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Kelesto Gaone Setlhabi

DIGITIZATION CHALLENGES: WHAT CAN WE LEARN?

Keletso Gaone Setlhabi
History Department (Student)
University of Botswana
Private Bag UB 00703
Gaborone
Botswana
setlhabik@mopipi.ub.bw
http://www.ub.bw

Abstract

New technologies have transformed information storage and retrieval procedures in museums. The challenge for heritage practitioners is not only to use collections information for internal management, but it is also to avail it to their users through public spaces such as exhibition halls, World Wide Web and public programs. Museum information specialists have emphasised the need to adopt and implement electronic systems that are in line with the collections management mandate of their museums because the rationale is not for change but for enhancement. An analysis of the Ethnology division documentation system at the Botswana National Museum (BNM) revealed how the problem of insufficient collections information was transferred from the manual to the digitized system. Such an example calls for more research on collections prior and post museum acquisition and parallel to computerization. This paper proposes the following solutions to such problems. Firstly, that as with other museum functions, clear digitization procedures must be formulated, adopted and documented to guide the staff in their work. It should be possible to enable the collections staff to address the same challenges as in manual systems. The practice in museums with funding problems has been to accept donated digitized systems without sufficient needs analysis of their current documentation structures that would serve as a base for better preparation for electronic systems. This as in the case of BNM, results in more orientation on implementing new technologies than dealing with existing documentation problems. The second proposal is that in their quest to adopt new technologies, museums especially in developing countries, must still seek to be relevant to their communities. It is crucial for heritage management institutions to ensure that modern cultural preservation and presentation tools do not create barriers. Museums must still be

able to use relevant information dissemination methods with their communities even amidst high demand for new technologies. The conclusion is that new technologies should be implemented after pre-digitization evaluation and local communities' needs assessment processes.

INTRODUCTION

Human presence and 'things' coexist and Pearce argues that these are a compulsory social entity in human lives (Pearce 1992). Their different synonyms are objects, artefacts, specimen, goods or material culture and a part of them has been collected by museums due to a number of reasons such as significance (Pearce 1992). Collections management procedures are mainly applied to an object in its museum phase of its life cycle. Its curation includes registration, preservation, storage and use in museum functions such as exhibitions and research (Robert 1995). For these to be possible, proper documentation is necessary and as Morris (2005) argues, the rationale for documentation is that museums should know what they hold in their collections for their benefit, collections care and the public. Documentation of collections is part of collections management (Roberts 1988), and digitization has been adopted by museums to better their collections management (Chenhall & Vance 1988).

This paper is part of my on-going graduate studies research titled 'Documentation of Material Culture in Botswana, The case of the Ethnology Division of the Botswana National Museum'. The research problem is threefold and this paper will partially focus on its first part, the information gaps in the collection records. The information on the Ethnology division records is mainly descriptive and administrative and it includes object attributes such as name, classification, material, colours, size, and administrative data such as identification number, cataloguers' details and storage. This type of information is best for museum inventories but lacks informative aspects that are vital for research, interpretation and presentation. My hypothesis is that the object and record collection methodologies used in museum collection development influence the data outputs.

I also argue that the significance and the cultural context of an object must be documented with an object in order give the broader cultural context of that object.

The second identified problem is the collection classification system used both at discipline and division levels and the last one is the separation of the tangible and intangible attributes of objects. The latter refers to the in-depth meanings of the objects in their cultural context including the technologies used in their production, which is often not collected and documented by museums (Pearce 1992). It also encompasses the stories, oral traditions, tales, songs poems and other form of intangible attributes related to the object as described by the 2003 UNESCO Convention for the safeguarding of the intangible cultural heritage.

The systematic documentation of collections at BNM began in the early 1990's through the SIDA (Swedish International Development Agency) partnership. As it has been in museum practice (Baron 1991), the process began with a review and adoption of a manual system that was followed by digitizing records. Sarassan & Neuner (1983) caution museum curators against the belief that computerization of records solves problems and emphasizes that it only serves its purpose if there is a good documentations system in place. It is important to adopt a collections management system that is in line with the institution's documentation system. The Ethnology Division has up-to-date computerized half of its collection and the information gaps in the digital system are the same as in manual records. This means that while the advantages of digitization such as speedy record retrieval (Quigley 1998) yield results, this information is insufficient for other museum programs.

The data entry procedure began after the identification, purchase and installation of the electronic system. There were no clear procedures during implementation and the important goal was speeding up the course. While the contribution of SIDA is appreciated as it managed to provide funds and expertise, the results of a haphazard computerized implementation were unforeseen. Good documentation as with other

collections management activities requires the adoption of policies and procedures (Raikes 1996).

A possible link between the lack of an adopted collections management policy in the museum and system implementation without guidelines might have influenced this course of action but it could have been possible to begin this phase with formal guidance. The broader negative impact of donor agencies of funding projects without full internal knowledge of beneficiary working systems was practiced (Lancester 1999). The 1990's also saw a period of digitization growth in museums and bodies such as International Council of Museums' Committee for Documentation (CIDOC) encouraged museums to adopt this trend (Chieze 1994). BNM like other museums in developing countries also adopted this important development. The mistake these latter museums did was the lack of needs analysis and overlooking the fact that the donor agencies always use institutions and professionals whose countries are more developed than those they are assisting (Lancaster 1999).

