

# *Education Collections as Museum Collections*

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**abstract** Museum education collections are inarguably a part of a museum's actual collection, just as are the research/permanent collections. However, past practices indicate that education collections are typically not given equal stature in museological terms. This paper argues that techniques and practices used with research/permanent collections should be applied to education collections, a viewpoint that has not yet been readily embraced. Several methods are addressed for upgrading an education collection to the level of a museum's permanent collection. The Lubbock Lake Landmark's education collection serves as a case study to demonstrate the need for the application of proper museological techniques to conform to best practices. A scope of collection was created, preventive conservation techniques were applied, a gap analysis was performed, and legal issues concerning the education collection were addressed.

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## INTRODUCTION

In the last three decades of the twentieth century, museums shifted focus from a largely collections-protection program to a blend of public education and collections protection (Hein 1998). This paradigm shift was a result of three landmark publications produced by the American Association of Museums (AAM 1969, 1984, 1992a). It coincided with a general shift in the cultural climate of the United States (Hein 1998) and other post-industrial societies (Hooper-Greenhill 1992). The AAM publications not only called for an increased role for education in museums, but also for education to become as important as other aspects of professional museum practices. In effect, the education of the public would be of paramount importance for the late twentieth and twenty-first centuries.

Various measures have been taken to heed this call. Museums have attempted to diversify their constituency (Treadwell 1989; Foundation de France and ICOM 1991;

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AAM 1992b; Museum Education Roundtable 1992). The exhibition development process now includes education-division staff in addition to curatorial-division staff (Franco 1992; Dean 1994; Blais 1999). Psychological models have augmented exhibition development (Ham 1999; Black 1990; Dean 1994; Massey 1994; Perry 1994; Blais 1999). Education policy design strategies have been implemented (Wilkinson 1999). And education divisions have become commonplace in museums (Franco 1992).

Education divisions have assumed greater importance as the museum community has acknowledged its intertwined relationships with society's educational needs. And as education divisions have matured, so have museum education collections. Today, education collections are a widely used tool that provides visitors an opportunity to interact with real museum objects. Education collections are distinguished from other museum collections by their usage, housing, and care (Macfarlan 2001). In general, education collections have been identified as areas in which the potential for visitors to have a learning experience is equal to or greater than in traditional museum exhibiting areas (McNamara 1990). The guiding concept behind education collections and hands-on exhibits is that visitors prefer them to static exhibits, an observation that can be deduced from the growth of hands-on museums in the U.S., U.K., and Europe, and the reactions of visitors in education collections and other hands-on exhibits (Caulton 1998).

Traditionally, museum education collections have not been given a full measure of conservation treatments. This relative indifference may be a result of the way the education collection was generated (Macfarlan 2001). Still, museums have a legal and financial duty to protect the assets of their trust (Malaro 1998). Although education collections are considered consumable, this does not release museums from responsibility. Education collections are a part of the trust. Therefore, museums have a duty to maintain and protect these assets and to prevent their destruction.

A well-maintained, researched and displayed education collection can provide more learning value to society than an education collection that is improperly maintained, little researched and underutilized. Given the education imperative of AAM (1969, 1984, 1992), as well as the legal responsibility of museums to protect assets, a reconfiguration of education collections must take place, not just physically but also philosophically.

A review of the literature demonstrates that scant information exists concerning education collections in general (Macfarlan 2001; Caulton 1998; Donawa 1996; Smithsonian Institution 1991; White 1990; Royal Ontario Museum 1979). Abundant information is available for preventive conservation relating to permanent collections (Buck and Gilmore 1998; Cassar 1995; Rose, Hawks and Genoways 1995; Rose and de Torres 1992; Bachmann 1992; Applebaum 1991; Pearce 1990), but not to education collections. A proper consideration must be given: Specifically, education collections should have a scope of collection, undergo a gap analysis, be part of a museum's collecting plan, and be governed by a museum's collection management policy including preventive conservation.

To illustrate some problems associated with traditional education collections, the Lubbock Lake Landmark's education collection was reviewed. This collection served as a case study to highlight a traditional education collection and demonstrate the value of a shift to upgraded care and management.

