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Preservation of Cultural Heritage: The Strategic Role of the Library and Information Science Professionals in South East Nigeria

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Introduction

Efforts to preserve resources on cultural heritage have gained new momentum throughout the world nowadays. Protecting cultural heritage is economical, as well as historical and also a cultural process. While cultural heritage preservation has not yet become firmly rooted in the Nigerian consciousness as football is, a great number of people and organizations see cultural resources as critical to the nation's economic development through tourism. Cultural heritage is based on the aspects of our past that we cherish, want to keep and pass on to future generations and outside world. However, the economic benefits of preservation are secondary to the intrinsic value of that heritage which is being preserved.

As rightly observed by Sekler (2001),

“tangible cultural heritage has the great advantage over its intangible counterpart, such that with proper care it will remain authentic over centuries. As long as historic monuments remain without falsification and misleading imitations, they will, even in a neglected state, create a sense of continuity that is an essential part of cultural identity”.

Libraries, archives, and museums hold disparate collections in a variety of media, presenting a vast body of knowledge accumulated over the institutions' history, and the mission of these institutions is to make their collections accessible to intended users. Then the question, what are the roles of library and information science professionals in the preservation of cultural heritage becomes relevant here? Lynch (2002) described several roles that Librarians may play in digital libraries as digitizers of unique materials in special collections (a role also played by museums and archives). Librarians are providers of such services as “virtual reference,

preservation and indexing, and as managers and facilitators of scholarly communications, through their participation in establishing institutional repositories”.

Book and Vondracek (2006) highlighted several past involvements of libraries in the preservation of documents (reformatted or duplicated) to enhance access since medieval times when monks fastidiously transcribed documents by hand. They also indicated that libraries began massive newspaper microfilming and digitization projects to successfully reformat thousands of rare collections and crumbling newspapers as effective means of preserving print holdings. They further noted that digitization can also be the first step in conducting advanced research on historical materials and ancient documents present a prime candidate for digitization because of their historical imports, combined with century of exposure and degradation. Digi CULT (2003) concluded that “digitization contributes to the conservation and preservation of heritage and scientific resources, creates new educational opportunities, can be used to encourage tourism and it provides ways of improving access by the citizen to their patrimony”.

Also, in recent times, digitalization has played major parts in the preservation of precious materials. Making high quality images available electronically can reduce wear and tear of fragile items. According to Jones (2001), we live in an increasingly digital world. Hundreds of libraries, museums and archives have recently launched projects designed to digitize their collections and place them on the web. According to Stephen Ostrow cited by Jones (2001), this trend is both “auspicious and ominous for cultural heritage institutions”. The main reasons to digitize are to enhance assess and improve preservation. By digitalizing their collections, cultural heritage institutions can make information that was previously only available to a select group of researchers accessible to all. Digital projects allow users to search collections rapidly and comprehensively from anywhere at any time (Jones 2001).

One of the primary problems confronting library profession is lack of commitment by the available human resources, particularly, in the areas of information and communication technologies (ICTs) and preservation of resources on cultural heritage. The knowledge explosion brought about by the acceleration of scientific and technological progress is adding a new dimension to education, capacity building, amongst other essential human development endeavours. Librarians, irrespective of their levels in the professional hierarchy must possess the conceptual knowledge, skills and attitudes relevant to the performance of their jobs. Training refers to the manifestation of knowledge, skills and attitudes in a person which enables him to apply them in his work situation. In essence, education is to cause a permanent change in behaviour potential of the concerned individual and it is regarded as the key with which to unlock the stores of knowledge and for their use by the society. As a result of its importance for professional upliftment, libraries have often tried to inculcate some desirable professional orientations in their personnel through training.

Digitization can also be the first step for conducting advanced research on historical materials. Ancient documents present a prime candidate for digitization because of their historical import, combined with centuries of exposure and degradation habits in their arrangement. However, Oketunji (2001) observed that the library schools are inadequate in meeting the challenges of modern information technologies owing to lack of financial resources to procure the necessary equipment needed for the training of students. Similarly, Singh (2004) argued that skill in information Technology (IT) can be gained only when one gets hands on training and experience in laboratories under simulated conditions or in real life situations. The graduates and past graduates turned out by library schools do not possess adequate skill and expertise to interact confidently with IT specialists, evaluate what is recommended by their and full fall their requirements.

