



Technology and Human Services in the Library and Information Profession: Ethical and Moral Dilemmas

Ismail Abdullahi, Ph.D
North Carolina Central University
School of Library and Information Sciences

Abstract

In today's library and information profession, more and more technologies are being used to access, organize, and provide services. These technologies take many forms, such as computers, the Internet, and web and digital services, and the list is increasing; even more technologies will be used in the future. The emergence and development of these technologies have provided many opportunities for both libraries and users in terms of access and networks. However, they have also come with unexpected challenges and ethical and moral dilemmas regarding the way information is accessed and used. These concerns include privacy, censorship, authenticity of information, intellectual property, the digital divide, and ethical and cultural issues that affect the socio-cultural life of every user. These concerns also lead to the following questions: Are we surrendering our human culture to technological culture? With more and more human services being taken over by technology, where does this lead us? This paper will examine the integration and use of technologies in libraries and how they have affected the social relations of libraries and users, as well as the ethical and moral dilemmas they have created.

Keywords: Technologies, libraries, ethical, cultural, censorship, privacy

Introduction

According to Foskett (1962), "librarians and information professionals are moral agents, responsible to themselves, others, and society as a whole." He also said that "our values and ethics provide a framework for our conduct, policies, and services." As Foskett observed, without our values and ethics, we are merely lurching about, "stumbling in the dark."

With the past decade's acceleration in technology development, academic programs and discussions have centered on business ethics, medical ethics, computer ethics, and bioethics. These discussions have examined the implications of moral principles and practices related to the conduct of various fields of human activity. Several questions can be asked in regard to these discussions. How have information technologies affected the longstanding mission of libraries? How will emerging technologies affect library services and user needs? How will technologies affect the place of the library as an organizer and provider of information? How will they affect the work of the librarian?

Society and Technology

To understand today's library, we must understand the library's history and belief system. Library philosopher S. R. Ranganathan developed five laws of library science that embody the library as a whole and reflect the goals and mission of the library. The first four are: "Books are for users. Books are for all. Every book for its reader. Save the time of the reader" (Rubin, 2010). The fifth and perhaps most important law is that "the library is a growing organism" (Rubin, 2010). The history and tradition of the library have always been to collect and organize information for the benefit of future generations.

With the invention of writing and the rise of commerce, many cultures made significant historical advancements in the ability to collect information. Ancient Sumerians wrote in cuneiform on stone tablets, early writers developed parchment paper, and the twentieth century heralded the era of the technology-based digital library. The development of technology has lent itself to the success of cultures and their ability to obtain, catalog, and share information instantly with anyone, anywhere.

Accepting Ranganathan's law that the library is a growing organism encourages us to pursue the evolution of the library into the digitalized future of technology. Not too many would dispute the need or benefit of technology in our libraries, and most would agree that the increased use of electronic tools is most certainly reshaping librarians' roles as reference sources.

Libraries and Technology

In describing the library as a free space for all in her article "Social, Intellectual, and Cultural Spaces: Creating Compelling Library Environments for the Digital Age," Dewey (2008) discussed an important aspect in the digitalization of libraries; it entails the collaborative effort of "creating new spaces to support the changing needs of twenty-first century students and scholars". While Dewey's article focused mainly on the academic library, her research is also valid for the public library because librarians and customers must work together as a team. She said of customers, "We librarians want to connect with them in as many ways as possible and encourage them to connect with each other in new ways supported by new technology" (Dewey, 2008). By creating the spaces necessary for customers to access the technology offered by the library, librarians are ensuring the future success of the library. Dewey documented the case of the University of Tennessee library's commons as an example of the integration of a "service-based space" that enters into a partnership with the campus's "Office of Information Technology (OIT) and several colleges...connecting students to the information, assistance, and services they need to be successful" (Dewey, 2008). Dewey's research is extremely valuable to the discussion of the future of libraries. In her case, the students are the equivalent of community member customers of a library branch. Student needs must be met and they must be able to attain the information necessary for their success. Dewey (2008) found that the current wave of library transformations is based on many factors. The digital revolution in its broadest sense is, I believe, the primary driver. Students, in particular, are living in the digital world, socially and intellectually. Libraries are developing and

purchasing digital collections and databases, as well as services to help people access digital resources. We librarians are in the same general digital space as our users, or are we? Dewey posed this question to encourage a forward-thinking planning process. We are living in a digitalized age where information is readily available through a variety of media. What Dewey suggested is that librarians and educators use their existing print collections and instructional services and have these service areas share the same space for students; thus, “students or faculty should be co-creators of new spaces to ensure relevance and usability” (Dewey, 2008).

