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# Ethics and Cyber Libraries: Challenges Facing the Values and Ethics in LIS

By Jessica Omer, *The University of Missouri*

Darrell Batson, the director of the Frederick County Public Library's system in Maryland, said in an interview, "Libraries have to evolve or die. We're probably the classic example of Darwinism" (Rosenwald, 2015, p. 1). He argues that as we move forward into the future, libraries need to adapt to new challenges, or they will be left in the past as obsolete. To adapt to this new era of technology and an ever-changing world, some academic libraries such as Iowa Western Community College, The University of Texas at San Antonio, and Florida Polytechnic University started what has come to be known as cyber libraries (Guion, 2017). Cyber libraries are defined as "An electronic version of a physical library" (Gartner, 2020). It is a library where there is no physical collection but where their complete collection exists in cyberspace.

We as a generation have entered an era where we stand on the edge of a divide, where on one side is the age of the physical collection and on the other is the digital world. A great example is from a faculty member at the University of Maryland who wrote in an email to the library director, "Let me make my main point one more time. We do not need any print versions of any journals. These are an historic relic from a bygone era. I am sorry to say that we have neither need, time, or wish to visit the beautiful expanses of the library building. This may be a shock to you, but it's reality" (Weise, 2004, p. 2). This is an example of one side that has stepped fully into the digital age and feels there is no room for things from the past that they think are obsolete. The other side of the argument feels print collections still have a place in libraries (Rosenwald, 2015).

Both sides of the argument have merit; however, according to Weise (2004), most people that argue for cyber libraries or only digital materials assume that "There will be a print archive 'someplace' just in case the electronic fails" (p. 8). Now, in most cases, this is true, but what would happen if, due to circumstances such as pandemics, natural disasters, fires, hacking, or system failures where there is no backup outside the collection? Cyber libraries face several problems concerning access, and these issues

need to be considered when thinking about a digital-only library. Although cyber libraries are seen as the new future for libraries, they still face many challenges, including issues concerning access, censorship of access, embargos, and technology.

## Review of Literature

### *Cyber Libraries and Access*

The main problems that most authors agree on regarding access and cyber libraries in terms of technology are either the lack of access to it or problems with it functioning as intended (Capurro, 1999). A survey done by the Pew Research Center shows a surprising number of Americans have little or no access to personal computers or personal internet connections (Alsop, 2020). Access is challenged by the fact that a number of Americans lack the technology to access cyber libraries. With some student's inadequate technology, such as slower internet connections and out-of-date computers, accessing library resources online can prove problematic (Needham & Johnson, 2007). Authors have argued that since cyber libraries' servers and databases are vulnerable to national disasters, hackers, electrical shortages, and internet problems, their access is unreliable (Paradise, Luft, & Andrews, 2002).

Recently, the library world has experienced something different that has created new challenges, a pandemic. Kiebusinski (2020) asks the question, "what happens when physical libraries close due to the pandemic and cyber libraries go down as well?" For example, Sciacca (2020) wrote about how Northern California libraries have faced virtual library outages. Patrons have been unable to access online resources due to an internet hack and system failures for over three months, causing an inability to access accounts, collections, or data. Weise commented that most cyber libraries assume there will always be a print collection somewhere to back up their virtual system, but what happens when there is not? (p. 8). Together, these articles indicate that cyber libraries face challenges regarding access, especially due to issues involving the pandemic, cybersecurity, technology, and economic issues.

### ***Cyber Libraries and Censorship***

Librarians face the challenges of ethical decisions every day, and those challenges change when technology becomes involved. When the Internet came into existence, a new information pathway opened to millions. However, many people felt that open access to everything was dangerous, which led to many academic libraries limiting access to information by requiring usernames and passwords or using behind-the-scenes filtering software to block access to information (Kaliammal & Thamaraiselvi, 2002). Some cyber libraries have created policies referred to as acceptable use. These policies allow cyber libraries to limit access to users concerning information and websites deemed inappropriate (Carver, 2002). The filtering of information created a new form of censorship that allowed libraries to restrict access to certain groups or certain types of information. Trushina (2004) stated that "the stronger we advocate the right of free access to Web resources, the more sophisticated filters and more restricted 'gateways' to information are developed" (p. 418).

