Eight Basic Literacies for Librarians:

A New Normal Agenda for Librarianship Education in a COVID-Affected World

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Abstract

Libraries are one of the few remaining public commons in U.S. society. As one of the last free places in society, public and school libraries bridge the digital divide to offer everyone free access to quality information and technology which is essential especially in times of crisis. During the COVID-19 pandemic and in other local emergencies such as natural disasters, libraries and library staff have been pressed into offering other important services needed by society and government, from educational and vocational support to crisis assistance. The many new roles that libraries, librarians, and library staff have been asked to fulfill raises questions as to whether education for librarians is keeping up with expanding needs. This paper recognizes the key role that libraries, librarians, and library staff occupy in our information ecosystem in a pandemic-affected world, and proposes eight new basic literacies for LIS education to better prepare librarians for a COVID-affected world.

Introduction

Libraries in the U.S. provide a common space for people of the community from all walks of life, offering unfettered access to information, resources, and services, and removing barriers to access for those unable to pay for subscriptions, Internet access, or technology. Libraries offer education and socialization through book groups and more, including film showings and entertainment events in music, art, science, history, technology, local civics events, health and exercise events, and practical training in areas such as cooking, gardening, Further, libraries serve as "the people's university," providing free classes, workshops, lectures, question-answering services, homework help, and one-on-one training sessions. As one of the last free places open to all, libraries and librarians are uniquely situated to address information challenges in a pandemic-impacted world.

During the COVID-19 pandemic, libraries provided vital community support hubs for information and broadband access. In March 2020 as K-12 schools and universities closed down or shifted to all-online classes, libraries offered wireless hubs supporting classes and homework that served as a lifeline for those lacking home broadband digital access. (American Library Association, 2021) Librarians and library staff taught people to use technologies, provided distance education test proctoring, and offered expanded access to online books, articles and databases. As people sought information about sewing masks and making homemade hand sanitizer, some library makerspaces 3-D printed face shields for health services providers in their local communities. (Balzer, 2020) Libraries also partnered in community health efforts to distribute free masks (Urban Libraries, 2020), distributed lunches for children who lost free

school lunches when the schools closed down, and even operated "seed libraries" giving free vegetable seeds to families to grow their own food.

These examples and many others, such as librarians teaching job search skills for the unemployed, providing cooling or warming centers in weather emergencies, and helping people access state, federal and local government services show libraries increasingly playing larger roles in communities. Beyond the core library mission of supporting reading literacy, libraries are well situated to play a greater role in supporting community needs in health, science, civics, emergency preparedness, and cultural heritage – success in which will also require technology and teaching skills, and some financial knowledge. This paper therefore proposes eight new literacies for library and information science (LIS) education to help to better prepare future generations of librarians for a COVID-affected world.

Eight Basic Literacies for Librarians: A New Normal Agenda for LIS Education

LIS education for a COVID-affected world necessitates better supporting librarians and library staff with training in areas that would help them to make an impact in supporting information needs and addressing critical problems that face today's society in a time of global pandemic. The following eight new basic literacies for LIS education are proposed with the goal of better preparing librarians for a COVID-affected world:

1. Health literacy - all librarians should be educated in health and medical literacy, to better understand and more effectively support information seeking, sharing, and understanding of health information for themselves, their families, the general public, and their local community.

2. Science literacy - During the pandemic, lives were endangered by misinformation and disinformation presented as science. Science literacy would help librarians support STEM education, design assessments, and teach the public to better understand science and reject misinformation.

3. Civics literacy – basic knowledge of civics would help librarians teach the public about government functions such as elections, voting rights, running for office, legislative processes, courts, government agencies, the Census, and access to government information -- issues greatly impacting libraries, communities, states, and the nation.

4. Cultural heritage literacy - every community has a local history. Cultural heritage literacy would help librarians identify and preserve truths and stories that might otherwise be suppressed, by conducting photographic, oral history, and digital cultural heritage efforts to preserve the legacies, culture and voices of people who might otherwise vanish from the historical record.

5. Teaching literacy - many librarians have had little training in teaching, yet often are immediately placed into teaching assignments. Basic teaching literacy would help librarians design and deliver effective classes, workshops, programs, and educational videos.