A study by Lee, Traurh, and Farwell (1995) has indicated “that inducting will demand a cadre of IT professionals with knowledge and skills in technology,

business operations, management, and integration and process re-engineering activities”.

This paper seeks to answer five questions. First, it looks into the forms of professional training received by librarians in Federal Universities in the South-east Nigeria as to ascertain their ability in meeting the accessibility and preservation of our cultural heritage. Second, it ascertains various formats of cultural heritage available in our institutions and environment. Third, it examines various traditional and electronic methods used by the studied libraries in preserving these rare cultural materials. Fourth, it identifies institutions involved in digitization of these materials, and fifth, the problems confronting these institutions in their efforts to provide access and preservation of cultural materials.

Literature Review

Preservation of cultural heritage resources have long been a challenge for libraries. Numerous articles discussing training of librarian on preservation role is now recognized as one of the major professional responsibilities of librarians. The most significant reason for this reorientation of attitudes is the way manner and rate our resources deteriorate. In addition, other studies have examined digitization of cultural heritage resources.

The review of literature of the study will be discussed under the following sub-headings:

- a. Cultural heritage resources
- b. Training of professional librarians
- c. Preservation of cultural heritage resources
- d. Digital Preservation

Cultural Heritage Resources

Culture is a term used by social scientists for a way of life. Every human society has a culture. Culture includes a society's arts, beliefs, customs, institutions, inventions, language, technology, and values. Culture produces similar behaviour and thought among most people in a particular society. This definition of culture is adopted by Linton (1945) who says: the culture of a society is the way of life of its members; the collection of ideas and habits which they learn; share and transmit from generation to generation (World Book Encyclopedia 2004) A people's cultural heritage, therefore, is their way of life and, in a broad sense, their traditional behaviour including the ideas, acts and artifacts which are passed on from one generation to another (Banjo, 1997).

The preservation of cultural heritage is central to protecting a sense of who we are, a meaningful reference in our culturally diverse world. However, Sekler (2001) states that

“there are many ways in which a cultural identity is formed and maintained. Much of the process has to do with the intangible cultural heritage of a body of traditions and usages, rites, poetry, song, and dance. A great deal of all these are passed on orally through generations. Consequently, its survival is always threatened...”

World Bank (2001) has warned that:

“Cultural matrixes contain elements of the human collective memory – language, beliefs and transmitted from generation to generation. Cultural references and signs are essential to the formation of national, group, and individual identities.”

UNESCO (1995) argued convincingly that the prevalent model of development based solely on the narrow yardstick of economic growth is outmoded... the report concluded that, above all, cultural diversity is here to stay. It is a manifestation of the limitless creativity of the human spirit. Its aesthetic value can unfold in multiple ways and stimulate the production and marketing of new and unique products.

UNESCO has been extremely active in identifying world heritage sites all over the world. These sites are considered to be important for the world's cultural or natural heritage.

The essence was to keep up-to-date and publish a world Heritage list of cultural and natural properties, submitted by member states and considered to be of universal value. Gregorain cited by Omekwu (2006) stressed that libraries contain the heritage of humanity; the record of its triumphs and failures, its intellectual, scientist and artistic achievements and its collective memory.

Training of Librarians

Ducker (2000) sees training as a systematic process of altering the behaviour and/or attitudes of employees in a direction to increase organizational goal. Librarians, irrespective of their levels in the hierarchy, must possess the conceptual. Similarity, Appleby (1991) reiterates that the purpose or objectives of any training programme should reflect the basic knowledge for the job which usually comes from education. He also noted that a good training programme should include skill and experience acquisition it should include development and conditions of attitudes and patterns of behaviour of employees.

Much writing on the state of professional librarian's training in most Third World Countries including Nigeria constitutes a library of woes, which can be a summarized as lack of equipment, poor funding, inadequate manpower. These are interlinked and are generally blamed on a variety of problems external to the library itself, such as lack of government policies supporting libraries, this of courses lead to poor services to our users. As rightly observed by Ogunseye (1984) "developing countries such as Nigeria" cannot afford the luxury of training passive librarians only. According to him, we need librarians who are also information specialists and information brokers.

