

Student poster presentations (n=8)

1. Glenn Fernandez-Cepedes

Lubbock Lake Landmark Research Assistant, Heritage and Museum Sciences, Museum of Texas Tech University, Lubbock, Texas

Evaluating the Impact of a Low-Tech Augmented Reality Panel on Heritage Interpretation at Lubbock Lake Landmark

Heritage interpretation plays a critical role in communicating the value of historic sites, engaging visitors, and fostering strong relationships between visitors, the community, and the site. This study explores the impact of a low-tech Augmented Reality Panel (ARP) on heritage interpretation at the Lubbock Lake Landmark, an active archaeological and nature preserve in Lubbock, Texas. A mock-up interpretive panel has been installed to explore the value of the panel and a survey conducted to evaluate the effectiveness of the ARP in enhancing visitors' interpretation of the site. The survey assesses visitors' engagement, understanding, and appreciation of the site's natural and archaeological significance before and after the installation of the ARP. Low-tech ARP has a positive impact on visitors' interpretation of the site. Visitors have reported increased engagement and understanding of the site's significance. The low-tech ARP provides a promising option for enhancing heritage interpretation, particularly in collaboration with digital interpretation elements.

2. Trystan Hatley

Heritage and Museum Sciences, Museum of Texas Tech University, Lubbock, Texas

Is Your Bathtub in Poor(celain) Condition? How to Practice Preventive Conservation on Historic Porcelain Objects

Despite being common in history collections, little information exists on the care and conservation of historic porcelain objects and specifically bathtubs. Multiple cleaning procedures have been developed, from lemon juice to a paste made with distilled water and baking soda. After the lemon juice procedure proved unsuccessful, the baking soda paste has been used in its place. Following the application of the baking soda paste, it is allowed to sit for 15 minutes. The paste is then wiped away and distilled water used to remove any remaining residue. The use of this paste has proven useful in the removal of rust, stains, and residues that were present on the porcelain bathtubs. Preventive conservation is important in the long-term safety of collections, and cleaning procedures for porcelain ensure such items remain in good condition.

3. Hannah F. Hill

Lubbock Lake Landmark Collections Research Assistant, Heritage and Museum Sciences, Museum of Texas Tech University, Lubbock, Texas

Too Much Stuff, Not Enough Space!

One of the most common issues museum professionals encounter in collections is limited storage space. The minimization of surface area that stackable packaging provides highlights the necessity to develop custom storage containers when dealing with a large quantity of similar objects. A hands-on approach allows for efficient use of space and the reduction of materials required to store multiple similar objects. The collection used as a test case for the development of these boxes contains nails, staples, and cartridges, all averaging around the same size. Instead of packaging each like item individually, a task that would require each item to be wrapped separately and stored in rows on flat trays, multi-tiered boxes comprised of archival materials have been constructed to store these objects. Designing a stackable box allows for the maximum number of objects to be stored in as little space as possible. Instead of having multiple flat trays taking up drawer space, the stackable box minimizes the surface area needed to store these objects. While additional time is required to design and create the custom packaging, the storage space saved, and the resulting organization of the objects provides an overall benefit for collections managers. Through the development of a tier-based storage container, collections space is used to its fullest potential.

4. Zane Hobson

Heritage and Museum Sciences, Museum of Texas Tech University, Lubbock, Texas

Barcode Solutions: Reviving the Woodward Collection

Efficient and well-organized museum collections rely on proper documentation and barcoding. The Museum of Texas Tech University's Anthropology Division has tackled the challenges associated with incomplete records in the Woodward Collection. Donated by G.W. Woodward in the 1950s, the collection comprises at least 900 objects but lacked a baseline inventory. To reestablish the collection's integrity, disassociated objects were located and consolidated, and all objects were cross-checked against limited documentation. Additionally, database information was updated, and barcode tags were assigned to all objects in the collection. As a result, a current inventory was established, and barcoding was implemented to facilitate regular future inventories. Although barcoding cannot replace original documentation, it serves as a valuable tool that establishes connections between objects and available information, helping manage collections with limited documentation more effectively. By illustrating how barcoding can address issues arising from missing or incomplete records, this case study offers valuable insights for other museum professionals facing similar challenges.