## THE CASE STUDY

The Lubbock Lake Landmark is an archaeological and natural history preserve located in Yellowhouse Draw on the southern high plains of Texas (Johnson 1987). Its primary mission includes the stewardship, preservation and maintenance of the preserve; integrated interdisciplinary research; collections care, documentation and management; and dissemination of knowledge through scholarly, educational, and public programming and publications. Located at the northern edge of the city of Lubbock (population 200,000), the Landmark is operated through the Museum of Texas Tech University and has an approximate annual attendance of 12,000 visitors. The public face of the Landmark is the Nash Interpretive Center and its trails. The Nash Interpretive Center is composed of long term exhibits; revolving exhibits; and a learning center where the education collection is located.

The Landmark's traditional education collection contained objects that exemplified the diversity and history of the area. But there were also objects that did not reflect archaeological and historical research conducted at the site: for instance, paleontological specimens from the Late Triassic Period and projectile points and ceramic sherds from cultural groups that came from geographic areas other than the southern high plains of Texas and New Mexico. The Landmark's upgraded museum education collection focused on the diversity of the Landmark's archaeological and geologic records—lithic, ceramic, floral, faunal, and sediment/soil records—while broadening its scope, accessibility, and usability.

## THE EDUCATION COLLECTION

The traditional education collection at the Landmark consisted of two cabinets containing 1,378 objects. One cabinet had 12 shelves; the other cabinet had two distinct units each with five shelves. Each shelf contained a variety of objects, including faunal materials, implement technologies, source materials for tool manufacture, and plant materials and photographs—all presented without a consistent arrangement scheme.

The Landmark's education collection lacked a scope of collection, contextual information, and conservation. Because there was no scope of collection, objects having no relation to the Landmark's mission were present in the education collection. Because no contextual information was available, many objects were included that were inappropriate for exhibition purposes, and a lack of data made interpretation difficult. And without applied preventive conservation techniques, artifacts received the same catalogue number or no catalogue number at all, or were improperly identified; catalogue numbers were written on objects using non-reversible methods; there were infrequent and inconsistent inventories, haphazard collecting and unauthorized accession of objects; and objects were housed or stored in a manner that promoted overcrowding and destruction. To address these problems, the research question was posed: How can a museum education collection be protected better to make it conform to policies and strategies implemented for a permanent collection?

**Methodology**—A collections management methodology was developed and employed to alleviate the problems associated with the Landmark's education collection. The collections management methodology was designed to establish control over the education collection and to impede deterioration. Upgrading the education collection was accomplished by applying a modified version of standard preservation and collection management techniques (Buck and Gilmore 1998; Malero 1998; Cassar 1995; Rose et al. 1995; Bachman 1992). Upgrading enhanced the longevity and usability of the collection as an education tool. All procedures were recorded. Management methods consisted of: creating a scope of collection; object identification; cleaning; cataloguing; stabilization; housing and storage; inventory; and a gap analysis.

*Collection theme.* A collection theme is similar to a scope of collection (Gardner and Merritt 2002). It defines the purpose of a collection and provides boundaries, through categories such as subject matter, geographical location, and/or time period. However, the collection theme's primary use is for creating a storyline for exhibition purposes. The Landmark's collection theme served both as a storyline and a scope of collection. It is based on the 30-year-old framework of the Landmark's research program (Johnson 1983, 1987). The theme, "Humans and Their Adaptations to a Changing Environment on the Southern High Plains," was assembled from the museum's and the Landmark's missions, the Landmark's regional research, and the content in the Interpretive Center's permanent exhibition areas; and by a review of the objects in the education collection itself. The theme served as a guide for removal or retention of education collection objects and the addition of new objects. It is appropriate for guiding visitors to a deeper understanding of the archaeology, history and natural history of the southern high plains.

*Identification.* Creating identifications for the education collection objects served as a baseline for interpretative purposes, and for determining the broad outlines of the collection. Objects conforming to the scope of collection were retained, and those that did not conform were culled and are being considered for deaccession. Both inherent and attributable categories were used for object identification, including accession number.

*Cleaning.* For the objects that were retained, cleaning proceeded according to standard Landmark conservation and preservation principles (Anonymous 2002). After consultation with the Landmark's bone preparator, all bone and teeth material were cleaned using either distilled water or acetone and soft toothbrushes. Acetone was warranted for fragile bone because it has the ability to expel water and will not cause bone to suffer from anisotropic stress (Moncrief and Weaver 1992), whereas water may cause undue stress on bone. A reagent grade (98 percent pure acetone) was used.