6. Technology literacy - as COVID-19 lockdowns demonstrated, technology expertise is essential for librarians in a digital world. Computer conferencing, web and social media, and

even 3D printers became game changers in a world of pandemic lockdowns, home schooling, and sudden scarcity.

7. Financial literacy – librarians often learn on the job to manage budgets and negotiate vendor contracts. Financial literacy training would help librarians in grant-writing, advocacy, and managing budgets for libraries, and support sustainability of both libraries and library projects.

8. Emergency services literacy - many librarians are faced with community emergencies in this new era, including not only global pandemics but also climate-change driven wildfires, floods, hurricanes, in addition to natural disasters such as earthquakes. Emergency services literacy would help librarians be better prepared for climate change impacts, public health crises and natural disasters, and better able to safeguard the library and serve the community.

The following sections will take each of these recommended areas in turn and discuss why these new literacies for LIS education are important for all librarians in a pandemic-affected world.

Health Literacy

One of the critical challenges for people in a pandemic searching for accurate information is that many sources traditionally seen as vetted, authoritative, and trustworthy increasingly now are locked away from the public behind paywalls, requiring costly subscriptions for access. Not only are scholarly research articles and national newspapers increasingly inaccessible to the non-paying public, but even small local newspapers have become inaccessible behind paywalls. Additionally, individual content creators such as bloggers, podcasters and video creators have started to lock away their content behind paywalls in subscription systems such as Substack and Patreon. So, as access to quality content in academic and scientific journals, metro and local newspapers, and individual content creators diminishes, an information gap has widened which has rapidly became filled with misinformation and disinformation, particularly on social media. Misinformation is generally seen as incomplete, incorrect, false or misleading information in context, while disinformation in context is deliberately false information. (Cooke, 2017, p.213) A variation frequently observed in social media is the disinformation campaign explicitly intended as an attack to inflict harm, which is sometimes referred to as malinformation. (Turcilo & Obrenovic. 2020, p.8)

Librarians by training are well suited to the challenge of countering misinformation and disinformation. In their graduate education programs, librarians learn information literacy skills that include understanding how information is created, used, managed, and applied to meet needs in context (SCONUL, 2011). In professional practice, librarians are often called upon to educate the public in information literacy skills that include not only teaching how to use library resources, but also how to think critically in evaluating and selecting information (Goodsett, 2020, p.229) This role of teaching the public critical thinking skills is reflected in ACRL's Framework for Information Literacy for Higher Education (2016), which uses six frames for understanding information which include educating learners with awareness that authority is constructed and contextual; that information creation is a process, and that information has value; that research is a process of inquiry; that scholarship is a conversation; and that information searching is a strategic exploration. Hotez (2021, p.6) noted that a critical issue hampering

efforts to combat the COVID-19 pandemic was a massive disinformation campaign by Russian trolls and bots against mask-wearing and vaccines -- an "infodemic" that sabotaged public health literacy. Hotez also pointed out that there currently is a gap as far as a research and educational programs in U.S. universities that are focused on deconstructing these types of health or anti-science misinformation campaigns and countering with effective health literacy communication.

Librarians were already involved in community health efforts before the COVID-19 pandemic. Public libraries in particular had responded to the opioid crisis in local communities with efforts such as training library staff to use the drug naloxone to help reverse overdoses in addition to other emergency health skills such as CPR and Stop the Bleed training, Mental Health First Aid, and Trauma Informed Care (Coleman, Connaway & Morgan, 2020; Chase, 2020; Real & Bogel, 2019). Other programs and services offered by libraries to address the opioid crisis have included support for navigating social service programs; training in life skills such as nutrition, finances, health, and career development; sharps disposal; drug disposal for unneeded medications; and distribution of free naxalone kits and comfort kits of shampoo, deodorant, and snacks. (Real & Bogel, 2019; Chase, 2020; Coleman, Connaway & Morgan, 2020)

University and health libraries have long been involved in innovating with resource and service provision in the health area. Nova Southeastern University's Library partnered with occupational therapy faculty and students to 3D print prosthetic hands for children (Johnson et al., 2014), and New Hampshire Medical Center Libraries embedded an "Ask a Librarian" button into electronic medical records to better support healthcare providers (Matthews & Flake, 2015), Libraries have also supported health literacy with training programs in public libraries that have included basic health from nutrition to wellness activities such as exercise programs, and advanced health literacy training in university libraries that has covered health and medical literature searching, citation management software, scholarly publishing, and funding resources for the health sciences (O'Malley & Delwiche, 2012, p.285) In the COVID-19 pandemic, public libraries also distributed thousands of masks to the community (Urban Libraries, 2020).