As stressed by Oketunyi (2001); Singh (2004); Ekere and Ekere (2008), the graduates and postgraduates turned out by library schools do not possess adequate skills and expertise to interact confidently with Information Technology (IT) specialists, evaluate what is recommended by them and fulfill their requirements. Singh (2004) further opined that the developments in library and information curricula have serious implications for library and information science education. As a result, it has become imperative to incorporate appropriate components of Information Technology in LIS education if the profession intends to retain its identity. He further observed that few library schools have responded to this challenge by expanding teaching areas and including integration of computer applications into their information systems in order to prepare for the turning out of professionals that are capable of functioning in non-traditional settings.

Training has long been regarded as the bedrock of achieving quality productivity in any profession. However, Agidatum (2007) argued most convincingly that there are professional librarians in the university libraries in Nigeria whose knowledge of library automation has been rendered obsolete owing to lack of training and re-training courses, which development poses challenges to their coping with modern library practices. This unpleasant trend is inimical to the development of library automation in Nigerian university libraries.

Silver (1981) comes up with ten training techniques as follow:

1. on-the job training;

2. vestibule training;
3. classroom/lecture method;
4. case study, in-basket, case history method;
5. self-study;
6. electronic teaching media;
7. simulations, games and role playing;
8. T groups, encounter groups, and sensitivity training;
9. schools and outside seminars and workshops; and
10. Consultants and special training.

Similarly, Appleby (1991) identified the following as the basic primary methods of employee training: on-the-job-training, apprenticeship training, vestibule training and classroom training methods.

Preservation of Cultural Heritage Resources

Some articles have addressed the preservation of cultural heritage usually housed in Museum and Libraries. "Museum and libraries have a lot in common. Both types of institutions disseminate information and cultural heritage resources to the public and academic communities. Many museums have integrated libraries or research centres; and many libraries, particularly academic libraries, house archival collections and learning materials worthy of exhibition" (Riley-Huff).

Educating librarians about preservation is now widely recognized as an essential element of any plan to address the preservation problems. According to Harvey (1993), preservation education courses for library professionals are typically in one of three formats: as a part of compulsory course such as library administration in a first professional qualification; an optional course of about one semester; or a separate qualification, for example one or two-year courses in preservation administration. He further argued that it is also essential to offer continuing education opportunities in resources' preservation for those whose qualifications need updating or those who wish to build on their existing knowledge.

Feather (1996) has called attention to the proper handling of library materials by all of those involved as a sort of inexpensive measure by any library or archive to begin its programme of preservation, which can, at least, prevent damage to materials which would have been caused by simple ignorance. Similarly, Smith (1993) argued that proper shelving and storage are important factors in extending the life of all books. He also noted that oversize books - inordinately tall, wide, or thick - frequently have bindings that are weak in proportion to their size and weight. They cannot be stored safely on ordinary vertical shelves. Hence, they should be stored flat on broad, fixed shelves or roller shelves, with not more than three or four volumes resting on top of each other. Writing on library book, photocopying processes, Burdick (1993) also noted that "certain styles of copy machines help to minimize damage to bound materials. According to him, V-shaped cradle copiers that allow a volume to be copied while lying face up are not yet widely available, so the best solution is to use a machine that has a copy surface that extends to one outer edge of the machine". Also, Ogden (1993) wrote that traditionally, libraries and archives independently have undertaken activities to preserve their collections by providing proper housing, protection from mutilation and theft, library binding, and occasional repair and restoration.

Harvey (1993) goes on to describe strategies for preservation, which include: "clearly deterring priorities for preservation, relating preservation actions to institutional objectives, preferring methods which treat materials economic in bulk (such as mass decalcification) over those which apply only to single items, implementing the practices of preventative preservation rather than reliance on "after the event" intervention by conservation, recognizing the important role which education and training plays, and accepting that librarians cannot have the running to conservators but must take their preservation further into their own hands".

