

# Collaborative Digitization Projects: Opportunities to Enhance Teaching and Learning

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*Many libraries assist faculty in the development of digital materials for instruction, with services ranging from scanning documents for electronic course reserves to providing digital production centers for faculty use. But what types of services are best offered by librarians when the development of instructional materials takes the form of formal, more complex digitization projects? This article describes one such collaborative project, the Dorothea June Grossbart Historic Costume Collection (HCC) at Wayne State University (WSU), and examines how building this digital resource has offered new opportunities for librarians to expand their partnerships with faculty and meet shared educational goals.*

**D**igitization projects are now commonplace in much of the library world. A search of the library literature and the Web will show that local digital collections, both large and small, have proliferated and are well documented. But for the Wayne State University Library System (WSULS) in Detroit, and perhaps other research and academic libraries, the collection-development answers to the question, Why digitize? must be compelling enough to compete with other expensive library and information technology initiatives. Digitization—beyond a few demonstration projects and temporary online exhibitions—is hard pressed to win such a difficult competition in an era of stagnant or shrinking budgets.

Yet, there are many reasons to support the management of selected collaborative digitization projects as natural extensions of the library's existing instructional support alliances with faculty. Some libraries, including WSULS, are exploring the potential of digitization partnerships to improve teaching and learning and are providing digital imaging centers and digital media services for faculty. As Rockman asserts, digitization partnerships with faculty are opportunities "outside of the traditional teaching and learning arena," which can lead to improved library involvement and visibility.<sup>1</sup> Libraries that are relative newcomers to digitizing educational materials can look to the experience and expertise of a growing number of institutions and libraries that are developing digital repositories of instructional, cultural, and scholarly materials for educational purposes.

Digitizing local resources improves scholarly use by helping preserve fragile artifacts and increasing access to the materials, among other benefits, but it also represents a collaborative process that requires closer, more sustained relationships with faculty than some librarians may have experienced in the past. While working together on the Dorothea June Grossbart Historic Costume Collection

(HCC), for example, WSULS librarians and faculty combined their strength to develop grant proposals, explore copyright issues, devise project goals, create databases and metadata, configure searches and interfaces, integrate the new digital images and related library materials into a course management system, and perform many other tasks over the period of one year. They are now designing evaluation tools and promotional programs together to ensure that the collection reaches its full research and educational-use potential.

## Project Background

HCC is maintained by the Fashion Design and Merchandising Department of WSU's College of Fine, Performing, and Communication Arts (CFPCA). The collection consists of five hundred pieces of Western dress and accessories, ethnic garments, and historic textiles. Some highlights from the collection include nineteenth- and early-twentieth-century clothing previously owned by historic Detroit figures, unique beaded garments, and various examples of designer wear. The collection was begun by former CFPCA professor Dorothea June Grossbart in 1982 after she received several donated pieces from the Chicago Historical Society, but it is now under the care of Jane Hooper and Rayneld Rolak Johnson, retired and current CFPCA professors respectively, and CFPCA faculty member Susan Widawski. Considered by CFPCA to be a study resource, the collection is used for classroom lectures, exhibitions, and research by scholars, students, and people interested in period reenactments.

Wayne State University (WSU) is an institution with an urban teaching and service mission that has, among its strategic goals, a focus on integrating "the new paradigms of learning and discovery created by technology in ways that enrich educational experiences."<sup>2</sup> There is an emphasis on serving remote users. With this in mind, the library system has been working diligently to forge partnerships with campus colleagues to achieve excellence in teaching, research, and community service. WSULS is adding more electronic library materials into its collections, offering a variety of electronic services on the Web, providing digital media production services and facilities, and helping faculty integrate digital objects and other library resources into their courses. Digitization

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projects are also being considered for several collections held by colleges and nonlibrary units. In the case of the HCC, a grant from the Detroit Area Library Network (DALNET), combined with WSULS support, allowed for the purchase of new equipment and software, completion of professional digital photography of selected garments and accessories, and the hiring of a graduate student assistant for metadata research and input.