5. Emory Holland

Museum Education Intern and Helen DeVitt Jones Fellow in Museum Science, Heritage and Museum Sciences, Museum of Texas Tech University, Lubbock, Texas

Wit and Wizardry: Using Children's Fantasy Literature to Teach Science

When creating children's programming, museum educators sometimes struggle to find the perfect balance of teaching and fun to create an engaging experience. *Wit and Wizardry*, a summer camp created by the Museum of Texas Tech University, does just that by utilizing subject matter from the popular *Harry Potter* series to teach scientific concepts to children aged 10-13 years old. The camp's lesson plans consist of activities, experiments, and guided tours that use recognizable content from the children's book and movie series to teach chemistry, physics, biology, and more. Based on initial observations of the campers and informal interviews with the campers' guardians, *Wit & Wizardry* is an overall success. As the Museum plans to continue offering *Wit & Wizardry* in upcoming years, recommendations based on results are: 1) to conduct more formal evaluations to further analyze the effectiveness of the camp's curriculum; and 2) ensure a positive experience for all campers through the adoption of inclusive language and multisensory activities. *Wit and Wizardry* indicates that by using already familiar fictional universes like those found in fantasy literature, museums may be able to teach challenging scientific concepts more effectively.

6. Kacie Howard and Brooke Thorson

Helen DeVitt Jones Fellow in Museum Science, Heritage and Museum Sciences, Texas Tech University, Lubbock, Texas

And

Lubbock Lake Landmark Heritage Intern and Helen DeVitt Jones Fellow in Heritage Management, Heritage and Museum Sciences, Museum of Texas Tech University, Lubbock, Texas

Creating Relationships with Nature Through Amazing Summer Adventures

The Lubbock Lake Landmark hosts Amazing Summer Adventures, a 6-week summer program for 5–10-year-olds that incorporates themes of science and nature. This program encourages youth awareness of nature and the environment around them through daily hikes and activities held outside. To understand the effectiveness of Amazing Summer Adventures in environmental education, program educators have conducted a survey of students that have attended the program about their experiences with nature and their perception of the environment. Survey methods include written questions in the students' daily journals, informal verbal questions with the program educators, and educator observation. Students have enjoyed most nature-centered activities and developed their relationship with nature, but further endeavors should be undertaken to help students retain learned information. Based on survey results, Amazing Summer Adventures reinforces student relationships with nature and encourages their personal explorations into the environment. Furthermore, heritage sites and museums can utilize this information to develop their visitor relationships with

nature and the environment.

7. Deidre Howard

Kenneth Keith Scholar, Heritage and Museum Sciences, Museum of Texas Tech University, Lubbock, Texas

From Impractical to Serviceable

With minimal documentation, a 1968 collection donated to the Museum of Texas Tech University poses questions about its use to the institution. The main question addressed is the provenance and origin of the objects. The collection contains over 1100 objects, comprised of both ceramic and lithic materials. Lithics and ceramics have been separated into groupings based on color, style, and type. The lithics have been fluoresced under a UV box for final confirmation of geographic origin, and ceramic paint styles were compared to known types in the comparative collections. Results indicate: 1) 20% of the lithics fluoresce orange under UV high and low waves, confirming their origins from the Edwards Formation of Central Texas; 2) 2% fluoresce dark purple/red confirming origins from the Alibates Formation from the Panhandle of Texas; 3) 9% of the ceramic paint styles match those of Chupadero Black on White trade wares known to occur in western Texas. At least 65% of the collection requires supplemental research and further inquiries for identification. Objects have been cataloged, barcoded, and received new packaging and housing in accordance with the Museum's standards for collections care. The once problem collection is transitioning to becoming a useful collection for reference, teaching, and training purposes.

8. Laura Ridge

Heritage and Museum Sciences, Museum of Texas Tech University, Lubbock, Texas

Found in Collection Project: Reassociating the Disassociated and Beginnings of Accessioning Process.

As collections' record-keeping becomes re-standardized, updated, and digitized, objects can become disassociated from their documentation or misplaced, only to be found without evidence of where they came from and become found in collection (FIC) objects. The History Division of the Museum of Texas Tech University's FICs project involves multiple aspects, focusing on research and correlation between FIC objects and current records, including provenance, accession, and other records in the History Division and Registrar's Office. The main results are: 1) establishing a baseline of FICs and current documentation; 2) finding evidence that FICs can be reassociated to accession numbers; and 3) beginning the legal process to claim ownership of objects for which no acquisition nor accession documentation is found. The benefits of this project are reducing the current number of FIC objects within the History Division, increasing the accuracy of documentation for objects, and establishing ways to minimize the possibility of objects becoming FICs in the future.