### ***Embargos and Cyber Libraries***

In connection with the issues of filters, patrons also face the problem of embargos. Several publishers have put embargos or access restrictions on their digital journals to full-text articles, leading to problems accessing information and data, especially if there is no access to a physical collection to back up the cyber collection. It creates the argument that as we progress in technology, we develop new ways to limit access to information. The prevalence of this technology in cyber libraries makes it easy for cyber libraries to control what patrons can and cannot see (Brooks, 2003).

### ***Analysis***

Rubin (2015) stated that the core value of access is "ensuring that all information resources are provided equally regardless of format and technology" (p. 543). Meaning that despite someone's economic standing, education, or access to technology, librarians' professional obligation is to ensure patrons can access the library collections. In terms of technology, the main problem for patrons of cyber libraries that most authors agree on is either lack of access to it or problems with it functioning as

intended. Many different factors can lead to the limiting of access to cyber libraries in terms of technology. In a survey done by the Pew Research Center, only 74 percent of adults in the United States own computers and have access to personal internet connections (Alsop, 2020), which means that about 23 percent of Americans do not have the technology to access cyber libraries.

In most cases, students and academics would argue that this is not a problem since most academic libraries are open either 24 hours or close to 24 hours. Yet, what happens when most academic and public libraries were closed due to a pandemic in 2020? Due to this, many people have had to rely more on digital and cyber resources. However, sometimes that is not an option since many people do not have access to the technology that would allow them to access cyber libraries because of their economic standing or physical location.

According to a 2007 study done by Needham and Johnson for Athabasca University in Canada, although computers have become a requirement for most college environments, access to this technology can differ greatly. Many factors can play into these problems. Students may have to rely on libraries or internet cafés, owing to their inability to afford or maintain the technology, or they could live in locations where public access to technology is not an option. They could only have access to outdated technology such as slow internet connections or old computers and software, or they could be required to share technology between family members and negotiate time (Needham & Johnson, 2007, p. 122). These factors can affect a person's ability to access cyber libraries. These problems with technology or the lack of equipment cause cyber libraries to not be practical in many parts of the world. Yet, the lack of technology is not the only problem the cyber libraries face regarding technological issues.

We live in an era where technology is constantly changing and moving forward; computers, servers, and new databases may be obsolete tomorrow. Compounding the issue further is the fact that some technology does not work with others. For example, Peoplesoft, a system used by millions of colleges and academic libraries worldwide, will not work with

Internet Explorer. Another system, SirsiDynix, a common library system, will occasionally glitch when used with Safari (University of Missouri, 2020).

Some authors argue that a lack of up-to-date technology to access cyber libraries is not a problem because there are other ways to access this technology, and in most cases, this is true. Yet, what happens if you have to drive an hour away to get to the closest computer because your school is closed or an internet café does not exist where you live, the local public library internet is down, or they have had a system failure? This thereby effectively removes all possibility of access to the cyber library's collections. The collections may still exist, but access to the technology needed to access them no longer does. Now the question is not just concerning personal problems with access due to technology. Now the question becomes what happens when forces outside of anyone's control affect access to cyber libraries.

Many argue that one reason to change to a completely cyber library is that physical libraries are vulnerable to natural disasters, fire, and water damage. Cyber libraries can suffer from these same issues. Cyber library collections may be in cyberspace, but access to these collections is still affected by these events. If you cannot access a computer or Internet to access the collection, does the collection even really exist for the patron? On top of that, cyber libraries are vulnerable to system failures, hackers, and network outages (Paradise, Luft, & Andrews, 2002).