The Place of the Library in the Digital Age

The general thinking seems to be that the Internet will eradicate print material as a source for libraries and libraries will be without print collections. In addition, those who fear this ask what the purpose of a physical library will be and what the role of a reference librarian will be. Stoffle, Kim, and Sykes-Casavant (2008) took a somewhere different approach. They suggested that “economics, not technology, is driving the need for fundamental changes in our universities and in our libraries.” They described a library that is more proactive in obtaining customers by way of going out into the community to garner interest and offer information on the services the library offers. Stoffle et al. argued that economics over technology as the cause for libraries’ questionable status is compelling. Essentially, the library’s own expense of maintaining an underutilized print collection is “endangering our role” and threatening our future. The library cannot afford to continue existing like “the library of the past” (Stoffle et al., 2008). Much like the other articles discussed, they recognized that change is necessary if the library is to survive and evolve into the library of the future.

Aqili and Moghaddam (2008) emphasized the role that librarians and information professionals play in bridging the digital divide. According to the authors, policy-makers should consider the “vital role that librarians and information professionals can play in the realization of knowledge-based society and sustainable development.” Thus, they can contribute significantly to help developing countries reach the United Nations millennium development goals.

In the study, “Participation in the Global Knowledge Commons: Challenges and Opportunities for Research Dissemination in Developing Countries,” Costa and Chan (2005) reviewed recent trends in the open access (OA) movement and discussed the significance of these trends for information in the developing world. Consequently, knowledge workers in developing countries are gaining more access to scholarly and scientific publications and electronic resources. This greater access to knowledge is extremely significant for developing countries to meet the millennium development goals.

Writers such as Wallace and Whitney (2008) discussed the idea that some educators and politicians no longer believe the space of the library itself is necessary because of the rapid advancement of digital technology. This easily ties the future of the library to trends and advancements in technology. Many people believe that all printed materials will and

should be digital while others, like me, feel the library is necessary because it provides an additional resource of learning and searching for information and because the space itself provides a relaxing atmosphere. Supporters of turning the library into a virtual space believe that taking a trip to the library to pick out a book will be replaced by relying on e-books that allow patrons to change their choice of materials at any location and any time. Once again, with these twenty-first century advancements, many questions arise about the roles and responsibilities of the librarian, particularly the school librarian. They concluded that “whether brick and mortar, virtual, or hybrid, the school library as a learning commons has an integral role in students’ research, information seeking behaviors, and learning assessments” (Wallace & Whitney, 2012).

Ethics Issues and Technology

Ethics are guided by the notion of responsibility in that (as moral agents, librarians) individuals (organizations), libraries, and (society) users should be held accountable to others for the consequences of their activities. In most societies, such as the United States, a system of laws codifies the most significant ethical standards and provides a mechanism for holding people, organizations such as the American Library Association (ALA), and even governments accountable. Therefore, the objectives of this paper are to (1) analyze the ethical challenge libraries face in using technologies to serve their communities, (2) address their responsibilities and the consequences of using electronic technologies, and (3) examine the moral challenges of information technology.

Today, we can say that libraries have overwhelmingly adopted information technologies. Experience shows that information technology has both positive and negative consequences. It also has virtually limitless possibilities. While its use can benefit humans, it can also be used as a tool for destructive activities. Gorman (1995) said, “1. Libraries serve humanity; (2) Respect all forms by which knowledge is communicated; (3) Use technology intelligently to enhance service; (4) Honor the past and create the future.”

When we examine the role of information technology (IT) in libraries, it is not the exception from the above mentioned views of Ranganathan and Gorman. We live in a world where technology has come to dominate and, to some extent, the way people access, use, and disseminate information affects our culture, our values as human beings. Rubin (2010) reminded us that ethical dilemmas in library and information science generally arise in relation to two issues. One is information ethics, concerned with the use and misuse of information. Such issues include the ownership of information, intellectual property rights, free or restricted access to information, use of government information, ensuring privacy and confidentiality, data integrity, and the international flow of information. The second area deals with professional behavior, including how we apply ethical principles to our decisions and actions as information professionals (Smith, 1993).