Ojo-Igbinoba (1993) in his writing on indigenous methods of preservation in Africa, stressed that apart from fungi, the libraries suffer inconveniences from termites, cockroaches, silverfish, firebrats, bookworms, book lice, moths, spiders, beetles, mud wasps and rodents. He goes further to state that most of the indigenous methods for combating fungal and insect attacks in the libraries were first formulated by expatriate librarians, and the formulations were based on mercuric chloride, phenol, "Ogogoros" (as alcohol) and methylamines sprays.

Digital Preservation

Digitization converts materials from formats that can be read by people (analog) to a format that can be read only by machines (digital), such as read-only scanner, digital cameras, planetary cameras and a number of other devices which can be used to digitize cultural heritage materials (Jones, 2001). The primary, and usually the most obvious, advantage of digitization is that it enables greater access to collections of all types. All manner of materials can be digitized and delivered in electronic formats and the focus of the contents that are selected for digitization varies across institutions (Hughes, 2004). Mulrenin and Geser (2001) concurs that the conversion into bits and bytes opens up a completely new dimension of reaching traditional and new audiences by providing access to cultural heritage resources in ways unimaginable a decade ago. Bradley (2005) argues that libraries, museums and other cultural institutions are committing increasing amounts of time and money to digitization in order to improve access to their collections.

In a plea for the development of digitization skills in existing staff, Jones (2001) maintained that:

Digital projects require new skills. Project planning should allow new technologies, even if an outside vendor completes a project or a new staff is hired specifically to work on a digital project, permanent. Staff should at least learn the basic theories and practices of digitization. Institutions often hire short-term staff for digitization projects which can result in the loss of digital expertise when the project ends.

A similar concern was shown by Mulrenin and Geser (2001) when they observed that cultural institutions should place high priority on their human resources development, set measures to speed up the transfer cum integration of knowledge into professional training and develop special courses for key areas such as digital management and preservation. Along similar lines, the National Initiative for a Networked Cultural Heritage (NINCH) in 2002 remarked that existing library and curatorial staff are rarely involved in digitization to any significant degree, except in digital photography and metadata creation.

Jones (2001) identified the benefits of digital access for collections as follows:

- Easy to be viewed from anywhere, at any time of the day.
- Can be readily printed from the web.
- Viewers can find what they are looking for quickly and independently.
- Save staff reference time by answering frequently asked questions on the web.
- Electronically enhanced images can be viewed with greater legibility.
- Increased use of collections and facilitated learning and scholarship.

The preservation benefits for collections include:

- Objects do not have to be reshelved or located by staff.
- Objects are not handled frequently thereby reducing wear and tear.

Methodology

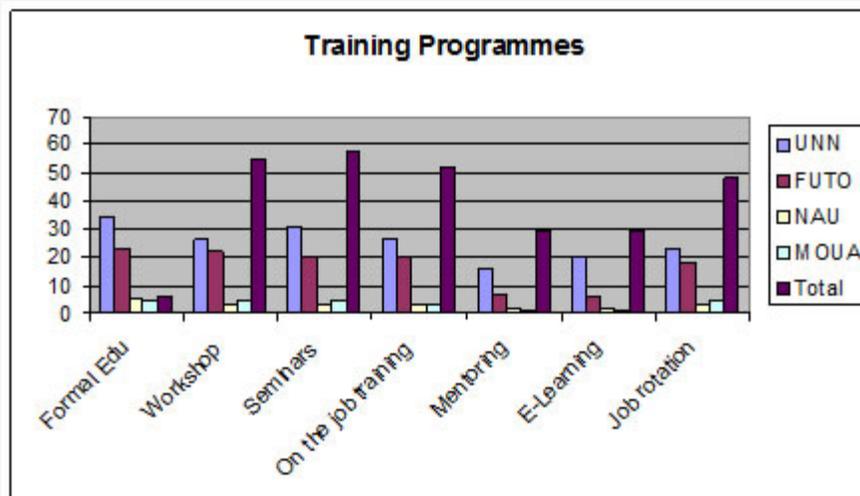
UNN	12	7	6	5	2	2	-
FUTO	6	10	2	-	1	3	1
NAUA	-	4	1	-	-	-	-
MOUA	2	-	-	1	1	-	-
Total	20	21	9	6	4	5	1

The librarians were asked to indicate the years they had worked as academic librarians. Table 2 indicated that 20 (30%) had been academic librarians for 1-5 years, with 21 others (32%) for 6-10 years, another 9 (14%) for 11-15 years, 6 (9%) for 16-20 years, 4 (6%) for 21-25 years, while 5 (8%) has worked for 26-30 years and only 1 (2%) has worked for 31 years and above.

