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Ethical Implications of Digital Tools and Emerging Roles for Academic Librarians

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Introduction

Digital tools and emerging technologies have transformed the landscape of higher education. College and university libraries have shifted their collections from predominantly print publications to digital resources. Academic librarians have turned from an ethos of ownership and authority to service, guidance, and collaboration. From pedagogy to resource sharing, the success of our institutions relies upon diverse technologies and widespread adoption. Librarians create technological processes, design resources, manage resources, and make use of diverse technologies to support teaching and learning. Educational technology has completely integrated into our work on many levels, remodeling the role of the

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library in higher education. As a distance services librarian, I rely heavily on digital tools, online platforms, and emerging technologies to engage and partner with students and instructors on an everyday basis. While the digital tool landscape is vast and wide-ranging, serving diverse functions in professional, personal, and educational life, this analysis will focus solely on digital tools and technologies in the field of higher education and libraries, as well as the process of adopting these tools into our practices. It is important to consider the ethical implications of utilizing digital tools in regard to the ALA Core Values of Librarianship. This chapter will examine the ethical role of librarians and academics in using, teaching, and promoting digital tools and emerging technologies in light of our professional values and offer guidance in moving forward without foregoing opportunities for innovation. Deeply reflecting on these technologies should become part of our philosophy and the philosophy that we impart upon our communities.

Information professionals' core value of social responsibility will be the focus of this examination. Initially, a number of emerging trends will be examined to demonstrate the changing landscape in academic libraries. An analysis of online technologies' effect on the social realm with emphasis on social responsibility will follow. I will then discuss personal information management concerns when using digital tools in the context of social responsibility with a focus on privacy in educational technology and academic libraries as well as the privacy paradox. I will recommend new roles for academic librarians to challenge these ethical dilemmas and uphold the core values of our profession. Case studies will be reviewed and practical applications will be suggested. The advancement of digital literacy and the integration of reflection in our professional practices emerge as key roles of information professionals as a result of this cultural shift.

Emerging Trends

Digital tools

In a recent study of more than seventy thousand undergraduate students across twenty-five countries, 96 percent of students interviewed owned a smartphone and 93 percent of students owned a laptop, presenting considerably higher numbers than the general population. Furthermore, 93 percent of students indicated a belief that these technologies are important to their academic success. Students in the study also perceived that technology in the education process provided a more engaging, enriching, and efficient learning experience.¹ As technology ownership, use, and expectations rise, it is safe to assume that technology in higher education is here to stay. The assimilation of emerging technologies in higher education has transformed not only the academic classroom but the academic library and the

academic librarian as well. Technology and digital tools are ingrained within the research process and production of scholarship. Librarians have assumed a role in pioneering and teaching these tools as part of our public services. Recently, this support extends beyond information resource management and library technology. Librarians teach effective search strategies for online information using open web platforms. We provide workshops on productivity tools and the latest apps for surviving college. This shift has complicated the academic landscape and presents emerging ethical dilemmas that have been overlooked or misunderstood by information professionals.

Digital tools are synonymous with the technologies utilized in an online environment. They are designed with the goal of increasing the efficiency of a task while providing users with a more interactive and engaging platform. Hardware and software can be considered digital tools. Websites that allow for multimedia production or presentations are considered digital tools. Devices, software, websites, and social media are digital tools. The learning management system and integrated library system are digital tools. These technologies correspond to the attributes of digital spaces in that they go beyond the in-class/out-of-class boundaries² as well as the on-campus/off-campus boundary. Productivity tools can be used for taking notes, annotating documents, or creating quick lists for the market. The modern academic library is a mix of academic and non-academic activity where students seamlessly switch between textbooks, smartphones, and digital annotation. In many ways, digital tools have allowed for this fluidity by creating an atmosphere of convenience, personalization, and productivity.

Digital scholarship

Digital scholarship is a prime example of an emerging trend in academic librarianship. This developing area leverages digital tools for research and publishing collaboratively with students and faculty. In roles within the field of digital scholarship, academic librarians act as partners to researchers and consultants on digital tools for use in digital publishing, digitization, data, and development of technologies to support scholarship. "A key attribute that distinguishes digital scholarship centers from more traditional research institutes (such as digital humanities centers) is that they are service organizations, staffed by individuals with specialized skills, who support work in the digital environment."³ A determinative aspect of digital scholarship services is the neutral, interdisciplinary physical and virtual space that allows for innovative work using technologies. The field has continued to grow and develop in the past five years into an indispensable service in academic libraries.