Health care often requires the public to make difficult decisions about their own or a family member's health and treatments, sometimes without having had an extensive amount of time to ask questions of doctors and health care providers. In the COVID-19 pandemic, people not only had to make decisions in a situation where little was yet known, but also faced a deluge of misinformation and disinformation. Providing basic health literacy skills in LIS education would enable librarians to address the unique health information needs of their local communities while also helping to combat health misinformation and disinformation to better support public health.

Science Literacy

Anti-science misinformation and disinformation has been an ongoing problem of the pandemic-affected world. During the COVID-19 pandemic, anti-science disinformation campaigns against both vaccines and mask-wearing resulted in what Hotez (2021, p.4) called an undermining of public confidence in vaccines. Lack of training in critical thinking skills resulted in many people being unable to effectively evaluate and reject unscientific claims and becoming vulnerable to disinformation campaigns and conspiracy theories. However, Carroll (2020, p.307) has argued

that even graduate students entering degree programs in STEM fields often are lacking in basic scientific process skills of finding and evaluating primary literature and thinking critically to assess evidence, and therefore has called for academic and medical librarians to take on a greater role in helping students to "read and process information like scientists."

Goodsett (2020, p.241) similarly has advocated for the importance of librarians teaching critical thinking skills as part of information literacy instruction, pointing to critical thinking elements already embedded within many of the profession's information literacy standards and frameworks. Examples of critical thinking skills already embedded within information literacy standards include: analyzing evidence and drawing reasonable conclusions, critically examining content such as ideas and arguments, evaluating for accuracy and validity, and assessing authority. (American Association of School Librarians, 2017; Association of College and Research Libraries, 2016; SCONUL, 2011) These skills in better understanding of science not only can support education, innovation, and vocational advancement in the community, but also can help the public to better evaluate misleading anti-science claims for better decision-making. Hotez (2021, p.2) warned that widespread anti-science disinformation can become dangerous and even life-threatening, such as by causing the public to avoid mask-wearing and vaccines that would protect them in a global pandemic.

Librarians already have been highly active in promoting science to the public. Not only have libraries been the "go to" place for books and information resources about science, but with the rise of the 'library of things,' (Brown, 2015) some libraries also now offer scientific equipment for home use such as telescopes, microscopes and more. During the solar eclipse of 2017, many public libraries partnered with NASA to distribute eclipse viewing glasses to the public and helped educate the public about how to safely view the eclipse. (Peters, 2017) Libraries also regularly offer science workshops, programs, and classes for a wide range of topics and age ranges, from public library programs teaching children about dinosaurs and space, to academic library workshops teaching university researchers about data science and open science data repositories. (Roy & Sholler, 2019). It would not be seen by the public as unusual for librarians to take a more central and active role in providing science literacy instruction to the public. Providing basic science literacy in LIS education would help librarians not only to support science education efforts but also to aid in supporting critical thinking skills for the public.

Civics Literacy

In today's world, misinformation and disinformation has created confusion around for the public around government and civics information, including electoral processes. Yet, for the public in a participatory democracy, civics literacy is essential to understanding how American government works, and to understand one's own responsibilities as a citizen. However, Cohen (2017, p.10) noted the problem that other than high school civics education, there is little opportunity for U.S. citizens to learn civics knowledge, such as basics of government – and indeed, not every high school student in the U.S. receives even the most fundamental level of civics instruction.

Kranich (2020, p.134) advocated that information literacy frameworks from AASL and ACRL should incorporate civics literacy as part of the information literacy standards, pointing to a long

history from 1940 to the modern day of ongoing discussions about librarianship's role and responsibility in supporting democracy. Notably, however, LIS graduate programs do not uniformly or consistently provide librarians with training in civics education. The programs which do provide this type of training typically offer an elective in Government Information or Government Documents, but often such courses are geared primarily toward training a smaller subset of LIS students interested in becoming federal depository librarians or working for government agencies.