The hasty implementation of the digital system left little room for training and after almost 10 years of digitization at BNM, only a few collections staff has mastered the system. This is a challenge because computerization has been slowed. The project was implemented in the mid 1990's and as mentioned earlier, half of the collection in the Ethnology Division has not been digitized. One solution could be in-depth training of all collection staff because initially only a few were trained to administer and support the databases. The other possible reason for the slow progress is the lack of dedicated data entry personnel. The collections staff is also expected to computerize records in combination with other collections tasks such as acquisition, object storage management, loans and research. The undocumented data entry procedures also add onto the above existing challenges, as it takes longer for new users to adapt to the system on their own.

Lack of local expertise in museum documentation systems has also contributed to the training challenge. While collection staff is knowledgeable in various collections

management activities, those with expertise in digital systems are very few and this has resulted in outsourcing such expertise.

Another limitation of the museum DBMS is that it is not a collections management system because it does not incorporate other museum functions such as object tracking, loans, exhibitions and research. These and other related functions are documented on external databases. There are several problems caused by storing information on databases that are not integrated. Firstly, an object movement cannot be centrally tracked and managed and all its records have to be updated separately. The repeated updates in different databases can result in inaccurate data (Orna & Pettitt 1998). Other entities such as persons and localities are also affected and the whole data entry and update mechanisms become long and untidy. Baron argues that this type of system is basically like the original paper system because of the disjointed records (Baron 1991). Another challenge on the system is minimal terminology control because most fields except numerical and derived ones allow entry and storage of any data format. Control measures should be set to reduce human error and these can be in the form of in-built choice fields and data dictionaries (Sarassan & Neuner 1983).

The last weakness at BNM that this study seeks to advance is the exclusion of intangible attributes of material culture in the DBMS. Kollars (1991) states that even though taken away from their original contexts into a museum, artefacts must still be associated with their original roles. This is why they must be documented with their living culture. A cited example is a *Bojale* (initiation) drum at the Phuthadikobo museum that was used in the 1990 *Bojale* ceremony instructions. This drum is the only one of its kind that was carried by Bakgatla into Botswana during their migration from South Africa in 1869 (Kollars 1991). This is an example of how objects can be used in some cultural events.

A ‘digital divide’ between museums and their communities in developing countries is a growing unwanted trend and this can be seen as an example of not prioritizing community needs. While digitization of records and the use of other new technologies

such as Internet are being fully adopted by these museums, their audiences have either limited or no access.

This results in a risk of miscommunication between the two because from my observation, museums have to keep up with the new trends for networking purposes and in the process put less effort in the traditional communication media. For example, in Botswana, Internet access in rural areas is very minimal and costly where it is available and the communities in these areas cannot benefit from the on-line collections management systems or other digital programs.

Despite the above-mentioned challenges, the following strengths need to be appreciated. BNM system was developed by museologists and this is a preferred practice because their dual role as museum professionals and system developers minimizes errors and the need for more customization. A growing trend in museum documentation has been to equip internal professionals such as Registrars with DBMS development skills in order to enable them customize and even be part of development (Buck and Gilmore 1998). AFRICOM standards have been adopted and this facilitates exchange of data with African Museums because of information format and reference uniformity (Stiff & Holm 2001).

RECOMMENDATIONS

Roberts (1995) emphasizes the value of planning for museum documentation and argues that like other museum functions, documentation must be planned for and not done haphazardly. Through the documentation needs analysis, existing problems such as information gaps could have been identified and a more fitting digital realization process could have been followed. For example, where artefacts lack substantial information, it is best to digitize records in inventory forms to store data such as identification number, material and storage codes. In such cases, full digital catalogues could be implemented at a latter stage after addressing some of the manual documentation problems.

Informed decisions that will assist collection curators to address the information gaps, exclusion of intangible attributes of artefacts and training must be made.

Solutions such as sampling a part of the collection and enriching it through further information collection and research could be tried.

Another approach could be of in-depth information collection of each record where possible instead of digitizing the whole collection and then reverting back to research, as it is not practical to estimate the completion time frame. This paper also recommends a collections management system that will integrate all collections functions and pre-museum acquisition, curation, use and exit stages of an object (Roberts 1995).

Museums must endeavor to put the needs of communities first before their own even in digitization. Due to limited Internet connectivity and digital technologies, the museum public programs and collections must still be availed through conventional methods such as outreach programs and mobile museum[1]. BNM still needs to reach out to these communities through non-digital methods and must try to balance the links between these and networking with other museums. The possibility of such a balance should also be assessed because of limited human and financial resources. A worst- case scenario that should be avoided is where in their effort to balance communication, museums end up neglecting both their communities and professional networks.

CONCLUSION

Museologists must address the challenges of digitization in order to fully reap its benefits. It can be concluded that even though first world countries have also experienced the same challenges, those in developing ones tend to be of a higher magnitude because of lack of financial and manpower resources that lead to outsourcing of funding, expertise and

[1] BNM will re-launch its mobile museum program this year.

systems. It is hoped that BNM and other museums in similar positions can review their digitization processes in order to maximize digital rewards. Museum collections are owned by local communities and it is vital that the move towards new technologies is not allowed to become a barrier between the two.

A balance is necessary because museums can still be able to adopt and use new systems and on the other hand continue with relevant and practical media for their communities. Such a course becomes a bridge instead of a divide.

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