic, cultural and intellectual
heritage in digital form...*(Bradley, 2005: 165)

Information processing, storage, retrieval and dissemination have improved all over the globe as a result of the invention of computer system, information and communication technology and the internet. In the course of the use of these information materials, people have cooperated, especially through the access given by libraries in availing their resources and linking their clientele to repositories in the internet. In so doing, the life-style of peoples' cultural identities, social structures and norms have been shared across the globe.

ICT provides libraries with tools and techniques for automated and intelligent processing of large data. Fjallbrant (1990) made an outline of the main features of these tools and techniques. These include: cheaper and speedier computer processing; cheaper storage; digitization of information; improved telecommunication for data transmission; increased reliability in hardware. Omekwu (2006) added that "the new information environment provides libraries of all types and archival institutions with limitless access to global information at the press of the keyboard or click of the botton". This becomes a veritable tool for library cooperation as they are linked in the internet and intranets.

These information materials have a way of affecting cultural values, because these value systems are dynamic and not static or rigid. Omekwu (2006) stated that as people come into contact with new cultural elements, they affect the culture and are affected by these new elements.

The modern means of dissemination of these cultural traits is through digital frontiers such as the Internet, CD-ROM, Audio Tape, E-mailing systems, web sites, online databases, and networks of cultural and professional Associations. Tucker *et al.*, (2002) was emphatic when they said that

The internet is one key development in the growth of globalization in the twentieth and twenty first centuries. Globalization has changed the nature of national governments, imposing national and international culture on local culture and promising to regulate economies. However it has also widened the gap between many nations and alienated those that do not abide by the new order.
(Tucker et al, 2002: www.Honolulu, 7-11 May)

Certainly the Internet offers the greatest opportunity for knowledge exchange in the world. As paper based information resources such as books, journals etc migrate to electronic formats, so are cultural materials and artifacts. Subsequently as more and more people listen or view these cultural items online, they are bound to be affected, one way or the other, by them. The opinion of Bassar in 1995, that as it becomes more and more convenient to view high quality representations of cultural objects on home computers, people are less likely to visit museums frequently, has become a reality (Bassar 1995). Cinema houses in Nigeria have gone out of business because of home videos, televisions and internet facilities.

In everything there is usually the good and the bad or ugly side of it. The internet which bears a bulk of cultural exchange has the positive and the negative aspects. A study by Omekwu (2003) shows distinctively the good and bad aspects of the internet and the digital revolution (Omekwu, 2003). He described the internet as a two-edged sword that can keep or kill. He went further to showcase the African rich cultural heritage and its impact factor in the Internet from a google search. The study reveals that, at the time of study, the web presence of: North Africa was 3,070,400; West Africa-3,139,000; Central Africa 1,573,340; South Africa-3,350,000; East Africa-2,262,000 and Oceanic-217,000. From this study the total quantum of African presence was 14,855,180. So, despite the fact that the individual Internet usage and institutional connectivity is low, the web presence of African Culture (arts, paintings, sculpture, dance, music, politics etc) was high, as far back as 2003. This is a good illustration that there exists digital presence of cultural

activities and programmes in the internet world wide. This statement is corroborated in the story told by Hale (2002) as described in Omekwu (2006) about how coca cola uses a variety of IT tools to export the America culture.

On the negative aspect of the Internet, it may be disheartening to learn that the all important digital frontiers have many ugly sides. There is a global concern for resources authenticity and integrity. Bradley (2005) carried out a study on this. Quoting Charles Rhyne's commentary on researchers' perspective on digital representation, he stressed that "for serious scholarship (including term papers, master's and doctoral theses being written at thousands of colleges and universities every year), digital materials will substitute for print materials only when it meets the same standards of accuracy and reliability", (Bradley 2005).

Saemus (2002) in one of his papers states that "when we work with digital objects, we want to know that they are what they purported to be and that they are complete and have not been altered or corrupted." He informed that digital objects are more easily altered and corrupted than, say, paper documents and records. Creators and preservers often find it challenging to demonstrate their authenticity.

Omekwu (2003) in his study recorded five bad potentials of the internet. These include: Fraud, Hacking, Access Right violation/Theft of information, spam or unsolicited commercial E-mail and computer viruses. Lloyd (1997) in Omekwu (2003) told the story of hacking in USA. Illustrating hacking, the writer says:

When, for example, the communication Decency Act, which sought to impose controls over content on internet sites, was being debated in the United States Legislature, hackers secured access to the Department of Justices' WWW pages and replaced the Department logo with a pornographic picture. (Omekwu, 2003:254)

The ugliest dimensions of the digital revolution include pornography, money laundering, cultism, international terrorism and child abuse. It is really disheartening to see young people in many universities and urban centres going almost nude in the name of dressing or fashion. Omekwu (2003) says that, "the influences of these cultures and lifestyles are so pervasive that no African country can claim to be unaffected. Thus, the modern digital frontiers possess resources for information

cooperation and cultural integration. These exist mostly in the web-based resources. The culture and lifestyle of the users can really be positive, but at the same time, there are very bad and ugly influences.

Methods

Survey research method was adopted for the study. Population of the study comprises all the library and information scientists/librarians in the libraries of the six universities. They numbered 78. No samples were taken.

Instrument For Data Collection

A questionnaire, which has four sections was used to elicit information from the respondents. Section A was on personal profile. Section B sought information on the role of digital frontiers in library and information cooperation that brings about cultural integration while section D. requested respondents to assess the influence of internet on various aspects to culture and indicate level of their agreement. Out of 78 copies of the questionnaire delivered to respondents, 64 completed and returned their copies of the questionnaire giving a return rate of 82.05%.