## Project Goals

Some project goals articulated by CFPCA faculty were to:

- Develop a digital collection for the purposes of historic record, descriptive information, observation, instruction, research, and analysis.
- Provide instructional support for specific classes offered in the Art and Art History Department, such as History of Costume, Clothing and Culture, and Senior Seminar.
- Offer greater access to the HCC for educators, students, collectors, designers, curators, and people involved in period reenactments.
- Develop metadata for historic items to provide as much accurate record, understanding, and background for the objects as possible.
- Facilitate preservation of the physical items by encouraging observation of digital images in lieu of physically handling pieces that are fragile or deteriorating.

All of these faculty goals are being met, benefitting students and researchers in concrete ways. Faculty have noted that students are already using the resource at home for study, design inspiration, and to complete research assignments. CFPCA instructors are finding the digitized collection to be an exciting extension of materials available to them as they develop courses and lectures.

Some of WSULS's goals were to:

- Build a technical environment that will allow creation, mounting, and manipulation of digital content of various types for curriculum support and research.
- Develop and support access mechanisms for digital collections, so that users are presented with easy-to-use search options and quick responses.
- Improve support for metadata creation and maintenance to increase integration and interoperability of digital content. This means moving beyond using the MARC format and the integrated library system as an access means, which was originally used in early experiments with digital collections, and moving toward XML and other standards.
- Provide collaborative leadership in the planning, implementation, operation, and evaluation of a cen-

tral digitization service and repository for WSU's campus collections.

- Maintain and enhance the library system's role in WSU's educational efforts.

By helping the CFPCA meet its goals, WSULS is now in a better position to realize its own goals by seeking participation from other faculty members and colleges, applying for additional grants after having obtained experience and demonstrated results, and securing continued support from its administration and institution.

## Roles and Responsibilities of Partners

As Barbara Dewey noted in a description of the University of Tennessee's collaborative digital media spaces, a "mutually agreeable memorandum of understanding" is an important element in collaboration processes.<sup>3</sup> To formalize the responsibilities and commitment of all digitization project participants, WSU uses a service-level agreement. In these agreements, the library system's role is to:

- Manage the project, including setting goals, objectives, budgets, and timelines; grant reporting and other communications; developing procedures and documentation; determining the technology that will be used; and purchasing equipment, software, and other project materials as required.
- Assisting with and executing the digitization process and the standards that will be used;
- Perform server- and database-related tasks, including software installation and configuration, database development, image and data loading; interface design and access methods;
- Managing rights issues, including copyright and patent considerations;
- Storing electronically, copying, and migrating the HCC images to ensure their future use and accessibility;
- Assist with and arrange for metadata input into database as necessary;
- Develop a Web site for the project;
- Integrate user access to collection;
- Provide technical testing, troubleshooting, and problem resolution;
- Train CFPCA staff as necessary;
- Assist with developing end-user tutorials and training programs for CFPCA instruction purposes;
- Incorporate the digital collection into educational settings; and
- Participate in publicity and promotional efforts, product evaluation and reporting, and exploring continued funding options for the project.

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Faculty partners agree to:

- Assist with setting and meeting project goals and objectives;
- Curate selection of and preparation of items for digitization;
- Develop content for project's Web site;
- Create metadata and enrichment for selected objects;
- Participate in developing end-user tutorials and training programs, publicity and promotional efforts, and product evaluation and reporting; and
- Explore continued funding options for the project.

## Digital Library Software

HCC data and images are accessed with the University of Michigan Digital Library eXtension Service (DLXS) suite of indexing and retrieval tools, developed by the University of Michigan Digital Library Production Service.<sup>4</sup> Membership in DLXS provides WSULS librarians with the use of XPAT, a powerful SGML/XML-aware search engine, and open-source middleware that supports encoded text collections, digital image collections, bibliographic data, and EAD-encoded finding aids. Images are encoded using LizardTech's MrSID Geo, which allows users to enlarge or shrink retrieved images on demand within the DLXS Web interface.

DLXS is also being used for several new digital library initiatives at WSU, including a poetry project partially funded by the Michigan Humanities Council; an Institute of Museum and Library Services (IMLS)-funded project called the Making of Modern Michigan in which WSU is participating along with Michigan State University and several other institutions; and an IMLS-funded project with WSU's Reuther Library to digitize and make Web-accessible a portion of the Detroit News Photo Archive.

