From Books to 'Bots:
The Role of Libraries in the Digital Age

In the mid-2000s libraries were in crisis. As the Internet grew in popularity, so did the availably of information and the number of full-text databases available online. The way people were doing research was fundamentally changing and libraries were left with the choice: adapt or die.

Initially, libraries did a decent job of creating new research strategies and altering their collections to suit the needs of their patrons. However, as students and other researches alike made the shift to online databases instead of books, the relevancy of libraries came into question. Why should universities and taxpayers devote so much money and space to libraries if everything needed was available online?

To make matters worse, libraries faced a secondary crisis in the "Graying of Librarianship." Most of the jobs in libraries were held by people over the age of 55, and as many of them refused to retire, there were very few job opportunities for anyone else. Elisabeth Leonard, a Ph.D. student at the School of Information and Library Science at the University of North Carolina at Chapel Hill, who has also worked in libraries for more than 15 years, described libraries in this period as being "a very old-woman feeling place to work."

Fortunately, what new people managed to find their way into libraries happened to be strong innovators. That, however, was not the only struggle. While librarians tended to be innovative thinkers, problems with library hierarchies and communication often prohibited the implementation of new ideas.

Organization and Marketing

Adam Rogers, emerging technology services librarian at the North Carolina State University, says bureaucracy is one of the few things he doesn't like about working in libraries. Nevertheless, he says, "Good leaders and colleagues cut through those limitations."

Libraries around the country are working to combat these. Bill Derry has been the director of innovation at Westport Library in Connecticut since June of 2011. There, the

infrastructure was already in place to streamline innovation, and it shows. Westport is one of the most interesting and forward-thinking libraries in the country.

Now, libraries are using social media, along with more tradition methods like email and physical mailing lists, to encourage involvement with the library community. Twitter is generally the most popular social networking tool, but most libraries also have Facebook pages and Instagram accounts. But as Jonathan McMichael, undergraduate experience librarian at UNC-CH, says, "There's no more efficient way to communicate with people than face-to-face."

Resources: Physical and Electronic

The programs libraries are advertising range from the traditional, like book clubs and story-time, to the cutting edge, like classes on how to use a 3-D printer. Westport Library boasts 11 different 3-D printers. Jaina Shaw, teen services librarian at Westport, says that "while most libraries are starting to consider how to add a MakerSpace [a type of 3-D printer] to their buildings, we are now moving beyond it" and trying to come up with ways to take their "Maker" to the community.

Not everything is technology though. Even the traditional programs are getting a facelift. Many library book clubs now meet in outside the library in coffee shops or bars. Jennifer Lohmann, librarian at Durham County Southwest Regional Library, says her 20s and 30s book club that meets in a local café, and she's "not always sure how many people … know it's a library program." These programs are also being expanded to include more niche reader groups, like fans of romance novels or comic books.

Even the role of something as quintessential to libraries as books is being reevaluated. The emergence of the eBook has given libraries more options in terms of both lending capabilities and space. From this, two key concepts have arisen: Library as Place and Library as Third Space.

Library as Place focuses on the physical aspects of the library. Desks, meeting spaces and couches take priority over the stacks, especially as more and more resources are digitized. McMichael says, "We have enough books that favor first- and second-year

students… [but] we don't try to keep anything more than that because the space matters more."

Libraries as Third Space is about creating a location for people that is neither home nor the office- or, for some people who work from home, an unofficial office. Again, this favors computers and desk space to shelves of books.

EBooks have been beneficial to this shift as they allow libraries to maintain substantial book collections while still having plenty of usable space. They are also beneficial because with certain copyright models, eBooks can be checked out by multiple people simultaneously, unlike physical books. This extends to various other digital media, including music, videos and movies that are now available at many libraries. However, unlike Internet research, which has been wholeheartedly embraced almost across the board, library users are a bit more wary about the transition to eBooks. Leonard says that the relationship between libraries and eBooks is complicated by the fact that "people still prefer reading in print to reading online, but libraries want the space."