All lithic materials, metal objects, ceramic sherds, tendon, hide and plant materials were cleaned. Distilled water (which has fewer impurities than tap water) and both soft and hard toothbrushes were used on the lithics. Ceramic objects, tendon, hide and plant materials were cleaned with a dry, soft-bristled toothbrush. Metal objects were cleaned with a dry, soft-bristled toothbrush only; neither acetone nor distilled water was used

because both have properties that can corrode some metal objects. Plastic objects were cleaned using distilled water and a soft toothbrush; acetone was not used as a cleaning agent because it can degrade some plastic.

*Stabilization.* Retained bone and teeth were stabilized. A solution of 1-2 percent or less conservation grade polyvinyl acetate (PVAC) dissolved in reagent grade acetone (hereafter referred to as PVAC consolidant) was used to promote structural stability. Objects were immersed twice into the PVAC consolidant to ensure that the solution penetrated and saturated the internal structure of the bone and tooth. The objects were weighed before and after immersion to determine the amount of PVAC consolidant absorbed by the bone or tooth. All stabilization information was entered into the treatment record and photodocumentation was recorded into an administrative database. In circumstances where bone material had fresh breaks, the pieces were conjoined using a PVAC adhesive (a solution of 20-25 percent PVAC dissolved in reagent grade acetone) used as a mending agent.

*Cataloging.* The retained education collection objects were provided with unique catalogue numbers. The new catalogue numbering system conformed to the museum's general system and was alphanumeric in design. The labels were written using a reversible, layered method. A PVAC base coat (15-20 percent solution) was applied to the objects. The numbering was written with India ink. A PVAC (15-20 percent solution) finishing coat was applied on top of the India ink to prevent the accidental removal of the label and to ensure waterproofing. The method was reversible through the use of acetone.

To create the catalogue, data categories (using both inherent and attributable data) were established using information generated from the identification process. All data were stored in a newly created administrative database using FileMaker®Pro software. The new administrative database rectified problems from the previously used education collection spreadsheet.

*Housing and storage.* The retained education collection objects were placed into one of two categories: education objects; and replacement education objects. Education objects are available for immediate public use and are maintained in one of the two closed cabinets. These objects have a direct relation to the scope of collection. The replacement objects have a relation to the scope of collection, but a similar education object already exists in the active education exhibition. These objects may be used to replace an education object if one is destroyed, lost, or damaged beyond repair. The education collection objects are maintained in different locations by category. If an education collection object is a replacement object, then it is stored in the education room's storage area. If the education collection object is an exhibit object, then the object is housed in one of the closed cabinets.

The closed cabinets were made of wood and required sanding and sealing to contain the off-gassing of volatile acids (Hatchfield 1995). A fine-grained sandpaper was used and two coats of an acrylic paint were applied. The units then were allowed to dry



Education Collection Cabinet 2 after collections management upgrade; the cabinet now has organized and recessed objects and labeled shelves. *Photo courtesy of Lubbock Lake Landmark*

and off-gas for three weeks before installation of the objects. Resealing was set to occur every five years, because the vapors from the off-gassing wood would have destroyed the protective coating by then.

Before object placement, each shelf was padded with polyethylene foam sheeting. The education exhibit objects were recessed into the sheeting to promote object stability and the return of the object after visitors were finished using it.

Replacement education objects were wrapped in acid-free tissue paper—buffered or unbuffered, depending on the object’s material—then placed into individual self-closing polyethylene bags with acid-free, lignin-free information tags, and into padded acid-free, lignin-free boxes with objects of similar composition (bone with other bone objects, lithics with other lithic objects). The boxes were given foil-backed, acid-free adhesive labels indicating contents, and were placed on storage shelves next to one another.

*Inventory.* Once objects were given their appropriate catalogue number and either housed or stored, an inventory was conducted. This task provided a detailed account of the objects in the collection, a baseline of data for interpretation, and an assessment of conservation and preventive conservation needs. The inventory gave shelf location of exhibit objects and box number for storage objects.