Teaching with technology

Digital technology in library instruction services is another important trend to explore. Teaching librarians have carefully integrated digital tools into instruction practices to meet the needs of modern research practices. Additionally, a number of academic librarians have expanded information literacy to include digital literacy or media literacies. Defining literacies is an ongoing debate in education and librarianship. Digital literacy has progressed past a matter of technical skill to include a cultural framework for using and evaluating digital content.⁴ In Thomas Mackey and Trudi Jacobson's "Reframing Information Literacy as a Metaliteracy," the authors argue that "metaliteracy prepares individuals to actively produce and share content through social media and online communities. This requires an understanding of new media tools and original digital information, which is necessary for media literacy, digital literacy, and ICT [information and communications technology] literacy."⁵ As digital tools further embed into the research process, librarians are able to further expand information literacy and metaliteracy to address new directions in knowledge discovery and scholarship.

Social media

According to a recent study, 86 percent of libraries are currently using social media.⁶ This presents a significant deviation from librarians' relationships with their users as well as an expansion of the physical library space in a social context to a digital capacity. Social media has also become a popular tool in the college classroom with a number of librarians employing techniques to utilize these platforms for collaboration and innovative scholarship.⁷ Social media has allowed libraries to uphold their institutional mission statements and professional values by extending support for knowledge seeking, cultural resources, and information literacy beyond the physical campus. Building on past initiatives to support diversity and equal opportunity, public service librarians have utilized social media for various outreach and marketing programs in order to support social inclusion.⁸ These platforms provide online environments where librarians and library staff are able to communicate and connect with users outside the physical walls of the library, eradicating the barriers between library services and the personal yet public lives of our patrons. This is indispensable for modern libraries attempting to keep up with the location-independent needs of contemporary college students and instructors. Though these instances only represent a fraction of social media integration into the library environment, it is imperative to further analyze the potential risks for librarians and users engaging with these platforms.

Ethical Implications and Risks

This is an exciting time to be an academic librarian. The possibilities and opportunities to further embed in the research and scholarship of our students and faculty continue to expand as evidenced in the field of digital scholarship and information literacy instruction. Yet, the changes in academic librarianship are accompanied by inherent threats and, in order to echo our values and our philosophy as librarians, we have changing responsibilities in supporting our users. Each time we adopt a tool into our services, it is imperative to consider the underlying costs of use and whether embracing certain tools reflects our values as librarians. Furthermore, as we utilize online social platforms, librarians have pushed the boundaries of our shared space into a potentially hostile environment. Instead of providing users with an online space predicated on diversity and inclusiveness, we thrust users into the digital abyss with little guidance or safekeeping. In answer, I will argue for a careful process of research, evaluation, and, most important, reflection. Reflection as a habit has been important for information professionals in continually improving our practices and “can help keep us on track, can help us (re)align our theories with our practices and vice versa.”⁹ The digital landscape is a complicated landscape to navigate. “Privacy, intellectual freedom, democracy, and information ethics are deeply interconnected.”¹⁰ As technology continues to blur the lines, our ethics must remain clear.

Social Responsibility

Information science professionals have a duty to advance social responsibility through recognition of social problems and conscious efforts to oppose inequalities.

The broad social responsibilities of the American Library Association are defined in terms of the contribution that librarianship can make in ameliorating or solving the critical problems of society; support for efforts to help inform and educate the people of the United States on these problems and to encourage them to examine the many views on and the facts regarding each problem; and the willingness of ALA to take a position on current critical issues with the relationship to libraries and library service set forth in the position statement.¹¹

Online and digital tools pose an unprecedented threat to users’ freedom of agency. The internet and virtual space shaped by emerging technologies is a social sphere, “heterogeneous and thickly integrated with social life.”¹² The

risks in participating in this realm, with allowance for anonymity and abuse, are widespread and entrenched in internet culture. It isn't necessary to include analyses of the offensive side of the internet; it is something that each user has personally experienced to some extent. While technology has allowed for beautiful collaborations and expansive communities, it has also become the interface of something much more sinister. Certain technologies and tools, even in the library, impact diversity and inclusiveness. When requiring students to sign up for any outward-facing web application or digital tool, it is asking them to take part in something completely uncontrollable to a certain extent. This vulnerability is heightened for marginalized populations.