Designation

Concerning the ranks of the participants, 16 (21%) were Assistant Librarians, 13 (22%), Librarians II, whereas 9 (15%) were Librarians I, 2 (5%) were Senior Librarians, 14 (24%) were Principal Librarians while 5 (8%) were Deputy University Librarians.

Fig. 1: Forms of Training Programmes Attended by the Participants



We wondered if the respondents are choosing training programmes opportunities that would help them on their professional duties. Overall, the whole participants, 100 percent (66) had formal education, 83 percent or 55 had attended workshop, similarly, 88 percent (58) indicated that they had attended seminars, whereas, 78 percent or 52 had participated in on the job training, 44 percent or 29 of the respondents had mentoring from their senior colleagues with 44 percent or 29 being trained through e-learning and job rotation at 72 percent or 48.

When asked the type of sponsorship they got for the training programme, the overwhelming majority of 79 percent (52) indicated that they were sponsored by the university, 73 percent (48) replied that they were self-sponsored. 7 respondents (7percent) indicated that they were sponsored by the non-governmental bodies. The next questions asked the participants were to indicate how satisfied they were with the trainings they received. Only 28 percent (19) were "very satisfied", more than half of the respondents, 53 percent (35) opined that

they were 'satisfied', 17 percent (11) of the respondents indicated "not satisfied" while none indicated 'undecided'.

We also explored the training programme that has tremendous impact on their knowledge of preservation of library materials. On workshop, 28 percent (18) indicated "strongly agree", 45 percent (24) showed "agree" while 18 percent (12) showed "Disagree" while only 9 percent (6) opted for "strongly disagree". With regards to seminars, 27 percent (15) indicated "strongly agree", 45 percent opted for "agree", while 9 percent (5) showed 'disagree', 13 percent (7) indicated "strongly disagree". With regard to the issue of e-learning, 17 percent (8) says "strongly agreed", 40 percent (19) indicated "agree". 36 percent indicated "disagree" and only 6 percent (3) says "strongly disagree".

When asked to evaluate the impact the training had on their job, 49 percent (21) indicated "strongly agree", more than half 58 percent (25) opted for "agree" 14 percent (6) indicated for 'disagree'; only 2 percent (1) of the respondents indicated 'strongly agree". On formal education, 54 percent (32) of the respondents opted for "strongly agree", 37 percent (22) responded "agree", and 7 percent (4) of the respondents indicated "disagree" only 2 percent (1) opted for "strongly agree".

On the issue of cultural heritage available in the research institutions, artifacts attracted the highest percentage of 42; this is closely followed by images from books (39 percent), songs (35 percent) and photographic slides. Some have more than one as their cultural heritage that is why it is more than 100%.

The respondents were invited to select methods they use in preserving their library resources.

Table 3: Methods used in preserving library resources

Preservation methods	Very often	Often	Occasionally	Never
Binding of loose sheets	63%	25.9%	9.5%	1.6%
Microfilming	2.5%	17.5%	25%	55%
Photocopying	41.9%	35%	19%	4.1%
Deacidification	5%	12.8%	18%	64%
Digitization	20%	38.7%	26.5%	14%

With regards to preservation methods used, table 3 reveals that 63 percent indicated that they use loose sheets "very often", 26 percent (16) indicated "often", while 10 percent opted for occasional and only 2 percent indicated "never". On the use of microfilming, 3 percent (1) indicated 'very often', 18 percent (7) says 'often', 25 percent (10) opted for occasional which the majority of 55 percent (22) indicated 'never". On use of photocopying as preservation method, 42 percent (26) indicated that they use photocopying for preservation of cultural heritage very often. 20 percent () indicated 'often', 10 percent (6) says 'occasional' while only 2 percent (1) opted for 'never' on the use of de-acidification only 5 percent (2) indicated 'very often', 13 percent (5) says 'often" while 18 percent (7) opted for 'occasional', majority of the respondents 65 percent (25) says "never". On digitization of library resources, 20 percent opted for "very often", while 39 percent (19) indicated "often", 27 percent (13) opted for 'occasional', while only 14 percent says "never" (7).

