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# Changing Expectations of Academic Libraries

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## INTRODUCTION

The digital age has fundamentally changed how academic libraries operate. With the advent of electronic resources, the job descriptions and duties of librarians have expanded to include many of the same roles that IT professionals traditionally play. These roles include dealing with computers and software on a scale not seen before, as libraries attempt to stay current and relevant by adding computers to their building. How each library has risen to meet these new challenges may be different, but there are a few things that remain consistent among them. Academic libraries in the modern age are expecting a different type of education and experience from their librarians. The administration expects them to deal with virtual materials and virtual resources, which requires different skills and expertise. These libraries have also adapted their mission statements and functions to reflect the change in their resources and personnel. Some of these changes have come slowly over the last two decades, while others have come fast, but they will not be the only changes that libraries will have to endure.

## BACKGROUND

Most people would say that the digital age was born with the Internet. However, digital technologies are much older than that, dating back to computers built in the 1960s. Libraries at this time were using MARC records, which were digitized and are still in use today (Arms, 2012). Though digital databases and e-books were still far in the future, libraries began using this technology early on to improve the quality of the services that they were offering their patrons. Technology was used to streamline libraries on both the back end and the front end, from the records that catalogers used

to the way that patrons found materials in the library. Card catalogs became obsolete as computing power increased and those records were able to be digitized. The libraries still had tons of physical materials for people to use in their research, but the digital catalog helped make it easier for people to find those materials.

In addition, telephones, not traditionally considered digital technology, helped the library answer questions without patrons having to be in the library. This was a marked change from previous interaction with patrons, because patrons no longer had to be in the library for them to ask question. Much of the traditional reference interview relies on the body language of the patron and picking up on clues that they do not know they are giving off. Without the visual cues, librarians had to sharpen their ability to hone in on problems. Just because the patron was calling with their question did not mean that they were certain about the information they needed. This remote-access librarianship paved the way for other methods of contacting librarians, including e-mail, instant messenger, and chat services. Learning from what they had done with regards to telephone interactions, librarians were able to adapt their reference interactions to serve their patron populations through these methods. While this greatly increased the contact librarians had with patrons, it did decrease the number of people coming into the library, and that was only the start.

Technological advances led to even more new horizons for the library. When the World Wide Web and its contemporaries were established, they brought with them a new type of resource, the web page, which librarians had to learn how to vet for accuracy and timeliness (Arms, 2012). The World Wide Web persevered as the accepted software, albeit with many changes over time. These changes included the addition of colors and images, as well as behind-the-scenes information that could be registered within the properties

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of the web page, but there were still questions about the authenticity of the information being presented on many webpages. Because anyone could build a webpage, this led to misinformation and confusion among library patrons, a problem that still continues in various forms to this day. Academic libraries in their research capacity especially struggled with this problem as students began incorporating webpages into their research. Confusing the matter were many valid websites which held information that could not easily be accessed in other ways. Organizations and government departments began releasing content on the Internet. Access became easy, but tracing the source became hard. Furthermore, studies at this time showed that, while students knew that the library had a webpage, and had access to the Internet, those surveyed felt that the library and the Internet were two separate things (D'Esposito, 1999, p. 458), leading to more concern that students were not getting the best advice when it came to research materials. At the academic library, researchers, in this case students, also had to contend with professors who would not let them use online resources for fear of misinformation. This practice of barring that type of resource led to students not fully understanding how to vet sources on the World Wide Web for their own everyday use.

Then, databases began forming to house materials that were both available in print and digitally. This led to database aggregators such as EBSCOhost, JSTOR, and CSA. Libraries found themselves having to allocate more and more of their budgets to these electronic resources. In some ways, these database aggregators made things easier for the academic library, because digital resources were available in packages that did not initially require much thought from the librarians. However, as libraries continued to sign agreements with these aggregators, they found that there was considerable overlap in the various collections, and that dropping parts of these agreements would increase the price of the packages, essentially giving libraries less information for more money (Zimmerman, 2010). However, libraries could not afford to just drop out of the digital age entirely; students, now familiar with web searching, began expecting resources to be available to them online, without them ever having to step foot in a library. Digital technologies allowed the universities these libraries were associated with to offer classes online for the first time, swelling their enrollment

numbers. However, academic libraries saw a decline in their patron numbers even as enrollment continued to grow. This juxtaposition of events required a response from the academic library.