According to Sciacca (2020) from the *East Bay Times*, Northern California Libraries in Contra Costa were hit by a ransomware attack that disabled all online networks. Hundreds, if not thousands, of library users could not access the cyber collection or their personal accounts. Ransomware is a form of malware that attacks a person's computer; a hacker will then demand a ransom to restore the victim's files. Hackers have been using this malware against hospitals, businesses, and now libraries worldwide. Bay Area county libraries have had months of cyber access issues; patrons have been unable to access accounts, collections, or information (Fruhlinger, 2020). These network outages demonstrate that not only are cyber libraries vulnerable to the same problems of access that physical libraries are, but

they also suffer from their own collection of problems, including hackers shutting down connections and network and system failures. Yet, librarians from the Bay Area county libraries systems stated that although their digital collection was down, they were still open for their patrons (Sciatta, 2020). Patrons can still browse and check out their physical library, demonstrating that because the library has both a physical and a cyber-collection, one is always there to act as a backup for the other, a hybrid system. Cyber libraries do not have a backup system if their cyber system goes down, which removes all access to any information or collection.

Other factors affect people's ability to access information through cyber libraries. One of these factors concerns the censorship of information: censorship through login restriction, subscription fees, publisher restrictions, and censorship of information due to software. Manzuch (2017) stated, "The perception of universal access made possible only by means of digital technologies is an illusion, because a set of complex power, financial, infrastructural, literacy, and other factors precondition availability of digital content" (p. 11). Manzuch argued that complete and unquestionable access to all online or cyber content is not possible due to many different issues. Several other factors, including publishers, tech companies, as well as libraries and universities themselves, facilitate these issues.

The first type of censorship focuses on the restriction of access due to subscription fees, logins, and publisher restrictions. Many academic libraries today require logins to access collections. These logins within themselves have many levels of restriction. For example, in many libraries, there are three levels of logins: students, faculty/staff, and guest. In many cases, the guest logins are restricted to minimal access to collection databases and content. Patrons using the guest logins are not associated with the university or the library that owns the collection; therefore, they have not paid for the rights to that information, causing them not to be granted access (Kaliammal & Thamaraiselvi, 2002).

Although most academic libraries cannot legally restrict all access to the public because they are

public institutions, they can limit access to their collections, databases, and archives. They are only required to give access to the Internet and public resources. These login restrictions are due to a second layer of censorship: subscription fees and publisher restrictions. Unfortunately, many factors, including the call for cyber resources and shrinking library budgets, have caused many libraries to start ordering more digital items, including e-journals and e-books, rather than physical ones. The demand for e-resources caused many publishers to raise their prices, which resulted in many libraries limiting the number of journals they subscribe to and limiting access to these resources.

Many libraries now require patrons to be members of certain communities or pay a fee to access these collections (Bellevue University Library, 2019). It has resulted in issues with access because many communities cannot afford to have access to these collections. Manzuch (2017) argued that "Often the communities that should benefit from such projects cannot access these collections due to barriers created by memory institutions" (p. 11). Since many people who should have access to these cyber collections have no way to pay for access to these collections, it is creating a larger economic gap in society.

Another factor that plays into restricting access to cyber library collections is publisher restrictions. The most significant difference between digital and physical collections is that when a library purchases a physical item to add to their collection, they own the right to that item for life. With a digital item, the library does not own the item - they are renting the use of that item. The problem is that a publisher or database has the right to remove access to an e-book, e-journal, or e-article at any time. This creates a problem in academic libraries because the library is not typically told when an item is removed. They usually do not find out about it until a professor or student attempts to use an item, and it is not there.

Many publishers or databases argue that since libraries are only renting the right to use the item and do not have the ownership rights to the item, they are only required to give access for what they consider the life of the item. They then define the life of a digital item based on the use of the item.

McDermott (2012) showed that publisher HarperCollins limited rental rights of digital items to 26 uses, stating that this was the equivalent to the life span of a physical item. This means that once a digital item has been checked out 26 times, the library would have to repurchase the rights or lose access, which indicates the content of digital or cyber libraries is unreliable and unpredictable. Even if the library pays the subscription fees that give them access to materials, they have no control over the collection or the content. Database owners, such as ProQuest and EbscoHost, can add or delete items from the collection at will, which leads to access problems with cyber libraries since access cannot be guaranteed. In the past, patrons could enter a library and have access to a library's physical collection, even if they were unable to check out the material. This cannot be said about cyber libraries because there is no physical collection, and access to their digital content is restricted by login requirements, subscription fees, and publisher restrictions.