When asked if their institutions have started digitization of their cultural heritage

resources, only two out of the four university libraries studied have started. They are University of Nigeria Nsukka and Federal University of Technology, Owerri, while the other two Michael Okpara University of Agriculture Umudike and Nnamdi Azikiwe University Awka are yet to start. Respondents' answer to the question on materials digitized in UNN includes crafts, images from books, artifacts, photographic slides, theses and other research works. On the other hand FUTO had only digitized images from books, theses and other research works. With regards to effectiveness of the digitization process in the affected institutions, 41 percent (13) reported very effective, 53 percent (17) indicated effective, only 6 percent (2) opted for not effective in UNN. While in FUTO, 31 percent (4) indicated 'very effective' and 69 percent (9) indicated "effective".

Table 4: Constraints in Digitization/Preservation

Constraints in Digitization/Preservation	Strongly Agree	Agree	Disagree	Strongly Disagree
Cost of digitization	34	19	12	1
Inadequate infrastructure facilities	37	27	2	-
Trained manpower	23	34	6	3
Non-existence of software	9	6	22	38
Harsh environmental condition	5	14	21	26

To better understand the constraints in digitization as a means of preservation vis-à-vis experiences by these institutions, several statements were proposed and the respondents' options were recorded. As shown in table 4, thirty four (34) respondents chose "strongly agree" on cost of digitization. On inadequate infrastructure facilities, thirty seven (37) respondents indicated "Strongly Agree". On trained manpower, thirty four (34) respondents indicated "Agree". With regard to the option on non –existence of software, the majority (38) of them said 'strongly disagree'. On harsh environmental conditions" twenty six (26) indicated "Strongly Disagree".

On how the situation could be improved, 75 percent (44) opted for "strongly agree", and 25 percent (14) opted for "agree", for training of librarians, provision of adequate digitization infrastructure attracted 70 percent (40) which indicated "strongly agree" 30 percent (17) opted for 'agree". On the issue of adequate funding 80 percent (45) choose "strongly agree", while only 20 percent (11) says "agree". Next is on proper handling of library materials, the majority of the respondents, 58 percent (33) indicated "strongly agree", with only 42 percent (24) opted for "agree". On ensuring favorable environmental condition, 60 percent (33) opted for "strongly agree", 36 percent (20) indicated "agree", while only 4 percent (2) indicated "disagree". On the provision of large bandwidth to ensure network connectivity, 62 percent (32) indicated "strongly agree" and 38 percent (20) opted for "agree".

Discussion

The use of mentoring and e-learning to develop library staff remains unpopular and not significant, as only 29 out of 66 respondents opted for them. Formal education, workshop and seminar seem to be popular among the listed options. This may be attributed to the fact that most of these are in-house. According to Ajidahun (2007), this latter outcome is because university libraries cannot afford to release

their staff to go back to school, either for part- or full-time studies.

Thus, it is cheaper to allow library staff to attend these training in-house. Training is unlikely to be effective as long as the personnel policies and systems of the university do not support the activity. For example, if training is not integrated with the career development plans of librarians and systems for performance evaluation, it is unlikely that "effective demand" for training will be created. The reluctance of the government to sponsor people for training and the lack of motivation on the part of librarians to take advantage of training opportunities could largely be attributed to the reasons for paucity of continuing professional development activities among librarians. The analysis indicated that most of the respondents were satisfied with the progress made at the training. Also, the result indicated that the impacts made on the trainees were enormous. These were most felt at the workshops and were closely followed by formal education and then seminars.

From the analysis, the cultural heritage resources available in some of the studied institutions include: songs, crafts, moral, historical sites, artifacts, works of arts and cultural, archaeological sites, photographic slides, folklore, and images from books. Of all the preservation methods previously listed in table 3, binding of loose sheets seems to be mostly used. This is closely followed by photocopying and the least was microfilming. As rightly observed by Milevski and Nainis (1993), book repair is a preventive maintenance activity. It anticipates potential damage to library materials and it provides corrective treatments to protect them from deterioration in the future, photocopying seems also to be very popular among libraries.