Professional poster presentation (n=4)

1. Paulette Hébert

Professor, Design, Housing and Merchandising, Oklahoma State University, Stillwater, Oklahoma

Testing a New Tool to Evaluate Museum Lighting

Luminance (Brightness) is important as patrons see luminance effects on displayed objects. Using SmartBeam® Luminance Camera App from Fusion Optix, surface light levels on displayed objects and museum interiors can be documented and assessed. The user can point their Iphone camera at a scene and generate a color-coded image plot with luminance indications. The camera and app have been utilized during visits to two Oklahoma museums: Frank Lloyd Wright's Price Tower Art's Center's Art and Design Museum in Bartlesville and the Philbrook Museum of Art in Tulsa. Sixty-two digital photographs of exhibit areas visually and empirically document luminance. The luminance levels range from ≤ 0.20 to ≥ 80.00 candela per meter squared (cd/m^2). Selections of resulting traditional and app images will allow viewers to see that the app images "augment the human visual system and increase the dynamic range and ability of the eye to perceive variations in luminance ...through a calibrated false color filter in real-time." The app effectively aids designers and museum professionals to see their museums in a new way and potentially it will inform lighting improvements.

2. Paulette Hébert and D. (Ruby) Orf

Professor, Design, Housing and Merchandising, Oklahoma State University, Stillwater, Oklahoma

And

Graduate student, Design, Housing and Merchandising, Oklahoma State University, Stillwater, Oklahoma

The Floor is Lava: Designing an Obsidian Museum in Ethiopia

Obsidian is made from lava, erupted from volcanos. Ethiopia has 53 Holocene volcanoes and was the site of a student museum design project. This annual project has been conducted since 2015, with a total 201 total students having participated. The central problem is designing an effective museum interior. One student has selected obsidian for display; conducted a precedent study (acquiring, reviewing and analyzing previously published professional, museums projects); identified a key inspirational image of an active Ethiopian volcanic light stream. The student's museum design includes a dynamic, fiber optic, Light Emitting Diode (LED) uplit element, emanating from the museum floor, mimicking volcanic streams. Gaylord Archival stools are specified to allow patrons to experience effects from various perspectives. The student has produced three pencil and pen sketches exploring "light mapping" visual effects and conducted 13 experiments, utilizing sample rocks, light boxes, and GTI Mini-matcher

laboratory instrument. The final sketch shows the proposed museum interior. Hand-sketching and use of visual exploration tools are effective for student museum design projects.

3. Larissa Kraye

Digital Archivist, Leon S. McGoogan Health Sciences Library, University of Nebraska Medical Center, Omaha, Nebraska

It's Not Impossible! Developing a Digital Preservation Action Plan

Digital preservation is more than back-up files. It ensures long-term access to digital content through policies, strategies, and actions. It needs to be addressed programmatically but it can be hard to know where to start. The Leon S. McGoogan Health Sciences Library has reviewed and used assessment tools such as the Digital Preservation Coalition Rapid Assessment Model and the National Digital Stewardship Alliance Levels of Digital Preservation to define the current digital preservation environment. From these assessment exercises, an action plan has been developed to implement the key requirements needed for a standards-based digital preservation program. This plan has allowed the organization to advocate for resources more strategically for digital preservation and gain buy-in from senior leadership. As a result, the library recently has approved a Digital Preservation Policy and received the resources to acquire digital preservation software. This project shows other institutions concrete steps that can be taken to safeguard digital assets.

4. Ana Sofia Silva

Curator, National Music Museum, Vermillion, South Dakota

Barcoding the National Music Museum Collections: Setting Up the Basics to Implement Barcoding for Object Tracking

One of the most challenging projects developed at the National Music Museum (NMM) for the first time was the barcoding of the collections. In anticipation of increased activity surrounding the collections with the renovation and expansion project, and the need to track them during the various relocation activities, the museum acquired a plugin utility for The Museum System (TMS) database called Barcode Manager (BM). The applied methodology included the design of barcode labels, the sourcing of materials, and the choices of equipment and software that best suited the NMM's purposes. Despite some challenges with this approach, the NMM successfully implemented the basic steps for an important collections management tool.