Campus and library climates are not experienced equally by all student or faculty populations. Two communities will be briefly examined to serve as an example of diverse experiences in higher education: lesbians, gays, bisexuals, transgender, and questioning (LGBTQ) individuals and students with lower socioeconomic status. Mehra and Braquet identified ten obstacles to overcome for LGTBQ equal and fair inclusion on campus: social isolation, no formalized support and institutional protection, lack of political representation, conservative climate, invisibility surrounding concerns and stereotyping, inadequate support services or existing resources, lack of LGBTQ coverage in curriculum, lack of fair services, perceived negative repercussions, and isolated LGBTQ advocacy.¹³ One of the major action points recommended for library and information science professionals was to identify and actively target "climates that breed hatred and contempt."¹⁴ Campbell and Cowan's research analyzed the heightened risk for LGBTQ patron privacy in regard to big data systems, an underlying aspect of using digital tools and social media. The authors noted the perception of the library as a safe public sphere for LGBTQ and the ethical obligation to perpetuate this role. "We can assume that queer library users are using the library as a safe place within the public sphere to locate and use information that supports self-motivated explorations of gender and sexual identity. And the evidence in library science research suggests that this is a complex and ambiguous process, which is only partially supported by our current infrastructure" (Campbell and Cowan, 502).¹⁵ Students from lower socioeconomic backgrounds are also at a disadvantage when navigating campus environments and academic libraries. These students lack a sense of belonging on campus as well as the social capital in comparison to middle and upper-class peers.¹⁶ These drawbacks are amplified in public-facing online environments, especially social media. Negative contact with emerging technologies can result in negative academic and library experiences for our patrons. Requiring or advising users to utilize digital tools without careful consideration of how students individually experience academic environments, online or in-person, is ethically unsound for librarians. LGBTQ and lower

socioeconomic students represent a small portion of the diverse populations and various inequalities encountered in higher education. The ALA's Core Value of social responsibility remains particularly relevant in the light of the issues faced by marginalized populations. It is imperative for information professionals to embrace a wide perspective of campus climates in online spaces to fully serve our role in promoting positive social responsibility.

Social media poses a notable threat to online users in the library, classroom, and beyond. Foremost, there are numerous examples of social media sites using personal data with the defense of informed consent in morally ambiguous ways beyond invasions of privacy.¹⁷ A telling case involves Facebook's 2012 mood manipulation experiment, where data scientists altered the newsfeed for almost seven hundred thousand users in order to see if positive or negative information engineered within users' timelines influenced users to post positive or negative updates, comments, and content themselves. The study¹⁸ differentiated itself from other wide-scale data analysis initiatives in one distinct aspect: instead of simply observing behavior, researchers manipulated users' themselves. This example of misuse is extremely alarming for any librarian or educator guided by professional ethics. Facebook has also been involved in numerous lawsuits about using names, photos, and identities of users to advertise and sell products without obtaining consent.¹⁹ To the point of this chapter, Facebook is simply anecdotal. What happened at Facebook is completely legal and can happen almost anywhere in the digital landscape. There are several instances illustrating the questionable ethics of social media companies, especially when it comes to how users' personal information is employed for commercial purposes.

Further, online spaces allow for bullying, incivility, and violence through anonymous forms of communication. There are more than eleven thousand websites, videos, or groups devoted to hate, with a large portion represented on social media sites and, sadly, that number is on the rise.²⁰ Recently, academics have begun examining cyberbullying in higher education from instructor and student perspectives.²¹ Additionally, with the rise of social media, there has been an accelerated threat of stalking as perpetrators are able to obtain "seed information" about targeted users online.²² As online spaces become increasingly prevalent for academic learning environments, these problems cannot be ignored by educators and librarians. The majority of awareness for cyberbullying happens at a K-12 level while conversations about digital citizenship and online social responsibility in higher education can provide students the knowledge and skills to effectively manage these difficulties from both within and beyond the college classroom. Yet, educators rarely take the time to discuss heightened possibilities of harassment, especially for marginalized populations. There is no current standard for navigating the complex moral landscape of digital tools.

Social Responsibility and Privacy

Privacy and confidentiality are a prominent concern for librarians when using, teaching, or promoting digital tools and emerging technologies. Studies from the Pew Research Center uncover significant user concerns about privacy in terms of data harvesting, data mining, and sharing information. Eighty-six percent of online users have attempted to limit their digital footprint and personal information while 66 percent of users asserted that the current laws “are not good enough” at reasonably protecting user privacy.²³ As opposed to the security risks of networks, programs, and large data sets, individuals directly interact with digital tools and make their own judgments about what to adopt and what information to relinquish. This presents a more intimate and convoluted problem of privacy. While the ALA embraces privacy and confidentiality within our profession’s core values, librarians’ responsibility to protect patron data, such as circulation records and browsing habits, differentiates from our role of teaching and promoting safe online practices as digital literacy, which falls within the broader code of social responsibility.