The technology available in libraries is not limited to eBooks, or the ever-popular 3-D printers that are popping in libraries all over the country. Most academic libraries have a wide range of audio and visual recording equipment, laptops, tablets, gaming consoles, cameras and production equipment to check out. Westport Library has an Oculus Rift virtual reality system and Aldebaran NAO robots in addition to Lego robotics and Arduino (an open-source electronic prototyping platform that can create interactive

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electronic objects). Durham County Libraries recently launched the First (and second) Library in Space.

Libraries are also helping build technological literacy. Their computers have a stunning range of software from the basics like Microsoft Word to much more specialized programs like Adobe Illustrator or Solid Works (an engineering programs that creates 3-D models). Libraries also have support staff to help patrons with all their computer needs. This includes anything from staff helping patrons pay bills online to training workshops to teach

people how to use robots. Bill Derry says that Westport Library has successfully trained more than 1,000 people on how to use each the robots and 3-D printers.

Technology and the Move Forward

With a move away from books and toward usable spaces libraries today are a far cry from the silent buildings full of shelves from many of our childhoods. Derry says that on one occasion when the Westport was hosting the First Tech Challenge, there was so much commotion "it was like you were at a farmer's market in the middle of the library." But library-goers are learning to adapt to a more bustling environment. Derry says "We find people sit near us when we're doing robot training in the middle of the library, and they're reading." While this is not true of every patron, more often than not, people like to have interesting things going on around them. Although, Derry says, "We did go too far when we were sawing metal in our library."

As libraries continue to evolve from quiet places to read to multi-purpose spaces full of activities and technology, their future is, in many ways, still uncertain. Derry thinks digital paper will be the next game changing technology, allowing for all the benefits of eBooks, but still giving people that page turning motion they so desire.

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Lohmann is not so certain. She says, "You have that [technology] going at the same time that we also started the seed library, so those two things are happening in tandem. It's hard to see where everything will go… The community responds to both." Shaw has a startlingly different prediction for libraries, that they could start "offering the kinds of services that Google offers their employees, such as daycare, lunch, laundry services and more."

However, there is another pressing matter at hand in terms of the future of libraries: the future of librarians themselves. Many libraries have started bringing in non-librarians, which can help foster new ideas, but can also be problematic. As Shaw puts it "most people's understanding of library functions is frozen from the last time they actively used a library, which is usually when a person was a child."

In Leonard's research, she has come across the idea of a library as a warehouse—meaning the only value in the library is in what it can acquire, be that books, databases or magazines. While it has been shown that libraries can collect valuable resources, librarians must still work demonstrate their value.

Changing Librarianship

For McMichael, this is all about research questions. With so many resources now available, people are often in need of a guide to help them find the best information, and they need to be able to ask good questions in order to do that efficiently. "We concern ourselves with people finding information and with connecting people to information," he says. "It's now more about the skills to get them there." And librarians aren't picky about how they do it.

Lohmann says, "The books are important [but] the information is more important... It doesn't matter how you're getting it. We would like you to have good-quality, relevant, factual information."

In this way, the role of the library in a digital age and a world full of resources has remained essentially unchanged from the role at its conception. Jennifer Lohmann says a library "is a place to find good reliable information or pleasure reading."

Adam Rogers adds to that idea saying libraries "help democratize access and opportunity."

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Elisabeth Leonard points out that in today's world, there may not be one singular role for the library, and that it is important for each individual library to make sure they do what is necessary to cater to their specific patron base, be that shelves of books or humanoid robots.

Bill Derry believes core principles are at the foundation of longevity for librarians. "It's always been about sharing, distributing and the democratization of information and of resources... We have opportunities to bring people together in brand new ways and to support economic development, education, and the development of the imagination."

As we move into the future, libraries must continue to evolve, but they must encourage the communities to progress with them. Derry quotes researcher John Seely Brown who says that we're no longer in the information age, but the "imagination age." With that, "We need to help people do something with all this information that they can so easily get."

The role of libraries delivering information has progressed from simply providing books, to providing access to the kinds of innovation and technology we may have been unable to fathom only five years ago. It seems that as long as there are ideas that want to be shared, there will be libraries there to give people a forum to share them- and maybe even inspire a few new ones.