## ACADEMIC LIBRARIES RESPOND TO THE DIGITAL AGE

Early in the transition, academic libraries realized that they would need to change to continue to stay relevant. Some of these changes were relatively simple, and included adding the most popular databases as they first began, or offering technology classes for their students who had missed out on those opportunities in high school. However, as public libraries and school libraries increased their technological advancements, academic libraries found themselves having to go ever farther to keep up with the demand of the digital age.

### Education and Experience

When the digital age first began, the Master's in Library Science (MLS) was the accepted degree for librarianship, and had been since 1924 (Kennedy, et al., 2007). Library programs taught cataloging, reference instruction, and how to prepare research guides, among other things. The focus was primarily on interaction with the patron, regardless of the level with which one was dealing. Even as technology progressed and these interactions were completed over the telephone or Internet, the emphasis was still on patron interaction.

This concept began to shift with the introduction of the Master's in Information Science (MIS) and the Master's in Information and Library Science (MLIS). Classes offered in these programs were more technology driven, and included metadata, database search systems, and social networking the idea being that if librarians could understand the inner workings of the technology they were dealing with, they could better assist their patron population with that technology. In many programs, these classes were offered alongside the traditionally offered programs, and would often be listed as interchangeable in the course catalog. For example, at Indiana University, in the School of Informatics (formerly the School of Library and Information Science), Representation and Organization of

Information, a class that focuses on theories of classification and metadata, is offered as an alternative to the traditional cataloging class. Students enrolled in the MLS program at IU also have the opportunity to take MIS classes as electives, while many others choose to earn a dual degree in both programs.

In the present age, now that libraries are more comfortable with technology, any of these three degrees can help a student secure a position in an academic library. Many librarians still hold the traditional Master's in Library Science, including younger librarians, but the content of those degrees has shifted dramatically since the first library science degree was granted. This has proven to be very helpful in preparing them for the changes in the materials and resources that the academic library uses.

Job-listings also changed. Libraries began recruiting librarians that had experience with electronic resources, database management, and other technological experience. The number one change in job-listings is the advent of the new position, electronic resources manager, or electronic resources librarian. Whatever the permutation of the title, these jobs require intimate knowledge of virtual resources and virtual materials on a scale that had not been seen before. Equally important to the familiarity with the resources was a familiarity with vendor language and licensing agreements that differed from the traditional print publishers. Many of the licensing agreements contain carryover language from print resources (Masango, 2005), but these agreements can be complex and daunting.

## **Virtual Materials and Virtual Resources**

Virtual materials or electronic resources (e-resources) are now the backbone of many academic library collections. These e-resources include databases teeming with journal articles, conference papers, and book reviews, as well as e-books through various systems, and mp3s and streaming video for media collections. While the process of collecting these materials has grown increasingly complicated over the last two decades, it was not until recently that the importance of electronic resource managers (ERMs) and management software was known. While many smaller universities struggle to catch up by hiring ERMs now, other universities were pioneers in this field. Many of them designed their own software to catalog and maintain

electronic collections at a time when few, if any alternatives existed. These systems became forerunners of the electronic resource management systems that many libraries use today, but libraries are still finding that it is occasionally beneficial to create systems for themselves, because electronic resource management does not have a one-size-fits-all. Complicating matters is the fact that these people and systems were not deemed necessary until very late in the process. With virtual materials now taking up large amounts of the collection, both in terms of number of items and amount of money in the budget, special attention needs to be paid to the collection process.