What might a more generalized approach to teaching civics literacy for librarians look like? Cohen (2017, p.10) outlined four key components of civics literacy including 1) basic civics knowledge, 2) critical thinking skills, 3) knowledge of how to be an active citizen, and 4) ability to engage civilly in a civics dialogue with others. Positioning the library at the center of civics literacy empowers librarians to not only provide key civics information about government functioning and issues of the day, but also to organize activities and events that engage the public in thinking about, talking about, and joining together to discuss solutions to community and public policy issues. (Kranich, 2020, p.145)

Libraries already have taken on a growing role in supporting e-government services for the public, including providing tax forms that used to be available through post offices, helping with computers and Internet access to apply for government services, and serving as depository libraries with collections of federal, state and local government documents (Bertot et al., 2006). Some libraries even offer passport application services. (Meise, 2016) The library already plays a major role in connecting the public with government information and services. By providing civics literacy in LIS graduate education, librarians would be enabled to better engage with the community in improving public understanding of government processes and functions, and the roles and responsibilities of citizens in maintaining a participatory democracy.

Cultural Heritage Literacy

Part of the challenge of countering disinformation is in countering attempts to bury or hide truth. It has been said that "history is written by the winners." Those who hold wealth and power are easily able to tell their stories, and to have their stories preserved as the official history published in textbooks and taught in schools. It is much more challenging to preserve and share the information of those who lack power in society. This is one of the critical roles of memory institutions such as libraries, museums and archives -- helping those in our community who lack the access and power to share and preserve their stories, history, and cultural heritage.

The existence of libraries, archives and museums has been part of preserving truth in first-person narratives of formerly enslaved people, information about the 1921 Tulsa Massacre, sundown towns in the U.S., and many other stories and accounts of people's lived experiences that might otherwise have been lost or suppressed. Nosrati (2018, p.265) refers to a 2015 report from the Council of Canadian Academies calling for memory institutions such as libraries to not only collect and preserve cultural heritage, but also to use digital technologies to "provide opportunities for the public to both access *and contribute* materials." Preserving cultural heritage encompasses both the tangible and intangible (Cloonan, 2018; Botticelli, 2021), ranging

from visual and written works to ephemera of storytelling, speech and cultural traditions. Öztemiz (2020, p.819) refers to cultural heritage literacy in the context of both tangible and intangible products that have cultural or historical meaning, while Hirsch (2001) points to the understanding and appreciation of cultures beyond one's own.

Some LIS programs have also already integrated coursework in diversity, equity and inclusion, and cultural competency into the LIS curriculum (Winston, 2001; Cooke, Sweeney, & Noble, 2016; Singh, 2020) in seeking to equip librarians with skills for working with diverse populations. Cultural heritage literacy in LIS education would build upon cultural competency training in providing librarians with essential skills for working together with the local community to identify, preserve and share cultural heritage information and resources for the benefit of future generations.

<u>Teaching Literacy</u>

Teaching, often referred to as "bibliographic instruction," has long been part of the work of librarians. Drabinski (2017, p.85) referred to information literacy as the "teaching location" which situates librarians within academia, placing the teaching of information literacy skills as the particular responsibility of libraries and librarians. While much of this instructional activity is handled one-on-one in assisting individuals with library resources and technologies, increasingly librarians are also tasked with teaching groups of learners in classes, workshops, and programs that range from children's storytimes to classes for graduate students and faculty. Green (2019, p.11) noted also that librarians are often asked to participate in instructional partnerships, co-design classes or trainings, and even to teach as lead instructors. More recently, teaching responsibilities of librarians have expanded into new areas such as data literacy and makerspace emerging technologies.

