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The Digitization of Historical Artifacts in a Hospital Library

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INTRODUCTION

Creating digital archives for a hospital library can be a rewarding, but daunting task. Establishing a digital archive of historical artifacts is one way that libraries can add value to their institutions. This type of preservation can also bring together communities, increase the visibility of the library, and help library staff learn new skills (1–3). The decision to begin a digital archive is not one to take lightly. Librarians need to consider the guidelines they will use, the technology and equipment involved, intellectual property rights, who will maintain the collection, and what artifacts will go into the collection (Figure 1) (4–7). This article looks at a project taken on by the Northeast Georgia Health System (NGHS) Health Sciences and Resource Center Library and the technology used to create a digital archives collection (Figure 2). The library had limited funds and staff, but worked with others within and outside of the organization to create the online collection. The main piece of technology used was Omeka, which served as the backbone of the project, but other components, including funding, guidelines, software, and marketing, will be discussed.

FUNDING

The beginning of any project starts with funding. How will technology, equipment, and other items be purchased? Blais and Lamont stated that funding is a basic need for an archives (8). For many archival projects, items to be included in the collection should be owned by the library, either through direct ownership or donations. To digitize these items, libraries will need to purchase the technology and equipment or see if additional donations can be given to the library.

The project for the NGHS Library involved having items donated from other departments and seeking funding through awards or grants from outside sources. The Media Services Department within the hospital donated a copy stand for the library to photograph over-sized items. Other departments brought in items that they wished to add to the digital collection (Figure 3). Additional funding was provided by the National Networks of Libraries of Medicine (NN/LM) Southeastern/Atlantic Region through the Express Library Digitization Award (9). There are many other funding opportunities available to libraries for digitization projects, including funding from other NN/LM Regional Medical Libraries, the Institute of Museum and Library Services, the National Endowment for the Humanities, and the American Library Association.

GUIDELINES

Another factor to consider is the guidelines you will use to create this online archival collection. The NGHS Library used guidelines from the Digital Library of Georgia, Dublin

Core Metadata Initiative, and the National Archives and Records Administration (NARA) to guide their decisions and establish what practices would be best for their budget, time, and staff (10–12)). There are, of course, other guidelines to use and consider. Some are from professional organizations, while others are present in articles. Many articles discuss not only the digitization aspect of this type of project, but how to preserve the actual historical object (6, 13). In the article *Digital Imaging and Conservation: Model Guidelines*, Dean points out that every digital imaging project concerned with the capture of artifacts must involve the preservation of the digital image *and* the original artifact and, at the very least, digitization should do no harm to the original source document (13). When creating a digital archive will you need to conserve the original piece? Will you be able to store it? What equipment will you have or need to request to meet certain guidelines and standards? What education will staff need to receive? These are all questions that can be brought to your attention through reading different guidelines and best practices. It will also help determine which will be best for your library to abide by.

EQUIPMENT

One of the bigger expenses you'll need to consider is the equipment that will need to be purchased. The equipment the NGHS library needed to purchase were a computer, book scanner, digital camera, a copy stand, and miscellaneous supplies.

Computer

The decision on which computer to buy came down to whether or not librarians wanted it to be supported by NGHS's Information Technology (IT) department and to be able to connect to the System network.

Another consideration was whether or not space was available to permanently set up a desktop or if a laptop would be more flexible.. A connection to the network was needed to save data to a specific drive that would be backed up by MIS. Staff needed to be able to move the computer whenever it was needed since office space was limited. For those reasons, librarians chose to purchase a standard Dell laptop through the IT department. The decision was right one for this library as it allowed project workers to do everything they needed to do, while allowing portability. Some hospital libraries may not need or be able to afford an additional computer. That is a decision each library will need to make based on budget and whether any awards or grants are awarded. Talk to others who have gone through the process, the organization from whom grants are received and the hospital's IT department to find out everything possible about the recommendations and experience of others. This can go a long way in helping to determine what type of computer may be best and if purchasing one when money could be used elsewhere is prudent.