Important rare materials are photocopies by libraries as a form extending the life span of such materials. One of the reasons libraries photocopy is economic-based. Most materials are so scarce and expensive that not all libraries can afford to buy them, therefore, photocopying to save cost.

Digitization seems not to be too popular in these libraries. This may be attributed to cost of digitization. Developing a digital surrogate of a rare or fragile original object can provide access to users while preventing the original from damage, handling or display. This was the motivation behind the digitization of many priceless artifacts, most famously the Beowulf manuscript at the British library which is too fragile for use or consultation by scholars without special permission. As noted earlier two of the studied institutions are not yet into digitization. Works being digitized by FUTO and UNN include crafts, images from books, artifacts, photographic slides, thesis and research works.

The two institutions involved in digitization reported that the methods they used are effective. According to Hughes (2004: 228), it is important to recognize that there is no best approach and indeed no best camera or scanner for image digitization. No single device can accommodate the wide range of physical formats in library, archives and museums collections because the dexterity of the camera or expertise of the scanner operator varies considerably and more so that handling guidelines, image quality requirements, budgets and time tables are project specific.

In order to ameliorate the constraints in digitization, inadequate infrastructure, manpower shortfall and non-existence of software, respondents recommended amongst others, training of librarians on methods of digitization of cultural heritage resources, provision of adequate infrastructures, adequate funding and ensuring favourable environmental conditions.

Conclusion

There is no doubt that preservation of Nigeria's cultural heritage resources is very important to the development of the various cultures. It is a witness of where we have come from and where we are. was rightly stated by Williams (2001),

“preservation of cultural heritage resources is essential to sustainable development. It recognizes the importance of cultural continuity and of human history in nourishing social cohesion, a sense of self, of belonging, and of place in a context within which to understand the past and to contemplate the future”. This task underscores the required capacity building in preservation techniques and commitment of librarians to preserve the various cultural heritage resources in their custodies.

Recommendations

1 Training of Librarians - With the sporadic changes in the information network, it is absolutely imperative that continuing professional development of librarians should be given priority. Since these librarians serve divergent needs of users in their respective libraries, it is important that these professionals should be conversant with how to preserve and access relevant information. So management should consider this important function of developing their personnel to ensure effective service delivery.

2 Provision of infrastructure - Every organization stands on three pillars of capital, human and material resources to support its functions. For the library to develop properly they need not only human but also material resources such as infrastructure which will help the library to carry out its operations. For instance, librarians need to be trained on digitization of library materials; for the training to be effective, the necessary facilities for effective learning should be available. Also when the training has been completed, they need these skill enhancing facilities to work with for permanence of the knowledge and skills acquired during the learning process.

3 Adequate funding - for the effective functioning of the library, adequate fund is needed especially to get the best out from the two other factors (human and material resources). Where adequate fund is provided, training of librarians and equipping of the library will be effectively achieved and this will enhance the whole process of digitization of library materials.

4 Environmental conditions constitute a lot to the preservation of library resources. Both harsh and humid weather adversely affects library materials. To ensure the preservation of the cultural heritage resources, they should be stored in air-conditioned rooms with moderate the temperature and electric fans to avoid hotness of the environment.

5 Provision of internet infrastructure with large bandwidth to ensure adequate network connectivity.

6 Integrating heritage resources in contextual community development by building in incentives for the local population to protect the heritage.

References

Ajidahun, C.O. (2007). The training, development and education of library manpower in information technology in university libraries in Nigeria. *World Libraries* 17 (1).

Appleby, P.C. (1991). *Modern business administration*. London: Pitman.

Boock, M., & Vondracek, R. (2006). Organising for digitization: A survey. *Portal: Libraries and the Academy* 6(2): 197-217.

Cortez, E.M., Dutta, S.K., & Kazlauskas, E.J. (2004). What library and information professionals can learn from the information technology and project management knowledge areas. *Portal: Libraries and the Academy* 4 (1): 131-144.