The second form of censorship is the filtering of restrictive software. Trushina (2004) wrote that "The stronger we advocate the right to free access to Web resources, the more sophisticated filters and more restricted 'gateways' to information are developed" (p. 418). She stated that the more access granted to collection and resources, the more restrictions will be placed. Many academic and public libraries have used online filtering systems to block websites, databases, and other online sources. Some libraries or organizations argue that these filtering systems are needed to block inappropriate or unethical resources, like fake news or pornographic websites. However, Rubin (2015) states that the fourth value of LIS is tolerance, meaning that "library collections should possess a variety of perspectives on a wide array of topics" (p. 540). He argued that it is inappropriate for librarians to enforce their own beliefs and ideas on their patrons.

Filtering systems allow libraries to block access to information based on their own opinions and ideas, which violates two LIS values and ethics: access to information and tolerance. Cyber libraries face many issues in this case since their whole collection is online. Many websites, databases, and access to different resources face the possibility of being

blocked by filtering systems. Many libraries around the world added statements to their computer policies, such as "The University Library supports the Library Bill of Rights and does not censor access to material nor protect users from inaccurate or offensive information; however, use of the computers to terrify, intimidate, threaten, harass, annoy or offend another person or persons constitutes grounds for disciplinary action" (Bellevue University Library, 2019). This way, the library is putting the responsibility on the patron while also showing that certain things that impact the rights of others will not be tolerated, thereby protecting the library and its patrons. However, some cyber libraries, such as Iowa Western Community College, have not made such statements. Where most libraries have websites dedicated to their collections and resources, the cyber library at Iowa Western Community College does not have a webpage that can be viewed without a login. There is no public access to their policies, procedures, or collections. This cyber library is so restricted that access to any information is restricted, which as a public institution, is a violation of LIS values and ethics.

The final issue related to censorship is an embargo. An embargo in academic terms is when a publisher of a journal limits full-text access to an article for current issues of a journal. Embargos can be active anywhere between 12 to 18 months after publication (Brooks, 2003). Embargos came into existence for publishers to protect their bottom line. Libraries are using more e-journals rather than print options and are paying for a database that contains thousands of journals rather than paying directly for one journal. For example, if a library pays \$20,000 for a database, the cost of the individual journals is only about \$20.00. In this way, the publisher gains little (Brooks, 2003). In many cases, embargos would not be a big problem because most libraries have either a physical collection or can interlibrary loan the journal to back up their cyber collections. In the case of cyber libraries, there is no physical collection to back up their cyber collection. Their only option is to use interlibrary loan to compensate for missing data.

However, certain circumstances occur, such as in 2020 where many libraries closed due to pandemics, natural disasters, or other issues, creating a situation

where there is no physical collection to back up the cyber one. What happens now? Since cyber libraries do not have their own physical collection, they must look elsewhere to find information when their cyber collection fails. When there is no option of using an outside physical collection, cyber libraries are out of options as there is nowhere to find what their patrons need, leading to many issues with access. Unfortunately, about 50 percent of academic journals have embargos on them, making a situation where patrons can see abstracts of the articles but not full text. Due to time constraints or lack of access to a physical collection, problems with access can mean that getting the patron access to the full text of an article may not be possible. A situation is then created where the values and ethics of the library professional cannot be followed (Brooks, 2003).

### **Conclusion**

In conclusion, cyber libraries face many challenges when it comes to access. These challenges can lead to cyber libraries failing in following the guidelines for the values and ethics of the LIS professional. Some authors have argued that cyber libraries are the future of libraries. They argue that patrons want information immediately at their fingertips. The fact that library budgets are shrinking and electronic sources can be cheaper cause many libraries to lean more towards the idea of cyber libraries. However, while digital libraries do have their advantages, they are not perfect. We live in a time where librarians have their feet in two worlds; a world of technology and a world of paper.

Research into this topic indicated that due to these access challenges, cyber libraries alone might fail. Although a digital collection is a necessity, our society is unable to function on it alone. Since we live in a multigenerational culture, we lack the ability to function in a completely digital world; the world of paper and hard copy is still preferred by many. The only solution to solving the cyber library access challenges is for libraries to function on a hybrid system with both a digital and physical collection. If the digital library fails, there is always a physical library to back it up, allowing for uninterrupted access to everyone.

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