In a 2017 survey of 1,115 U.S. librarians, less than 7% felt that formal instruction on how to teach would not be helpful to them (Curtis, 2017, p.31) However, few ALA-accredited programs actually provide a course to train librarians in teaching skills as part of their LIS graduate education. Armstrong (2019, p.381) noted the importance of librarians continuing to improve their teaching expertise throughout their careers, including adapting their teaching to different learners, different learning situations, and to changes in the production and dissemination of information. This suggests that librarians who may not have received training on teaching skills during their LIS programs must first teach themselves *how* to teach (often under extreme pressure, such as by being assigned to the bibliographic instruction rotation schedule) and then must also continue investing time, effort, and personal funds on improving their teaching skills.

The potential inequities of this situation should concern LIS program educators. Teaching is essential for librarians, as even those in non-public-facing roles still are likely to be asked to teach in-service trainings. However, not all will be equally able to pay for extra training, such as costs of attending extra workshops or conferences. These financial barriers will be especially challenging for librarians and library staff already disadvantaged by the lack of generational wealth due to racism and discrimination.

Since teaching is an essential part of librarianship, LIS programs of the future clearly should include this training as part of graduate education. In a pandemic world, excellent teaching skills can have an important impact in combating misinformation, disinformation, and malinformation, possibly even saving lives in the case of helping the public to learn the information literacy and critical thinking skills for evaluating claims about vaccines and health treatments. To be successful in teaching key literacies to the community, librarians of the future would benefit from being provided with basic teaching literacy skills and knowledge about learning and learners as part of their LIS graduate education.

Technology Literacy

The COVID-19 pandemic has made clear the importance of remote access digital technologies for libraries. With library buildings closed during a pandemic lockdown beginning in March 2020, it became critically important for librarians to pivot as quickly as possible both to working at a distance, and also to making the library's information resources and services optimally available and accessible online. Technologies for communicating with the public, sharing resources online, and extending the reach of the library's wifi all became vitally important.

With roughly one out of four Americans lacking broadband access at home, news stories regularly showed people sitting in their cars in library parking lots to use the library's wifi for jobs and informational needs, and for children's schoolwork (Kang, 2020; Pew Research Center, 2021). As library buildings closed, librarians worked to renegotiate digital resource contracts restricting some subscription databases to in-library use only, in order to make that access available to the public online,

The critical importance of technologies in the pandemic extended to other areas of library activities as well. With health care providers in danger from the lack of personal protective equipment (PPE), both public and university libraries with makerspaces donated their 3D printers to efforts to print face shields for hospitals and healthcare workers who lacked sufficient PPE (Balzer, 2020). Librarians also worked to support parents who needed help teaching school-age children at home during the pandemic by providing storytimes and other library programs online, as well as offering take-home learning activity kits and curbside pickup and dropoff services. Computer conferencing programs such as Zoom and Skype gained increased importance for librarians in working with the public.

Librarians have long held an important role in teaching people how to use technologies, such as technology learning for children and teens, but public library staff in particular have been a key lifeline of support for older adults needing help in navigating an increasingly technological world. During the COVID-19 global pandemic, 31% of Americans described themselves as needing help setting up new digital devices, and 26% stated that they usually needed someone else to set up a device or show them how to use it, but those numbers were much higher among older adults, with 66% of those over age 75 and 48% of those aged 65 to 74 needing help (McClain et al., 2021). Drop-in clinics for helping older adults with technology have been a common service offered by public libraries. During the pandemic, this need for technology literacy took on a new importance since technologies became a primary means for access to a

wide range of vital information and services, including telehealth, vaccine appointments, online shopping, and grocery delivery.

With the powerful impact of the global pandemic in elevating the importance of digital technologies and shifting a wide range of interactions and services online, libraries and librarians are positioned to be ongoing leaders in teaching and helping the public with technologies. Providing technology literacy for librarians in LIS education is therefore important not only in enabling librarians to support the public with digital technologies and online resources and services, but also in supporting ongoing public learning and innovation with emerging technologies in library makerspaces, as well as supporting local cultural heritage preservation projects in text, audio and visuals, and making these resources available to the community online.

Financial Literacy

Librarians face many challenges on the job in managing financial aspects of library operations. Beyond managing library budgets and staffing, other financial literacy areas are involved in taking on and sustaining new library projects, and keeping the library open with its resources and services fully available to the public.