In libraries, technologies developed slowly. The first was microphotography between 1900 and 1960; this was followed by the 1960s computer applications that brought online information in reference services in the 1970s, followed by the Internet and World Wide Web. The trend continues with digital libraries, Web 2.0, and social networking.

Today, with the proliferation of information and technology in libraries, analyzing and evaluating their impact can be difficult. These technologies can capture, store, identify, process, and disseminate information at a speed unforeseen in the past. Thus, the benefits and consequences must be studied, from their application to fulfill human needs to privacy, intellectual property, the digital divide, professional ethics, and freedom of speech.

The UNESCO IT-Ethics Program (Sembok, 2003) alluded to this concern when it advocated, “Promotion of the principles of equality, justice, and mutual respect in the emerging Information Society; Identification of major ethical issues in the production, access, dissemination, preservation, and use of information in the electronic environment; and Provision of assistance to member states in the implementation strategies and policies on these issues.

The Moral Challenges of Information Technologies

This brings us to the moral challenges of information technology. For libraries, these challenges began when people moved from the oral tradition of disseminating information to using information technology, first by writing down words and organizing them into scrolls or books. Then came the second wave of technology development, the invention of the printing press in 1454 in Germany; this made books available to libraries in greater numbers and increased people’s reading and their desire to read. The printing press led to more copies which broadened the mission of libraries. Libraries collect, organize, and make information available to their users and in the best interest of the whole society. The moral problem comes in when that collection, storage, and use of knowledge and information is carried out by a third party without our knowledge or consent. When this is done by an organization other than an institution established by the people and endowed with moral and ethical authority, the value of that system diminishes. For example, the ALA established core values in 2000, as follows: “Connection of people to ideas; Assurance of free and open access to recorded knowledge; Information, and creative works; Commitment to literacy and learning; Respect for individuality and diversity of all people; Freedom for all people to form, to hold, and to express their own belief; Preservation of the human record; Excellence in professional service to our communities; Formation of partnerships to advance these values.”

In adopting new technologies, do libraries have to change the values upon which they were established? Technology can be a double-edged sword. It can bring many new benefits and it can take away these benefits or break apart libraries’ core values; these issues create ethical and moral dilemmas for libraries. This brings us to analyze and examine issues that have arisen from the adoption of information technologies in libraries as they relate to human services.

Privacy

Webster’s Collegiate Dictionary (2004) defines private as the “quality or state of being apart from company or observer...freedom from unauthorized intrusion.” This

means that things that belong to you are “private property” and your own space is considered private. No one has the right to access your property or space or to use it without your permission, as Rubin (2011) observed with regard to Internet privacy. Internet communication involves many different activities; he identified them as “sending and receiving e-mail messages, transmitting and downloading files, participating in social networking, and the purchase and sale of goods and services.” All these activities can be intercepted through the attachment of “cookies” or “spyware” to track users’ activities online. These are also activities related to library use. As Gorman (2000) argued, “The point is that it is not technology that is the enemy of privacy but our joyful use of technology, we give away something of our selves each time we engage in a transaction.”

Most citizens in democratic societies are protected by privacy laws. In the United States, for example, the right to privacy is constitutionally protected. The Privacy Act of 1974 established a code of fair information practice that “governs the collection, use, maintenance, and dissemination of personally identifiable information about individuals that is maintained in systems of records by federal agencies...The Privacy Act prohibits the disclosure of information from a system of records absent the written consent of the subject individual” (Wikipedia, n.d.). Privacy is also related to respecting a person’s freedom and human dignity. The ethical implications arise when the use of information technology involves the storing, gathering, and dissemination of information that relates to accessibility where a wider implication is accessing users’ private information by external groups. Accessing databases that contain personal information or reading email messages accomplishes this, for example. In traditional libraries, user records were kept in a safe place that was accessed only by one library staff. Even so, in today’s Internet-dominated world, maintaining privacy in digital information is possible

Ethical Dilemmas

In many situations, an ethical dilemma forces a person to make a decision regarding what kind of action he or she should take in a particular situation to best uphold personal ethics. Many times, ethical dilemmas occur when one has a problem and is troubled by determining whether a decision is right, fair, or honest. Studying ethics helps us improve our lives. Librarians’ greatest concerns should be to improve the lives of human beings. According to Kallman and Grillo (1996), “most experts agree that there is actually no special category of computer ethics; rather, there are ethical situations in which computers are involved.”