When discussing privacy and ethics, the concern for information professionals resides in the risk of future harm to users. Daniel Solove details several distinct issues with consent being utilized to legitimize big data practices. While users are provided control over their personal information through decision-making based on terms of service and agreement to data collection practices, the practice of informed consent is flawed for numerous reasons. “Consent to collection, use, and disclosure of personal data is often not meaningful, but the most apparent solution—paternalistic measures—even more directly denies people the freedom to make consensual choices about their data.”²⁴ Until privacy law adapts to the growing threat of big data and personal information collection practices, this defective system is an unavoidable aspect of using digital tools and online technologies. Educators and information professionals assume a level of competence in “digital natives,” yet research reveals that students’ technological performance is often mediocre, especially in terms of ethical decision making.²⁵ In Daniel J. Solove’s *The Digital Person: Technology and Privacy in the Information Age*, he details the concept of digital dossiers. “There are hundreds of companies that are constructing gigantic databases of psychological profiles, amassing data about an individual’s race, gender, income, hobbies, and purchases.”²⁶ Private sector companies and government agencies utilize this information to significantly affect the lives of users from compiling credit history to influencing health insurance rates. The lack of transparency, assumed consent, and reliance on esoteric opt-in privacy policies have failed to protect the privacy of digital users.

Personalization and convenience are two of the most compelling selling points for digital tools, yet often produce hidden consequences that are only materialized when taking a critical approach to analyzing a given technology. Research on the topic of personal information behavior and using digital tools on the social web reveals a “privacy paradox,” whereas users express concern over privacy issues yet value personal information, such as their online browsing history, as surprisingly insignificant.²⁷ Despite anxiety and knowledge of predatory data piracy and harvesting, users willingly provide personal information to companies with little discretion. The exchange, which is often framed as economic in practice, is judged as justifiable. While this speaks to Solove’s concerns about implied consent, Juan Pablo Carrascal et al. conducted a study to determine monetary value for a specific aspect of personal information, and the results were shockingly low. Participants were willing to disclose their browsing history for seven euros on average.²⁸ This phenomenon has been explained through the privacy calculus theory, where individuals perform a simple decision as to whether the loss of privacy is worth the gain of disclosure in addition to strong social motivations for adopting certain technologies.²⁹ Despite this somewhat nonsensical paradox, information professionals engage users with diverse emerging technologies without guidance for protecting personal information, expecting users to navigate the sometimes manipulative online environment on their own.

According to a content and textual analyses conducted by Michael Zimmer, there is minimal planning and literature on how librarians should handle threats to privacy in light of emerging technologies. While libraries continue to adopt diverse technologies and tools into our professional practice, there remains the question “from an ethical perspective, whether the successful implementation of Library 2.0 can take place without threatening the longstanding professional concerns for, and protections of, patron privacy.”³⁰ In response, he analyzed library literature discussing privacy issues in light of emerging technologies. When narrowing down his scope to thirty-nine relevant articles, only three had substantial privacy-related discussion; these three articles represent less than 1 percent of the total articles discussing emerging technology in libraries. This should be an alarming figure to any information science professional. The lack of careful research and consideration has led to a hasty adoption of many digital tools and technologies in a field reputable for advocating for democratic ideals within our communities.

Information professionals cannot disregard the impact of emerging technologies and digital tools on privacy any longer. The big-data systems and profit-oriented predatory practices of these technologies threaten a core value of our profession and our obligation to advocate for the interests of our communities.

The internet has not fulfilled society's hope as the great equalizer; in fact, many argue that it has led to the greatest global economic inequality ever known in addition to intensifying social inequalities through digital exclusion and the digital divide.³¹ Moving forward, librarians need to reflect on our current work, our resources, and our emerging roles in this technology-integrated information landscape to further promote social justice in-person and online. Incorporating these values into digital literacy services will materialize as a core value for upholding our professional values.

Changing Role of the Academic Librarian

The ability to collaborate, create community, and acquire knowledge using digital tools has revitalized and enriched our institutions. Some of the most advanced library innovations and partnerships in higher education can be attributed to the spread and opportunity afforded by digital tools and emerging technologies. Yet, a critical step for adopting digital tools and technologies is lacking: a process of evaluation and reflection. With social responsibility at the core of our principals, librarians belong in the role of educating users about the risks of using digital tools and how to evaluate these tools critically, expounding on our current information literacy missions. Using the ALA Core Values of Librarianship, we can find guidance in assuming new roles in this evolving information landscape.

