The Digital Divide and Poverty
How Library and Information Science Professionals Can Help Bridge the Gap

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Abstract

This paper provides an overview of the digital divide due to economic inequality. Other reasons for lack of access and knowledge of digital technologies, such as educational level or mental disability, are not discussed in the scope of the research, although often such disadvantages overlap one another. Terms addressed in the literature include digital literacy, digital inclusion, information literacy, and information poverty. These terms are defined within the paper, followed by a discussion of how poverty worsens the digital divide, and how the digital divide equally exacerbates poverty. Policies and initiatives proposed or enacted to alleviate the digital divide among low-income households are discussed and analyzed, as well as what the future responsibilities of library and information science professionals are in providing digital inclusion to the poor. In providing an overview of the current state of the digital divide in low-income households, a clearer view of what is needed going forward can be addressed.
Introduction

The gap between those who have accessibility to digital technological resources and those who do not is a very complex and extensively discussed topic in the library and information science profession, as well as in wider realms of scholarship and study. Labeled as the “digital divide”, this issue is ever-present, both within post-industrial societies and between developed nations and underdeveloped nations. The divide can refer to more than just access, as technical help and training also are needed to truly eradicate information inequality. Using digital resources is increasingly becoming a vital part of daily life, and marginalized and low-income populations are being further sidelined from the rest of society due to this societal change. Not having access to and knowledge of digital technologies negatively affects one’s educational and employment opportunities, as well as access to health and government information. There are many reasons why people may not have access to digital information, including mental or physical disabilities and geographical location; however, for the scope of this paper, the focus is on the digital divide faced by those living in impoverished or low-income households, particularly in the United States. The need to fully understand the disparity and implement initiatives which enact positive change is studied, theorized, and written on extensively in library and information journals. This paper focuses on the review of several articles which help in defining and addressing the problem of the digital divide and poverty, followed by a brief discussion on the significance of the issue in the library and information science field and the future implications and practices for information professionals to embrace in order to work toward equality.

Literature Review

Defining the Terminology

There are several terms surrounding the discussion of the digital divide which help in clarifying what is meant when talking about the problem. To begin with, “digital divide” itself has been defined in various ways since the 1990s. Such definitions range from larger, global views, such as the discrepancy between parts of the world which have easy access to loads of information technology and parts of the world which do not have that access, to more narrow definitions which focus on the disparity between individuals who have the skills and knowledge to use information technologies and those individuals who do not (Aqili & Moghaddam, 2008). Certainly, the concept of the digital divide has grown more complex as
technology has advanced in the past decade. Initially, the term became popular after mentioned in the 1998 National Telecommunications and Infrastructure Administration (NTIA) report which illuminated the inequalities in access to computers and the Internet in the United States (Cancro, 2016). Other terms such as “digital literacy” and “digital inclusion” are becoming increasingly central to the discussion about the digital divide, and define problems in inequality that go beyond simply having access to technology. Digital literacy means having the skills and knowledge needed for successfully utilizing digital technology, and digital inclusion encompasses the outreach and policies developed in order to provide digital access, as well as teach digital literacy, in efforts to close the gap (Jaeger, Bertot, Thompson, Katz, & DeCoster, 2012).

Along with digital literacy, there is a term called “information literacy” which is important to the digital divide discussion. As more and more information can solely be accessed in digital format, the need to be information literate is increasingly necessary. Information literacy, as defined by The National Forum on Information Literacy, means “the ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand” (Jain & Saraf, 2013, p.48). This term applies to the digital divide because information illiteracy is directly impacted by lack of access to and knowledge of current digital technologies. Alistair S. Duff (2015) posits that as information expands rapidly and society relies more and more on digital technologies, the marginalized poor will be further ostracized due to the lack of resources and knowledge available to them. This begets the term “information poverty” or “information poor”. Information poverty describes a lack of information due to digital and information illiteracy which causes a further disadvantage, one which causes socio-economically poor persons to lack something that is considered normal in society to possess (Duff, 2015).

Poverty and Digital Exclusion

The link between poverty and the digital divide is rather complex. The rate at which the digitization of information is happening is in many ways exacerbating the existing inequalities between the poor and the rest of society (Cancro, 2016). In other words, before even being able to tackle the much larger societal problems of inequality and poverty, the emergence of digital information technologies has further marginalized the nation’s poor. Even when people can finally afford the cost of a personal computer, other investments are necessary such as the cost to maintain the computer, the cost of
broadband Internet connection, and the cost of digital literacy training, which many low-income households cannot afford (Wong, Ho, Chen, Gu, & Zeng, 2015). Amy Gonzales (2016) has introduced the concept of “technology maintenance” when discussing the continuing costs that technology access requires. As access is made available to the poor either at home or in public spheres, the divide will start to focus on the differences in the capabilities of maintaining the access (Gonzales, 2016). This discrepancy ultimately affects whether using information technologies provides a positive benefit to the user, as low-income users experience a much higher frequency of malfunction, disconnection, or other limitations of access in comparison to more privileged users (Gonzales, 2016).

Cleary, Pierce, and Trauth (2006) support Gonzales’s comments with clear data about the growth of Internet use in low-income households, which was growing at a rate of around 25% at the time of their research. Unfortunately, the total cost of ownership (TCO) of technology needed to access the Internet (which is very much related to the technology maintenance concept) is much more difficult to sustain—as much as three to four times costlier than the initial price of a computer (Cleary, Pierce, & Trauth, 2006). This research is to show that while access was once the main limitation to low-income persons, it is now becoming more ubiquitous and policies which once focused on the furtherance of access must now focus on providing maintenance and education of digital technologies for low-income users—these policies will be explored in the next section.