Discussing the ethical issues surrounding nanotechnology, Calvin (2002) said, “For the past decade, nanotechnologists have basked in the glory of positive public opinion, we’ve worked the public with our ability to manipulate matter at the atomic level and with grand visions of how we might use this ability. All this ‘good news’ has created a growing perception among business and governmental leaders that nanotechnology is a powerful platform for twenty-first technologies on their side. Nanotechnology could be beneficial to humankind by providing humans to access and process information, but it could be also destructive if not used properly”; as Joy (2000) described it in regard to the ethical dilemma, “I believe we will wish our course could be determined by our collective values, ethics, and morals.” He further warned us that “it is far easier to create destructive uses for nanotechnology than constructive ones.”

The Digital Divide

The digital divide refers to the ability or inability to access and effectively utilize the technological resources that are shaping our world, and it may be the result of gainful employment being distributed unequally in contemporary societies (Weiss, 2012).

Access to technology is often defined by the information users don't have. The causes of what is called the digital divide include socioeconomic, ethnicity, and geographic location; for example, socioeconomic disparity affects users' access to technology and their technology competence. Today, the digital divide is a worldwide social phenomenon; it manifests as the gap between those individuals and communities that have access to information technologies and those that do not. In other words, the digital divide describes the growing gap that exists between those who own or have access to information and those who do not as a result of their lack of access to information and communication technology (ICT) due to their socio-economic status. The term digital divide can mean not only unequal access to computer hardware, but also inequalities between groups of people in their ability to use information technology fully. Since 'digital divide' is used to describe the inequality between technology haves and have nots, it is usually measured by computer ownership and Internet accessibility.

In reality, another issue to consider is the people who lack the skills and knowledge to use ICT. Education regarding the use of ICT must be included to fully realize and understand the complexities of this area. Mossberger, Tolbert, and Standsbury (2003) identified a model that identifies four "divides":

Access: Are computers accessed at home, work, school, or library?

Skills: People must be taught how to use the technologies.

Economic opportunity: Information literacy enhances human capital.

Democratic technology: Democratic technology promotes an informed citizenry and equal opportunity, which are vital to democracy.

Technology and Education

Lamb and Johnson (2012) reminded us that we are currently facing the increasing loss of school libraries and professional librarians. Therefore, we can either experience a "colony collapse or survive and thrive" through the use of technology tools in the library and classroom. Lamb and Johnson compared how hard worker bees work and how busy they are to the busyness of students as they use tools to perform and explore tasks. Digital learners play six roles: searcher, curator, inquirer, socializer, organizer, and storyteller. If we as librarians and school staff are not twenty-first century ready and cannot teach appropriate technology skills to students, then students will not receive the best learning outcome. The variety of student roles and needs must be met for students to become leaders in our ever-changing world. For example, "searchers" should be introduced to the old and new way to search for information and be provided with search tool alternatives in case their original method of searching does not work. Lamb and Johnson again reminded us, "Don't get stung by using traditional approaches with today's digital learners...organize lessons around these technology swarms that build essential 21st century skills" (Lamb & Johnson, 2012).

On the other hand, according to the *Chronicle of Higher Education*, “[to] keep students focused on class, some professors now ban laptops from their classrooms, arguing that the devices are just too much of a temptation. Other professors ask laptop users to sit in the front row, in part so the professors can glance down occasionally to see what is on the students’ screens. A few colleges, Bently among them, have set up systems that let professors switch off classroom Internet with wireless-Internet nodes. This comes after colleges and schools have spent millions of dollars equipping their classrooms with Internet access” (Young, 2006).