Digital pedagogy

According to the Digital Pedagogy Lab, digital pedagogy refers to “using digital tools thoughtfully as it is about deciding when not to use digital tools, and about paying attention to the impact of digital tools on learning.”³² In accordance with recent trends in academic librarianship, there is immense value to embracing these insights in order to improve our practices related to emerging technologies. Reflection about why, how, and when we use technology can protect users and improve our everyday interactions. Digital pedagogy advocates for instructors or librarians to assume less of an authoritarian role and alternatively adopt a collaborative relationship with students. When teaching about digital tools, we should not attempt to scare students away from using technology, but instead attempt to provide the skills for critical usability as partners in their educational process. Digital pedagogy is founded on the philosophy of empowering students, a principle echoed in the field of librarianship. There is a quick and easy approach to effective, thoughtful integration of digital tools: never use a digital tool simply for

the sake of using technology. When considering a tool for any teaching or learning opportunity, librarians should ask themselves a series of questions to determine whether the tool is pedagogically valid, whereas technology must enhance the learning or research process in a clear manner. Relying on technology to improve learning without careful examination will be a detriment to our students and faculty. Using digital pedagogy as a librarian promotes an analytic mindset for developing and reflecting on any technology-related teaching practices. While doubting your professional aspects in light of ethical implications is not a comforting experience, these critical strategies strengthen our decisions about incorporating technology into our services and our overall support for campus populations.

Digital literacy and digital citizenship

Academic librarians are well suited to incorporate lessons on social responsibility and safeguarding privacy into current information literacy and digital literacy practices. Beyond instructional environments, users do not commonly engage in studies of cultivating literacy. “Considering how literacy-related organizations reflect an understanding of digital and multimodal literacies... today’s schools are forced to consider the digital in areas that make sense to students in meaningful ways, rather than just to employ digital tools as isolated instruction in the classroom.”³³ Digital literacies and personal information management require a multifaceted skillset that overlaps with the ACRL Framework for Information Literacy in Higher Education. Digital environments allow for engaging and highly individual experiences, entailing further personal responsibilities of users. Additionally, there is an opportunity for librarians to partner with faculty in creating course curriculum and assignments to educate students about moral significances when using digital tools.

Ethically using technology requires skills beyond operating hardware and software. Emerging technologies have created new complications for social interaction. As of now, there are no agreed-upon guidelines for how users should act in digital environments. When teaching with or promoting digital tools, considerations of positive digital citizenship and digital empathy must be ingrained in information literacy and metaliteracy initiatives. “A commitment to digital citizenship seeks to protect users’ capability to partake freely in the internet’s diverse political, social, economic, and cultural opportunities, which informs and facilitates their civic engagement. In short, a commitment to digital citizenship aims to secure robust and responsible participation in online life.”³⁴ While digital citizenship is often accentuated in K-12 education, it is not safe to assume that college students already possess the knowledge or skills to act socially responsible in online environments. One of the most effective ways to fight hate speech and

incivility is counter-speech, which brings attention to the issue, exposes users to divergent views, and exemplifies how to treat people with respect. Additionally, if users are familiarized with terms of service and online community norms, they will feel more empowered at reporting violations and assuming an active role in the digital community.

Furthermore, librarians have the ability to support users in creating a positive digital footprint as well as online safe spaces. The internet, with the use of digital tools and emerging technologies, presents a fresh platform for civic engagement. Libraries pride themselves on being safe spaces in a physical sense; it is time for us to advocate for and create online safe spaces. Disenfranchised patrons can feel further disconnected and unsupported when libraries implement digital tools, emerging technologies, or other digital scholarship opportunities without careful planning and facilitation. In Rachel Wexelbaum's "Assessing Safe Spaces for Digital Scholarship in the Library," she concludes her analysis with a hope that "increased awareness of the academic librarian's role in the provision of safe spaces for learning—also known as the free flow and exchange of information and ideas—will help people in our profession not only to redesign library spaces for digital scholarship, but also to empower everyone to learn and teach how to use new media and technologies to improve the human condition."³⁵ By incorporating digital literacy and digital citizenship into our reference and instruction practices, in addition to planning online spaces with careful consideration of misuse and abuse, we find new roles in promoting social responsibility for our constituents and beyond.