## Digitization Process

The HCC project allowed CFPCA faculty and graduate students to learn about the selection and preparation of garments and accessories for digitization, and to gain general curatorial experience. Selections of a total of fifty objects were made to represent a cross section of the collection, concentrating on pieces that would illustrate particular periods, materials, construction, embellishments (e.g., beading, embroidery, decorative elements), colors associated with various periods, and fabric design. The Digital Library Services (DLS) team contracted with the WSU Photography Department to con-

duct a number of four-hour sessions to digitally photograph the objects on site at CFPCA facilities. Because the project's budget was relatively small and only a limited number of sessions were available, some of the dollars were used to purchase an additional dress form, which maximized the number of garments that could be prepared and captured at any one session. A 5.3 megapixel camera was used to create four hundred uncompressed TIFF images, each at 3008 x 1960 pixels. For the Web interface, the images were downsized and encoded using MrSID Geo. The team also created thumbnail-sized versions of the images for easy browsing and fast retrieval. Additionally, a digital video of the selection, preparation, and photography stages of the digitization process was created by WSULS's Media Services Team. CFPCA and WSULS both plan to use the video as a teaching aid in future classes and for other digitization projects.

## Metadata Decisions and Tasks

The HCC project presented an array of challenges related to metadata and how it would be designed, input, and stored. CFPCA faculty had already been using a collection management database system, called Collectorpro, to input basic descriptions of objects in the collection. This proprietary software, designed for cataloging and inventory of antiques and collectibles, did not meet some of the project's additional requirements, which included having single repeating fields for image file names and spontaneously creating custom database fields of various formats. After evaluating the pros and cons, project participants decided to migrate existing collection data into a FileMaker Pro database to gain the required flexibility. The FileMaker Pro database was designed by librarians to take into account faculty partners' needs, to incorporate a combination of Dublin Core and collection-specific metadata elements, and to work easily with the DLXS architecture chosen and managed by WSULS. With advice from Fran Kremasky, the Cataloging Team Leader at WSU, and an extensive document about metadata formats for fashion and traditional costumes at Kent State University, librarians worked with faculty to map existing collection data into new metadata fields and label them for use in DLXS.<sup>5</sup>

CFPCA faculty members are now enriching the metadata, which will be transferred as periodic data extracts to WSULS for updating of the online collection. Upon receipt of the data extracts, librarians use DLXS to programmatically mark up the data elements into SGML and index the data using XPAT.

## Some Future Goals

To augment the HCC project, WSULS librarians are planning to license the digital rights for a set of 1,875 History of Costume digital images (the original set of slides was published by Slide Presentations in 1975 and is held by WSULS), and load them into DLXS as a separate collection.<sup>6</sup> DLXS will allow users to search HCC and the commercial images separately, or to search both together, as core data fields for each will be mapped to common metadata elements. At this time, simultaneous searching across WSU's DLXS collections and non-DLXS collections is not possible, but WSULS is actively pursuing solutions for broadcast searching across its heterogeneous types of digital resources. For now, records about HCC, to include URLs that perform predefined searches into specific segments of the online collection, will be added to the WSU library catalog.

## Evaluation

Evaluation is ongoing and includes collecting and analyzing data about and from users of the digital resources by means of classroom- and Web-based surveys. A final evaluation will take place at the end of the grant period, and will include answers to questions such as, What issues were identified that require further consideration? and What processes were most successful and least successful?

## Spreading the Word

Several other Detroit-metropolitan institutions and museums, such as the Detroit Historical Museum and Henry Ford Museum/Greenfield Village, are interested in expanding this project to include images from their own historic costume collections, and funding is actively being pursued toward this end. At WSU, in the meantime, the positive outcome of the demonstration project has led to renewed awareness of WSULS's digital library expertise and services. Faculty and librarians who participated in the project are hoping to present details about their collaborative partnership and highlight the online collection at an upcoming WSU Teaching, Learning, and Technology Roundtable (TLTR) conference, where WSULS plans to actively seek new faculty partners for future projects. There are also plans to formally open the

online collection to the campus community by holding an event in a WSU gallery space, with promotional cards similar to those for art show openings mailed out to CFPCA students.

## Conclusion

Librarians involved in digital library services at WSU are encouraged by the impact of this relatively small digitization project. By interacting successfully with CFPCA faculty on the HCC project by meeting their needs, sharing ideas, and obtaining positive results, the library system has gained at least one more important ally in its efforts to expand its educational reach and solidify its reputation as an important information technology partner on campus.

## References and Notes

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## Other Resources

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