One example in financial literacy is library advocacy. In the U.S., public libraries often are dependent on local millages which require voter approval for increases in funding (Parker, 2015). Frequently libraries are in competition for available funds with other organizations, such as other departments in a county or local municipality, or other academic units on a campus or in a K-12 setting. Librarians may also need to engage in regular grant writing to bring in funds for new or ongoing library projects, and may find outreach efforts also are necessary to connect with donors and sponsors who may agree to provide funding or donate other needed resources to support for library activities.

Licensing issues represent another key financial literacy aspect for librarians. In obtaining new databases or renewing previous purchases, librarians must negotiate contracts with vendors, requiring not only good abilities in understanding contracts and licensing agreements, but also a good understanding of how the public will want and need to use these resources in order to negotiate for favorable terms. (Mattson & Schneider, 2013) In a pandemic-affected world, librarians may increasingly need to negotiate for online and remote access needs as well as to consider in-library use and non-affiliated users – for example, unhoused people, refugees, tourists, and others temporarily in the local community.

Overall sustainability of library projects is also an important financial literacy concern. For example, both Eschenfelder et al. (2019, p.190) and Pandey and Kumar (2020, p.29) identified digital cultural heritage issues that included the need for diversified and reliable sources of funding, such as contracts, grants, fees or other revenue streams. Related considerations included partnerships, planning, and awareness of costs and expenditures in seeking to establish sustainable projects. Johnson (2016, p.4) also raised financial sustainability issues in discussing a digital cultural heritage project which exceeded estimated time, causing the library to absorb costs for extra hours. Funds are needed for not only for launching digitization and preservation

efforts but also for completing project and sustaining longterm public access. (Pandey & Kumar, p.29) Providing financial literacy skills in LIS education would support librarians with the abilities needed to maintain funding for the library and for library projects, activities, and resources.

Emergency Services Literacy

COVID-19 not only tested the emergency preparedness of libraries to provide resources and services to the public during a worldwide pandemic, but for some libraries even represented a concurrent disaster when they simultaneously experienced other extreme weather crises exacerbated by climate change. Wildfires in California temporarily closed some libraries during the pandemic (Peet, 2020), while in Iowa a derecho damaged libraries in August 2020 (Peet, 2021). In Louisiana, Hurricane Henri and Hurricane Ida hit within weeks of each other in Fall 2021, and Ida was so powerful that it continued onward to hit the East Coast, costing lives and also damaging libraries in New Jersey and New York (Mechler, 2021).

Libraries have long supported the local community during emergencies, such as by providing a staging zone for first responders, or serving as a cooling center for the public during extreme heat. Following a community disaster, librarians must be prepared to act. This might include activating a disaster plan, reaching out to staff using a phone tree, and communicating safety information to both the library staff and the community (Kehnemuyi, 2021). Libraries not affected by the disaster might also take a more proactive role in working to assist people in the community who need help and information – a role which Veronda Pitchford of Califia refers to as libraries serving as "second responders." (Peet, 2021)

For librarians in a pandemic-affected world, LIS education in emergency services literacy will empower them to better protect themselves and their communities, safeguard their libraries and staff, and be better able to help others when disaster strikes.

Summary

Forces waging disinformation campaigns to suppress truth and dismantle democracy are actively engaged in anti-science and health disinformation activities, and are seeking to censor and suppress cultural literacy efforts, raise barriers to participation in government electoral processes, and to block efforts to address or even discuss climate change.

The eight literacies proposed here for LIS education in a pandemic-affected world provide an interlinked set of skills to address areas that librarians of the future will need to combat misinformation and disinformation, and to support the safety, health, and educational needs of the community while also strengthening and sustaining the library's ongoing presence within the community. These eight areas include health literacy and science literacy in order to help people navigate misinformation and disinformation; teaching literacy skills to communicate more effectively with the public; civics literacy to better understand and support public participation in government and electoral processes; cultural heritage literacy to help people tell their stories and preserve their information so that the truths and the lived experiences of people from all backgrounds and all walks of life in our society cannot be hidden or suppressed; emergency

services skills for survival of the library and community in a time of pandemics and other crises; and basic financial skills and technology skills to sustain and support all of these efforts. These new basic literacies for LIS education are proposed here to help the next generation of librarians better meet the needs of a pandemic-affected world.

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