Case Studies and Applications

The ALA Privacy Toolkit provides a useful set of standards and considerations, specifically addressing the challenges of implementing and adopting emerging technologies. By categorizing these technologies (apps, cloud computing, etc.) and providing specific concerns and examples for each subset, the toolkit provides a functional resource for librarians using technology or considering a new digital tool in our practice as well as teaching digital literacy as part of information literacy. The Library Freedom Project, "a partnership among librarians, technologists, attorneys, and privacy advocates which aims to address the problems of surveillance by making real the promise of intellectual freedom in libraries," champions active resistance to digital surveillance through education and various initiatives in public, academic, and special libraries.³⁶ On an institutional level, a number of academic libraries, such as Oakland University have created or augmented current privacy policies and developed transparent processes for management of information to better meet the needs of protecting patron data in digital environments.

Several libraries and higher education institutions have also assumed an active role in educating students about their digital footprint and ethical implications when using digital tools. Research guides from University of Pittsburgh (Digital Dossier: Manage Your Online Presence and Use Web Tools Effectively)³⁷ or Claremont Colleges Library (Online Identity and Digital Citizenship: Your Online Presence)³⁸ are excellent examples of how librarians can educate users and offer solutions for constructive digital citizenship. There has been a rise in campus-wide initiatives focused on online behaviors and broad digital ethics. Diverse partners on the University of Edinburgh campus have developed a “Managing Your Digital Footprint”³⁹ campaign, which provides general social media presence awareness to students, faculty, and staff at the institution. Research, such as the study on teaching digital confidence conducted by Sue Greener and Craig Wakefield⁴⁰ or organized efforts such as the Digital Pedagogy Lab, further educate faculty in effectively integrating digital tools into teaching and learning practices. This work provides students and faculty resources and guidance in promoting positive digital citizenship, yet additional efforts are necessary to thoroughly assimilate these ideals into current library practices.

Another surfacing trend in academic librarianship is critical librarianship, a praxis of philosophy and practice that encourages reflection and activism as part of the information science profession. Critical librarianship addresses libraries’ missions, values, and roles through a critical framework heavily influenced by underlying social, economic, and political structures that shape the current higher education environment. Proponents maintain that practicing critical librarianship can “support critical thinking, information literacy, and lifelong learning skills in students.”⁴¹ Critical librarianship is useful in addressing the ethical implications examined within this chapter due to the nature of its practice, which relies on mindfulness, reflection, and careful consideration for social responsibility and ethics in the teaching and learning process. The recently published *Critical Library Pedagogy Handbook* offers workbook activities as well as lesson plans to build upon critical librarianship theories and provide practical applications for instruction librarians.

While two main recommendations have been asserted within this chapter (integrating digital literacy practices into information literacy and incorporating the practice of critical reflection when using, teaching, or promoting digital tools), a number of practical applications for academic librarians and educators are offered below.

- Develop a process of pedagogical reflection and research before using, teaching, or promoting a digital tool or emerging technology into your work.

- Incorporate a library assignment or lesson that encourages students to conduct research on a digital tool in information literacy instruction.
- Encourage students to create alternative identities when using any public-facing profiles to keep separations between their personal and public lives.
- Talk to students about online social responsibility and how to be a productive digital citizen.
- Create a dialogue about ethics when using emerging technologies, and include opportunities for student reflection about digital tools and online environments.
- Develop best practices for using digital tools and emerging technologies within your organization that explicitly address ethical implications.
- Identify personal boundaries and pedagogical principles in teaching digital tools and consult with experts in your field or organization.
- Create a digital tool policy for your library and address these issues on your library website.
- Create partnerships with campus partners thinking critically about using educational technology or digital tools, such as Information Technology Services or Centers for Teaching and Learning.

Conclusion

Librarians have a trusted expertise in the academic community. Careful reflection about our professional responsibilities in regard to how we use emerging technology and the digital tools we adopt into our spaces and classrooms is necessary for moving forward. In assuming a proactive role, librarians can better adapt to the challenges generated by the dynamic digital environment. Digital literacy, with specific attention to personal information related issues, should be further embedded into current information literacy work. Librarians have an important role in furthering social responsibility in the digital domain, a space of anonymity with potential for misuse, which presents a greater risk for marginalized populations. This can be achieved by advocating for positive digital citizenship and speaking out against social injustice in online environments. One of our greatest defenses against this threat is reflection: reflecting on digital tools from a pedagogical viewpoint and fostering reflection about emerging technologies in our users. In assuming these fundamental roles, we conserve our ethical ideologies, the missions of our institutions, and the values of our profession.

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