*Gap analysis.* Once the inventory was completed, the upgraded education collection was reviewed from an exhibition standpoint. The gap analysis surveyed the scope of collec-



Education Collection Cabinet 2, opened to show an organized and labeled shelf with recessed objects. *Photo courtesy of Lubbock Lake Landmark.*

tion and the ability of current objects to provide a storyline around the central theme (Gardner and Merritt 2002). Many holes existed in this central storyline. To address the problems discovered through the gap analysis, a future acquisition list was generated by reviewing the Landmark's entire lithic, faunal, floral, geological, and implement technology records and comparing them to the education collection catalogue. When the Landmark's education collection did not contain sufficient objects in comparison to the entire collection, the needed objects were added to the future acquisitions list. The challenge came in augmenting the education collection through field research and donations.

## RESULTS

Originally there were 1,378 objects in the education collection. After the scope of collection was agreed upon and object identification was completed, the number of objects in the education collection was reduced by 50.7 percent (699 objects culled, 679 objects kept). The object acquisition list, created through the gap analysis, brought in 82 new objects from the Landmark's regional research program. The Landmark's upgraded education collection numbered 761 objects, in 15 categories (figure 1).

An important result of the collections management methodology concerned accessioning of education collection objects. During the identification process, an attempt was made to find and record accession information. According to the museum's collections management policy, all education collection objects should be accessioned (Museum of

**Figure 1:** Number and type of objects contained in the Landmark's upgraded education collection.

Type of Artifact	Number of Objects
Bone	333
Lithic	171
Metal	55
Ceramic	54
Teeth	47
Floral	31
Soil/Sediment	21
Glass	16
Shell	15
Plastic	7
Bricks	5
Leather	2
Plaster	2
Antler	1
Rubber	1

tion objects was not maintained in the traditional education collection records. This flaw in the accessioning record made it impossible to determine what year the objects generated from the Landmark preserve were collected, and consequently, what accession number was used. Although most if not all objects in the traditional education collection had been accessioned, matching an accession number to a specific object was usually not possible.

## SUMMARY

The Landmark's upgraded education collection has provided the basis for an ongoing permanent display (located in Landmark's learning center, which can be accessed by all visitors who enter this part of the building). The upgrading underscores the lack of proper museological care for traditional education collections. The principles and methods used to manage, protect and exhibit the museum's permanent collection should be applicable as well to the education collection, which now resembles a permanent collection in terms of its care and management.

The process of identifying objects in the education collection revealed that approximately half were not appropriate or indicative of the Landmark's archaeological and geologic record, suggesting that neither the Landmark director nor the collections manager were consulted when objects were accepted. Furthermore, there was no collection

Texas Tech University 1996); however, this management practice was not enforced. Based on the original education collection count (1,378 objects), only 7.69 percent (106 objects) of the education collection objects had accession numbers.

In the museum's anthropology-division accession records, 10 accession cards held all the information for 106 objects. However, only one accession card contained enough information to determine the identity of a single object in the education collection. The remaining nine accession cards (and the 105 objects listed on them) did not appear to correspond to specific objects.

All education collection objects that came from the Landmark preserve were accessioned by the Museum of Texas Tech University. However, no distinction was made between those objects placed in the research collection and those in the education collection. Furthermore, the accession year for education collec-

theme or scope of collection, nor was there a collecting plan, resulting in the haphazard generation of the education collection.

Creating these documents has allowed the Landmark to gain intellectual and practical control over the collection. The future object acquisitions list allows the Landmark to direct growth and thus to enhance the storyline and, subsequently, the power of the ongoing display as an educational tool.

Many education collection objects were not processed properly from a museological perspective—the result of poor collecting practices and the belief that traditional education collections did not need preservation procedures. Proper procedures are now in place to ensure that education collection objects, once accepted and accessioned, are identified, cleaned, and stabilized (if appropriate) by Landmark laboratory personnel. For the long-term protection of the education collection, the procedures that exist for the museum's anthropology division collection are applied to the education collection.

Poor procedures also caused the lack of accession and catalogue numbers. Upgrading the education collection could not solve the problem of lost accession record information. To track accession information in the future, all objects brought into the education collection are now required to have accession numbers in the new education collection administrative database.

For objects that were not generated from the Landmark preserve and that had no accession number, title was in doubt. Texas law code Title 6A (Property Loaned to Museums) chapter 80 (Ownership, Conservation, and Disposition of Property Loaned to Museums) was referenced to determine the legal status of these objects and the steps necessary to maintain clear and unrestricted title. A museum must be able to document possession of the object for a minimum of 15 years—and no person may have claimed the object during that time, according to the records of the museum—before being considered abandoned. After 15 years, a museum is required to publish a notice to the lender at least once a week for two consecutive weeks in a newspaper of general circulation in the county of the museum. If no contact is made within 65 days, title of the object vests in the museum.