Book Scanner

When there are books, pamphlets, flyers, or similar items that need to be digitized, a book scanner is the way to go (Figure 3). A regular scanner may work for your purposes, but review project goals before making a decision. NGHS librarians wanted the option to scan each item as a separate document or to link each scan together as a single document or PDF; therefore, it was necessary to make sure that the scanner lid would be able to lift off the platen (the glass surface of the scanner) to accommodate larger books. The final detail needed for the scanner was to make sure that a book could lie flat on the platen when scanned. A high end or expensive book scanner, was not needed, just one that would suit the project's purposes and scan the few books and other flat items townend. The group found the *OpticBook* by Plustek to be the best for the library's needs. It was within the designated price range and matched the library's priorities. It could link documents, had a lid that would

lift about an inch and the platen went to the edge of the scanner to allow books to lay flat. The *OpticBook* also had other features, like Optical Character Recognition, that could be useful for this and other projects. Lastly, there is a stand that can be purchased to lift the scanner off a table so that spines can stay at a right angle during scanning. As with other equipment, it is wise to make a list of project goals and priorities and to consult with others, either within or outside of your institution, to see if they have any advice about book scanners and what will be best for your situation.

Digital Camera

A digital camera is a necessity when digitizing artifacts. There are some items in hospitals that are three dimensional or oversized, such as doctor's bags, prescription bottles, and medical supplies that need to be photographed. There are many available options for digital cameras, but staff decided to use a decently priced camera that had all of the functions needed. For these purposes, the Canon Rebel XS was a useful selection. It has different automatic settings that can be used for events and for general photography and a manual function to photograph the 3-dimensional and oversized objects. The camera is easy to use and the instruction manual had good tips for those who were unfamiliar with this type of camera. Speak with a media specialist and others who are familiar with digital cameras to decide what is best for your project. Make sure that the camera is reasonably priced and within budget, uncomplicated to use or learn to use, and one that will meet the needs of the project.

Copy Stand

When photographing objects something is needed to hold the objects. For three dimensional objects a light box or a copy stand can be used, but for oversized, flat objects, a copy stand is best (Figure 4). Because of limited space and a tight budget, our group decided to use a copy stand because it would work with both types of objects. Copy stands range in price according to size, lighting, and brand. For the purposes of this project, a fairly large base, good lighting, and a reasonable price were desirable. The media specialist at NGHS was contacted for advice and he provided a copy stand for use in the project. This was a stroke of luck and the librarians are very grateful to have had the copy stand donated. It was in perfect condition and was the right size for the oversized items staff needed to photograph. Remember to contact those in your organization and others who are familiar with this type of equipment to see what advice (or donations) they might have for any project.

Supplies

It may be necessary to purchase a few miscellaneous supplies for a project. For this digitization project, a memory card and card reader were purchased to make transferring images from the camera to the laptop easier. This meant that others could use the memory card to photograph events or use the card reader to download images from someone else's memory card (Figure 4). A laptop case and small camera bag were purchased in which to store the laptop and camera when they were not in use. Lastly, archival items were purchased. These included CDs, CD case, and boxes. Your library may need some, all, or none of these items for a digitization project. Again, review your goals and guidelines to see what equipment and supplies are needed to support a specific project.

SOFTWARE

The next biggest expense encountered will be the software and programs needed for the project. The software needed for the NGHS project included an image editor, productivity suite, Adobe reader (although any PDF reader is fine), and collection management tool.

There is also software that will come with equipment, such as the scanner and camera, but these are not additional purchases and will not be discussed in this section.

Image Editor

There are many image editors available for use when carrying out a digitization project. Editors can be downloadable, online only, open source, or proprietary. Which one chosen will depend on the level of the project, the skill level of those involved, and price. The History of Caring project at NGHS was small compared to projects at other libraries and there was little to no money to spare on this portion of the project. Staff was familiar with several image editors including Photoshop, GIMP, and Pixlr, so the learning curve with this type of software would be minimal. These facts helped staff to decide which product would be best for this project. GIMP, which is downloadable, free, open source image editing software was selected. Proprietary software would have worked well but was too expensive for the library budget. Online editors are also nice, but not as robust as other options. The simplicity of online editors means they are a cinch to learn, but may not contain the tools needed for the project. GIMP has many of the same features as proprietary software, has more elements than an online editor, and it's free. Take into consideration these and other factors when choosing an image editor.

Productivity Suite

The productivity suite may be the easiest decision. Most institutions have *Microsoft Office* which makes it very simple to decide what will be used; however, if your institution does not have a productivity suite or the available suite is too basic, (only does word processing, spreadsheets, and presentations), then it may be necessary to look into downloading something that can help create marketing material. If the budget does not allow purchase of something like *Microsoft Office Suite*, the author suggests looking at *OpenOffice*, which has the same tools as *Microsoft Office*, but is a free, open source, productivity suite. It will have a slight learning curve, so the project director will need to weigh the cost of proprietary software against learning something that may be different from what staff are used to handling.