Another area where technology is used to access learning is distance education or online learning. In the past, distance learning was usually a program offered for students who were separated by physical distance from the school and instructor. It was taught using text, audio, and video. Today, however, with improvements in technology, students can access learning through the web, which gives them a rich interactive learning experience that surpasses the traditional distance education classroom. Online learning has provided a better opportunity to serve the needs of traditionally underserved populations who because of geographic location or other constraints cannot participate in campus-based face-to-face learning.

At the same time, critics of this type of learning, such as Tippens (2012), have argued that “computers will enhance learning, but they will never replace the profoundly personal dimension in deep learning.” Tippens continued to say that “the degree to which we believe that physical presence is important to learning will influence our answer to ‘What is college for?’ If we decide that college is simply an instrument to transfer objective data from one brain to another, without serious reflection on the big questions of life, or if we think essential knowledge can be reduced to a set of easily digested facts, then modes of delivery are not especially important.” Tippens said, “If a life—a soul—is to be formed, if college is about reflection, exploration, discovery, and self-discovery, then engagement with a mentor or guide in a lively community of learning is essential. Something akin to Socratic dialogue will be prominent.”

The New Generation of Technologies and Ethical Issues

According to Stahl (2012), the developments in ICT have led to its current presence in many aspects of personal and organizational life. There is a debate about the ethical issues that these new technologies are raising. The digital divide itself raises many ethical issues that could be related to equal access to information, libraries, privacy, and the Internet. As Stahl (2012) suggested, this will lead to various concerns about surveillance and, more important, the boundaries between ICTs and humans will continue to blur. Furthermore, increasing numbers of humans will rely on ICTs to analyze, store, and interact with their environment. As Postman (1992) argued, “technology is a state of culture. It is also a state of mind. It consists in the deification of technology, which means that the culture seeks its authorization in technology, and takes its orders from technology. This requires the development of a new kind of social order, and of necessity leads to the rapid dissolution of much that it is associated with traditional beliefs.”

As technologies continue to change, especially in the developed world, the question is what becomes of rest of the world. As Robert G. Rogers (2011) said, “That the

world suffers mainly from an infrastructure divide is dramatically evidenced by the numbers. Nearly four-fifths of the world's population lack access to dependable, reliable, and affordable public communications networks, whether it's to make a phone call, log on to an Internet website, send a fax, fire an email message, post a blog entry, or engage in some serious podcasting.”

The Future

Information technologies are now ubiquitous in the lives of people across the globe. These technologies take many forms, including personal computers, smart phones, the Internet, web and mobile phone applications, digital assistants, and cloud commuting. In fact, the list grows constantly and new forms of these technologies are working their way into every aspect of daily life (Stanford Encyclopedia of Philosophy, 2012). This continuation and acceleration of technology in our lives has created concerns; Kurzweil (2006) reminded us that “if this doubling of capabilities continues and more and more technologies become information technologies, then there will come a point in time where the change from one generation of information technology to the next will become so massive that it will change everything about what it means to be human,” and at this moment in what he called “the Singularity” our technology will allow us to become “a new post-human species.”

Also, according to Rogers (2006), the lack of infrastructure in regions such as developing countries means that “[if] the digital divide is anything, it is an infrastructure divide. It has next to nothing to do with a shortage of information appliances and almost everything to do with the unglamorous, gritty, silt-encrusted, and costly mélange of wires, conduits, poles, switches, and other assorted gear that make up the underbelly – or nervous system – of the much-touted ‘information society.’”

The digital divide is alive and well in all parts of the “global electronic village” (Singh, 2007). The role of libraries and librarians will continue to expand and change in the years to come; the way teaching and learning are practiced will also dramatically change. However, the role of librarians will continue to be literacy and content experts, regardless of the type of literacy or mode of content delivery. To summarize this discussion, Postman (1992) asked, “Can a nation retain a sense of cohesion and community by allowing into it people from all over the world? And now comes the third – the great experiment of technology – which poses the question, can a nation preserve its history, originality, and humanity by submitting totally to the sovereignty of

technological thought-world?” I would like to conclude this discussion by the wise words of President K. Kimura who explained the spirit of Zen in Buddhism by reminding us that “To be thankful for the life we’ve been given, to have thoughtfulness and compassion for others, to seek wisdom, and to cultivate one’s character.”

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