The first records of the Landmark's education collection occur in the 1997 inventory, leaving nine more years before the museum may print a notice to the lender in the local newspaper. Objects without clear and unrestricted title that are viewed as important to the mission of the Landmark have received the same care as objects with clear and unrestricted title. They have been inventoried and incorporated into the administrative database with notations indicating that these particular objects require tracking and the legal steps for claiming title. A hard copy of the inventory is in the office of the education program manager, with a description of the legal steps required in the year 2012.

For objects that are being considered for deaccession and have no associated accession information, ownership cannot be currently documented. These objects have been wrapped individually in appropriate acid-free paper and placed into self-closing polyethylene bags and stored in acid-free, lignin-free boxes within the storage room of the Landmark's Learning Center. They will remain in storage until 2012 when ownership can be vested by the museum through the process outlined by Texas law.

## DISCUSSION

All museums must be able to account for and protect the collections they maintain and own. This baseline for proper museological practices extends to education collections. A scope of collections and collecting plan define the type and amount of objects that will be collected, housed and used, allowing a museum to gain intellectual control over the collections (Gardner and Merritt 2002) and restrict uncontrolled growth. The creation of a scope of collection also helps ameliorate the problems of haphazard and inappropriate object generation (Malaro 1998). Additionally, a gap analysis should be performed with all museum collections. A gap analysis provides any museum collection with an appropriate framework for understanding where the collection needs to be enhanced and a rationale for controlling collection growth. Museum education collections should grow in a proportion that resembles the growth of the research collections and a gap analysis will help to meet this need. The incorporation of new objects into the education collection should be pursued through an acquisitions committee (specifically, educator, curator, and collection manager) and proceed according to the policies that are used by the registrar and curator.

Problems may arise with specific objects in the education collection, as all objects are bound to deteriorate at some point. The specialized care needed for treating these damaged objects will fall under the direction of the education curator in accord with the collection manager or curator.

Museum education collections cannot remain a receptacle for unwanted, unnecessary, or inappropriate permanent collection objects. If an object in a permanent collection is not usable because it does not fit the scope of collection, it should not be placed into an education collection; the objects in the education collection should conform to the scope of their own collection. Furthermore, simply calling a transferred object “educational” does not make it so. For an experience to be educational, a framework must be devised for the transfer of information through objects to visitors (Macfarlan 2001).

Museums must be able to demonstrate clear and unrestricted legal title to the objects they own (Malaro 1998), including education collections. All legal aspects concerning permanent collections are pertinent to education collections. Clear and unrestricted title to the objects in a museum education collection must be vested by the museum that owns them. This legal matter should be of concern because museum education collections are deemed destructive or consumable collections. A museum does not have the legal right to damage or destroy someone else’s property. A thorough review of the education collection and associated documents should be undertaken. Objects that cannot be demonstrated to be owned by the museum should be removed from the education collection and placed into storage where they can be protected from use damage. Property laws of the state in which the museum is incorporated should be followed until the museum can demonstrate that it is the legal owner of the objects.

Education collections have been termed consumptive; this view has allowed a general malaise to surround their protection. To properly care and manage education collections extends their usefulness within a consumptive environment. This premise is oppo-

site to the philosophy that traditionally has surrounded education collections: a philosophy that regards the eventual destruction of education collection objects as an excuse to avoid caring for them or managing them properly.

To maintain the collection over the long term is a goal that reflects the collection management policy set forth for museum collections (Malaro 1998). Maintaining objects in this manner provides a baseline for object protection and facilitates object retrieval during periodic inventory. Although no absolutes exist, every museum should assess the purpose and use of its education collection with the aim of ensuring its longevity.

All museum objects and collections eventually deteriorate to a point where they are no longer usable. Permanent collections are no different from education collections in this respect. Simply because education collections have been determined to be of non-research value does not indicate that these objects are valueless or should exist in a condition that actually hastens their demise. Once this philosophical change occurs at the administrative and practical levels, a properly maintained and managed education collection provides accountability for the public trust. A museum education collection is after all a museum collection.

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