Some materials, however, will not be digitized. There may be concerns with the process of digitizing them, or with the quality that will result from digitizing. Some digitization projects will be rejected due to copyright concerns. In these cases, there will have to be extra effort from the library to make sure their patrons are aware of what is available in the library, so that these materials are used. Still other academic libraries will have special collections, such as historical items or rare books that would not fit into the digitization model. These libraries are still a vital part of the library system at a university, and can be a great draw for researchers not just from the area but from around the globe. Marketing these physical materials alongside digital materials is vital to their continued existence. Otherwise, the materials will be deaccessioned from non-use.

The other option libraries have in the face of unused materials is to place them in archives. This is not always feasible for libraries due to budget constraints, but it is an option to consider when faced with materials that there may not be many existing copies of. In that case, a dark archive would be the best solution. In addition to keeping these materials in a library's possession, it ensures that there will be an existing print copy of the material available to the world in the case of the online vendor going out of business. This is not only important for the institution holding the last remaining physical copy of an item, but for all libraries that would like to have continued access to items. There are special copyright rules associated with making copies and digitizing materials with the intent to archive them, and this can sometimes circumvent traditional copyright problems with regards to digitalization. It is, however, important to exhaust all efforts to find an extant digital copy of materials before embarking on a digitization

project at the university level, because it can be costly, both in money and reputation, if mistakes are made.

Also of particular interest in libraries when it comes to electronic resources is the cost of materials. The cost of online databases has risen steadily in the last decade and will continue to do so unless suitable alternatives are found (Zimmerman, 2010). While many libraries are ready to give in to the cost and adjust their subscriptions and purchases based on it, there are alternatives already available. One such alternative is the open access journal. The Directory of Open Access Journals lists over nine thousand journals in eighteen categories, each housing scores of smaller disciplines. Not only are these journals as good as their for-pay counterparts, but often they are actually preferred by researchers in their fields. In addition, materials in open access journals can be supplemented by online repositories sponsored by universities. These repositories hold pre-prints of articles, as well as other materials, depending on the legal agreements the universities can make with the publisher. Many of them also house work that undergraduates and graduate students have done during their time at the university, making for a more well-rounded research body. Not only can students see what is being pursued by researchers in their field, but they can also see what work their fellow students have been doing, encouraging collaborative work within disciplines and without.

## Mission Statements and Library Functions

The rise of digital material required a response from the librarians out in the field doing work with patrons and acquiring and cataloging materials in technical services, but also from the administration governing these librarians. It has long been accepted that universities would have mission statements at both the university level and at the department level, which would be organized in tandem so that the university was working toward one united goal. As their roles on the university campus changed, academic libraries needed coherent mission statements that encompassed all the work that they were doing, not just their role as repositories for the physical book. Mission statements began including language about the technology, itself. For example, in Western Kentucky University's mission statement, the fourth tenant is, "Maximize digital technologies and develop networked resources that enhance learn-

ing (WKU Library Advisory Council, 2013)." These new mission statements do not just deal with library technology as a burden that has to be dealt with, but as a tool for improving library resources and service. Activities that go along with these mission statements include building information commons, where students can gather and partake of information through a variety of means, including print and digital. They often also have televisions tuned to news headlines and group study areas for students to work collaboratively.

This reflects the changing library functions. What was once a quiet area for individual study is now a collaborative area filled with students working in groups to finish projects. In a way, this is just the library catching up to what has been done in the classroom for decades. Group projects had often been assigned to students in years past, and these projects were often carried out in the computer lab, or shut away somewhere in a group study room. However, libraries can, with technology, now embrace these group projects and make it easier for students to work. Now the library is a place where that work can be done easily, with access to all of the materials the group would need. Though there are librarians on duty to help students with questions, the stereotype of the shushing librarian is being shattered. This was a change necessitated by falling patron counts; as students began accessing materials on-line, libraries had to find other reasons for students to come into the library. Libraries began marketing their resources, rather than just relying on word of mouth for students to come in to the library. One of the library's best resources is the space that they provide for students to work, and this was a resource that was being underused because the space had not adapted to fit changing work demands.

## FUTURE RESEARCH DIRECTIONS

The challenges that libraries face today could potentially sound the death knell for smaller academic libraries. Students no longer believe that libraries have the monopoly on research materials, and they are right. Google scholar has become a serious challenge to libraries despite a pushback against it from librarians, because it is attached to a name that nearly everyone knows—Google. Most students, especially undergraduates, can find the materials they need for their class projects from the comfort of their own home computer.