Collection Management Tool

This was perhaps the biggest decision that was made and it will be the same for others. This decision will be based on skill levels, capabilities of technology, support, the ability of the software to create the desired look, and price. Those working on this project, including volunteers, had varied experience with web design and collection management tools. Because of this, it was decided to use a product that had little coding involved. This would allow more than one person to work on the project and would make it easier to train other employees to use the tool. Librarians also wanted to make sure that the tool had a lot of the capabilities that were desired, such as metadata sets, tagging capabilities, themes, and plug-ins. The capabilities that are required by readers may be different and those on other teams may not have the same desires for what the product can do. Make sure to discuss what is wanted from the product with team members and make a list for future reference. Our group wanted to make sure that there was some sort of support feature with the tool. Though a manual to reference and online help were preferred, it was necessary to be somewhat flexible with this option. Staff wanted the finished look to be like an exhibit or scrapbook, created with minimal coding, if any to achieve this goal, so librarians looked for a tool that was meant for that kind of display or had that feature. Lastly, it was important that the software to be relatively inexpensive since a hosting package would also have to be purchased. Though there were plenty of proprietary and open source options available, Omeka appeared to be the best product for this project because it met many desired options (14).

Omeka is an elegant, flexible, easy-to-use digital exhibition and collection platform for libraries, museums, cultural heritage organizations, and individuals. *Omeka* can be used to create extensive digital archives (15). It has the option of downloading for no cost to host on the institution's own server, but also offers hosting subscriptions for a reasonable price. Because the library used the hosting subscription, its URL would show as a subdomain on Omeka.net. If it is necessary to use a package that lists a site as a subdomain, it is still possible to use a normal domain name and have it reroute users to the subdomain. For instance, NGHS's site is historyofcaring.omeka.net. We purchased the domain name historyofcaring.com and have it redirecting users to historyofcaring.omeka.net (16). This allowed us to use historyofcaring.com on marketing materials and other resources. Kucsma, Reiss, and Sidman noted that

Omeka has great potential to effectively and efficiently support small and medium-sized digital collection building and online exhibitions for libraries and archives. The software is well-suited to enable librarians, archivists, and curators to work effectively in the context of their disciplines. The core *Omeka* software architecture and design are well-suited to allow the software to expand and improve as the user community grows (17).

These reasons, and others, helped to make the decision to use *Omeka*. Our collaboration, ability to seek outside help, and research options helped staff choose a great platform for this project and everyone loves the outcome.

MARKETING AND OUTREACH

To ensure that the work done is noticed by administrators, physicians, nurses, and other hospital staff, any digitization project must be marketed. Library staff can send email announcements to staff, write a column for the hospital newsletter or other publications, create flyers or postcards to place in hospital waiting rooms and staff areas, or announce at staff meetings. If staff are interested in spreading the word about a digitization project outside of the hospital, it is possible to work with local public libraries and radio stations, put notices in area newspapers, or send flyers and postcards at local physician offices. There are, of course, many other ways to market a project within and outside of the hospital, but these are a few that worked for various projects that the team at NGHS Health Sciences and Resource Center Library has completed.

To create any kind of marketing or outreach material, library staff can write and produce their own or work with marketing departments. For the project at NGHS, librarians wrote and created announcements and postcards (Figure 5). Consider the strengths and weaknesses of library staff and use that information to determine if library staff should make marketing items in-house or use the strength of the hospital's marketing department.

CONCLUSION

When tackling a digitization project, it is imperative to look at all aspects of the project and the strengths and weaknesses of those involved. Do not be put off by the size of the project or the technology involved. Admit when you are not sure of how to do something and ask for help from people in other departments or from those who have been through similar projects – they are great resources. Review guidelines and articles on the topic and train yourself or watch tutorials to learn how to use equipment and software. Projects such as this

can enhance the library in the eyes of many people who are inside or outside of the organization. Use the talents and knowledge of library staff and other professionals to create a digital archive showcasing the history of your institution.

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Figure 1.
Hall School of Nursing student

Figure 2.
Hall School of Nursing librarian and students

HALL County Hospital
Auxilliary
accepts the
HALL School of Nursing
as
Auxilliary Project

Completely furnished Nurse's Dormitory \$2500.⁰⁰
Gives unlimited Scholar-ships (2 for 1960) 800.00
Donated to Educational Fund 15000.00
Teaching Equipment 525.00

1962

Figure 3.
Page from 1960s Hall School of Nursing scrapbook

Figure 4.
Faculty page from School of Nursing Yearbook

Figure 5.
Promotional postcard for History of Caring website