Data Analysis

For each item in section B, C and D (ii), the total weighted frequencies were used to determine the mean score. Items of the research questions with a mean score of 2.5 and above on the four-point Likert rating scale were accepted.

For each item in section D (i), frequencies and percentages were used to describe responses to items.

Results

Table 1: Assessment of the Role of Digital Frontiers in Library and Information Cooperation.

N=64

S/NO	ITEM	ITEM MEAN
1.	Internet	3.88
2.	The Intranet	3.2
3.	CD-ROM	2.24
4.	Audio Tapes	2.72
5.	E-mailing system	3.56
6.	Web sites	3.48
7.	Data Bases	3.32

8.	Online Union catalogues	3.4
9.	Web based theses and Dissertations	3.36
10.	Web based Abstracts	3.44
11.	Online library	3.28
12.	Online Journal	3.52
13.	Networks of professional Associations that are web based	3.32
14.	Online professional fora	2.84

From table 1, thirteen of the items, had means above 2.5 and were therefore accepted as media for information cooperation. Only item three, CD-ROM which had a mean of 2.24 was rejected. Internet had the highest mean, (3.88), while Audio tapes, item four had the least acceptable mean (2.72.)

Table 2: Item mean of Internet Facets that can bring About Cultural Integration. N=64

S/No.	Item	Item mean
1.	The internet can bring about cultural interaction	3.2
2.	Cultural networks exist in the internet	2.8
3.	Viewing the cultural networks in 2 (above) can Bring about cultural integration	2.48
4.	Cultural websites are available via the internet	2.96
5.	Viewing web sites in 4(above) can bring about cultural integration	2.68
6.	Viewing the internet cultural networks can Affect established cultural values positively.	3.32
7.	Viewing the internet cultural networks can affect established cultural values negatively.	2.8
8.	Viewing the internet cultural websites can negatively affect established cultural values.	2.96
9.	Viewing the internet cultural websites can positively affect established cultural values.	3.0

Eight of the ICT items in this table have means above 2.5 and are all acceptable. Item six has the highest mean, while item three which says “viewing the cultural networks in 2 above can bring about cultural integration” has the lowest mean of 2.48. Item three is therefore unaccepted.

Table 3: Frequency and Percentage of Influence of Internet on Various Aspects of Culture. N=64

s/no.	Item	Frequency	Percentage (%)
1.	Songs	56	87.50
2.	Dance	51	79.68
3.	Drama	59	92.18
4.	Dressing	59	92.18
5.	Language	38	59.37
6.	Housing	54	84.37
7.	Politics	56	87.50

8.	Personal profile behaviour	56	87.50
9.	Housing architecture	56	87.50
10	Arts: culture	51	79.68
11	Arts: painting	59	92.18

Three items (3, 4 and 11) have the highest frequency of 59 and a percentage of 92.18. Item 5 has the least frequency of (38) and the least percentage of (59.37).

Table 4: Item Mean of Internet Influence in Bringing about Cultural Integration through Culture Facets N=64

s/no.	Item	Item Mean
1.	Songs	3.08
2.	Dance	3.28
3.	Dressing	3.12
4.	Drama	3.20
5.	Language	2.96
6.	Housing	2.88
7.	Politics	3.0
8.	Personal profile behaviour	2.84
9.	Architecture	3.04
10.	Arts: culture	3.16
11.	Arts: Painting	3.28

The items (2, 11) have the highest mean of 3.28. Item 8 which, is personal profile behaviour, has the least mean of 2.84. All the items have means above 2.50 and all are acceptable as culture facets through which internet brings about cultural integration.

Discussion

From table 1, it could be inferred that library and information scientists/librarians in the South East of Nigeria have become ICT compliant. They are also aware that IT based items listed in table one provide medium for information cooperation. It could be that the benefits of CD-ROM are yet to be fully utilized. That made it garner a mean of 2.24.

Table 2 showed that eight of the nine ICT items are acceptable. Item six which says that viewing the internet cultural networks can positively affect established cultural values has the highest mean of 3.32. From this fact, it means that the positive effect of internet in cultural integration outweighs its negative effect. This is depicted in the difference between the mean scores (3.32; 2.80.) of items 6

and 7 respectively. Item seven states that “viewing internet cultural networks can negatively affect established cultural values. Item seven has a mean of 2.80.

Table 3 revealed the extent to which ICTs have brought about cultural integration through aspects of culture. Respondents gave the highest percentage (92.18) to Drama (item 3); Dressing (item 4) and Arts: painting (item 11). One might expect language (item 5) to be among the highest “percenters” in view of how various languages have been adopted, imbibed or modified through ICTs and cultural integration.

Table 4 projects Dance (mean: 3.28) and Arts: painting (mean: 3.28) as culture facets that have the highest mean. Item 3 which, is Dressing, has been subjected to the domineering Western influence, may not have been appreciated enough by respondents to warrant attracting a higher mean.

Conclusion

From the analysis of the findings it could be inferred that library and information scientists/librarians in the South East universities appreciate the fact that digital frontiers are a veritable instrument for information cooperation and cultural integration. Respondents to this study, attested to the latter (cultural integration) by identifying drama, dressing and Arts: painting in Table 3 as culture facets with highest frequency and percentage through which internet brings about cultural integration. Even though ICT items have negative and positive effects on established cultural values, respondents consented to the fact that positive effects outweigh the negative effects.

Recommendation

In the light of the findings of the study, it is suggested that:

1. Information and library scientists/librarians should be encouraged to use CD-ROM as well as enlist in online professional fora as media for information cooperation.
2. Legislators throughout the world should find a way of censoring the programmes being fielded in ICT media especially the internet.
3. ICTs should be provided in university libraries. This will make librarians appreciate their (ICTs) relevance in information cooperation network and cultural integration.

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