Part of the way to combat this problem is to embrace the supposed enemy. Google scholar can be a very effective tool when used properly, and if a student has the system set up correctly, they can even use Google Scholars' search features to search their own libraries. This search feature has been immensely popular with students, but it is not the only thing they need when they research. Other databases are still important to the research process and may have search interfaces more suited to the search topic at hand. Libraries have to become creative when trying to draw in students to their libraries and to use their resources..

This can be accomplished through a strong connection to the faculty. Students see faculty every day and are more likely to take their advice when it comes to research and their grades. Set up library instruction sessions for classes, and be sure the students know what's in it for them when they attend. Explain to them the difference between searching in Google and searching in a database, and how the latter can actually be easier and quicker to do once they know how to do it. Running through search questions in the various databases can demonstrate to them the different types of results that they can get. Furthermore, it will show them that difficulty sometimes presented in retrieving materials when one is not logged in to a university database.

Other suggestions for making a library more inviting and adaptable to the changing digital world include creating collaborative learning spaces that integrate technology with the learning experience, adding outlets and power stations to facilitate the use of laptops, tablets, and other portable electronic devices. Information commons like the one discussed here are an excellent way to facilitate this change and are very popular subjects for funding and grants at this time. They provide a seamless entrance for the library into the world of technology and provide a valuable resource for the students. Furthermore, if a campus has a technology center that is not part of the university library system, an information common can artfully redirect traffic back to the library that the library might be losing to other sources that seem to be more convenient. This is in turn better for the students, who will have academic librarians on hand to answer questions when or if they arise, making the research process easier and encouraging them to continue their studies without getting discouraged.

The last advice for the academic library in the digital age is to consider changing how success is

measured. A library whose success is measured by the number of people walking through their physical gates and using their brick-and-mortar building is going to be disappointed by the numbers that they see, even if those numbers are bolstered by things like information commons. Universities are being more flexible with their class models, offering more classes online, and therefore many people may never step foot on the university campus, much less in the university library. Rather than letting these students languish, struggling on their own to accomplish research while their counterparts on campus have all the help they could want, university libraries should be working with advisors and classes to make sure that they are also reaching out to these students. There are a variety of ways that this can be done, including web tutorials, research guides, and videotaped presentations on library resources that can be embedded in the software that the university uses for their online classes. The tools to reach these students are available, and helping them should count in statistics, even if they are not coming to the university. All ways that the university resources are accessed should be given equal weight, because the university is still providing a valuable service, whether librarians are conversing with patrons through email, on the telephone, or in face-to-face interactions. Even keeping track of patrons accessing virtual resources through OpenURL can be an easy, cost-effective eye-opener to the way that the academic library is helping their students (Wright, 2014).

## CONCLUSION

Today's library exists in a very different world from the days when they first became popular. Much of the library's content is digital, and can be accessed online. Some materials, however, cannot be digitized at this time because of technical or copyright concerns. Identifying these materials and integrating them into the curriculum is important for their continued value and to increase patron counts in libraries. Equally important to libraries is the constant innovation of new resources and outreach methods to serve the patron population. Changing how they measure success will also help libraries justify and evaluate programs, because it will highlight the way that their services have changed over the years. For the most part, libraries are already keeping track of statistics in many and varied ways, and



acknowledging that these changes exist. However, they are not doing enough to put more emphasis on those reference interactions and that resource usage, when they should be. By embracing the digital age, libraries will survive and thrive far into the future.

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## KEY TERMS AND DEFINITIONS

**Academic Libraries:** Libraries affiliated with universities or colleges.

**Digital Age:** From about 1980 on, coincidence with the advent of the World Wide Web.

**Digitization:** Scanning or otherwise manipulating print materials into an electronic format.

**Electronic Resources:** Library materials available in an electronic format.

**Mission Statement:** Unified theory, plan, or goal of an organization or subsection of the organization.