DigiCULT (2003) Europe: Creating cooperation for digitization. Available: www.cordis.lu/ist/ka3/digicult/eeurope-overview.htm

Ekere, F.C., & Ekere, J. (2008). Contemporary challenges facing library and information science professions in Nigeria. In Nworgu, B.G. (Ed.). *Global challenge and enhancement strategies*. Proceeding from first International Conference of the Faculty of Education, University of Nigeria, Nsukka, held from 17th-21st June.

Feather, J. (1989). Preservation and conservation: A professional issue for the 1990s. *New Zealand Libraries* 46 (2&3): 17-25.

Harvey, R. (1996). *Preservation in libraries: A reader*. Topics in Library and Information Studies. London: Bowker.

Harvey, R. (1997). The preservation of electronic records. In Gorman, G.E., & Milles, R.H. (Eds.) *Collection management for the 21st century: A handbook for librarians*. London: The Greenwood Library Management Collection.

Hughes, L. (2004). *Digitization of collections: Strategic issues for the information manager*. London: Facet Publishing.

Jones, T. (2001). An introduction to digital projects for libraries, museums, & archives (<http://images.library.uiuc.edu/resources/introduction.htm>)

Lee, D.M.S, Trauth, E.M., & Farwell, D. (1995). Critical skills and knowledge requirement of information science professionals: A joint academic/industry investigation. *MIS Library Quarterly* 19, 313-340.

Linton, R. (1945). Present world conditions in cultural perspective. In Linton, R. (Ed.). *The science of man in world crisis*. New York: Columbia University Press.

Mulrenin, A., & Geser, G. (2001). *The DigiCULT Report: Technological landscapes for tomorrow's cultural economy: Unlocking the value of cultural heritage*. Salzburg Research, on behalf of the European Commission.

NINCH (National Initiative for a Networked Cultural Heritage) (2002). *The WINCH GUIDE to good practice in the digital representation and management of cultural heritage materials*.

Ogden, S. (Ed.) (1994). *Preservation of library & archival materials: A manual*. Northeast Document Conservation Centre.

Ogunseye, F.A (1984). 21 years of library service: Keynote Address; *Nigerian Libraries* 20: 1-14.

Ojo-Igbinoba, M.E. (1993). The practice of conservation of library materials in Sub-Saharan Africa. Indiana: Africa Studies Program, Indiana University.

Oketunji, I. (2001). Education of librarians in an electronically oriented society. Paper presented at the Cataloguing, Classification & Indexing Section of the Nigerian Library Association Seminar/Workshop on Software Choice Parameters for Cataloguing in Nigerian Libraries held in Akure, Ondo, 22-27 October.

Omekwu, C.O. (2006). African culture and libraries: the information technology challenge. *The Electronic Library* 24 (2).243-264.

Riley-Huff, D. A (2009). Design insights and inspiration from the Tate: What museum Web sites can offer us. *Portal: Libraries & Academy* 9(1) 79-98.

Sekler, E. (2001). Sacred spaces and the search for authenticity in the Kathmandu Valley. In Serageldu, I., Shluger, E., & Martin-Brown, J. (Eds). *Historic cities and sacred sites: Cultural roots for urban futures*. Washington DC: The World Bank.

Silver, G.A. (1981). *Introduction to management*. St. Paul: MN: West Publishing.

Singh, R. (2004). Restructuring library and information science curriculum. LIS Education in India.

Smith, M.A. (1987). Care & handling of bound materials. In Preservation of Library Materials. Conference Library held at the National Library of Austria, Vienna, April 7th-10th, 1986 (ed) merrily Smith, *IFLA Publications 40-41* (2): 45-53.

UNESCO (1995). *Our cultural diversity*. World Commission on Culture and Development. Paris: UNESCO.

Williams, H. (2001). Historic cities: The sense of place, sacred and secular. In Serageldu, I., Shluger, E., & Martin-Brown, J. (Eds). *Historic cities and sacred sites: Cultural roots for urban futures*. Washington DC: The World Bank.

World Bank (2001) Historic Cities and Scared sites: Cultural Roots for Urban Futures. Washington DC: World Bank.

World BOOK Encyclopedia (2004). Culture Chicago: World BOOK inc. p.1186