The lack of dependable Internet access to low-income households in a society which has made online participation in many ways required, causes low-income persons a loss of job opportunities, educational advancement, access to social services, and even a loss of more cost-effective consumer purchases (Shapiro, 2015). In determination to have these opportunities available, some low-income persons have opted for smartphones in order to access Internet resources, as smartphones are cheaper and more accessible than computers and expensive broadband Internet connection (Park & Lee, 2015). Research determined that “smartphone-only” users had lower educational levels, lower incomes, were more likely to be ethnic minorities, and were less confident in their ability to locate information online (Park & Lee, 2015). Shapiro (2015) admits that smartphone use is better than no access at all, but mobile devices limit the kind of tasks a person can perform online, such as draft a resume and apply for a job. Even more, the Pew Research Center found that around half of “smartphone-only” users have to
terminate or freeze their service due to financial limitations (Shapiro, 2015). Thus, the struggle that low-income households face in attaining and keeping access—dependable access—to online resources has not been solved through smartphones.

**Bridging the Divide**

In looking at the wealth of research conducted on the digital divide experienced in low-income households, it is clear that there is not a fix-all solution. There have been many approaches and initiatives put in action by the national and state governments, some which have certainly made a difference and some that have not. Under the Telecommunications Act of 1996, the E-Rate program was enacted which has given billions of dollars to providing Internet connectivity in schools and libraries over the years; in fact, essentially all public schools and nearly half of public libraries have benefited directly from the E-Rate program (Jaeger, Bertot, Thompson, Katz, & DeCoster, 2012). Another initiative created by government agencies is DigitalLiteracy.gov—an instructional website which seems to speak directly to people who do not have digital access or literacy, rather than geared toward community institutions on the frontlines of bridging the divide, making the site problematic and ineffective (Jaeger, Bertot, Thompson, Katz, & DeCoster, 2012).

The Federal Communications Commission has put forth many initiatives in narrowing the digital divide—a 2015 initiative as cited in the article by Shapiro (2015) proposed updating the Lifeline program that provides access to telephone service for low-income households to include broadband Internet service in order to help narrow income inequality. It can often be difficult for low-income persons to access the Internet at libraries and other public centers due to inflexible job schedules, lack of childcare, and lack of transportation (Shapiro, 2015). For school-aged children in low-income families, having to access the Internet at a library means they may have to miss extracurricular school activities which could eventually reflect poorly on college applications (Shapiro, 2015).

Despite the advantages of in-home Internet connection, libraries are still the main access point for computer use and digital literacy training for many disadvantaged people—relied on more heavily than other cultural institutions to foster and promote digital inclusion (Cancro, 2016). This importance placed on libraries to help eradicate digital inequalities means it is vital that librarians and those in the information field must invest in advancing their own skills, be flexible and open to new technologies, and campaign for
policies that help sustain and grow library services for the impoverished (Aquili & Moghaddam, 2008). Unfortunately, while government policy-makers wish to rely on public libraries as the frontline of digital inclusion, library funding has decreased, placing increased strain on library staff and resources to provide adequate help (Jaeger, Bertot, Thompson, Katz, & DeCoster, 2012).

Cleary, Pierce, and Trauth (2006) propose a three-part strategy to achieve digital equality: first, to provide in-home broadband Internet access through encouraging market policies which decrease the TCO; second, to continue supporting and enhancing broadband Internet technology to public libraries and community centers; and lastly, to make available training and technical support to all users, everywhere. As for information literacy, Duff (2015) asserts that the government is now duty-bound to ensure the worst off in society are properly informed, that there must be a human right to information, and information poverty must be alleviated.

Discussion

It is clear that the digital age has left many people behind. Income inequality presents many hardships to people in the United States, and now that job postings are often only listed online and applications are often submitted digitally, people struggling financially are put in a challenging position to find adequate work. Not to mention the digital age has created many new jobs in the tech industry and many jobs not even in the tech field require some amount of digital literacy. Library programs are a free public service that need to be marketed to low-income persons who will benefit from the resources and classes provided. The research presented in many of the articles reviewed in this paper points to the educational and career benefits that digital literacy and information literacy provide. Conversely, the effects of not having dependable access and knowledge of computers pulls people further into poverty. For society to flourish, digital technologies must be made available to every citizen, and every child must be given a fair opportunity for success. With the digital divide as it is, this is not the case — low-income children are not given a fair chance to succeed when other children in their classroom are able to do research, excel at schoolwork, and utilize educational tools in the convenience of their home at any time.

The future of the digital divide is largely in policy-makers’ hands, but on a local level, public libraries need to take initiative in creating a community of digital inclusion and advocacy for low-income persons to succeed in a digital world. This can be done through community outreach and quality public
programs. Funding is a never-ending issue for public libraries, and making the most of the resources and skills available is extremely necessary. Finally, becoming active in civic engagement to help get legislation and policy passed which will help libraries provide better services to low-income people is imperative, and holding library administration and city managers accountable to the proper allotment of funds for current technologies and trainings.

Conclusion

This paper is an overview of the digital divide faced by low-income people. There are many more complexities and discussions to be had about reasons for the divide and how actions are failing or helping in narrowing the inequality, and these are beyond the scope of this paper. Through determining the meaning of many terms in the digital divide discussion, the ways in which the poor experience disadvantages in the digital world, and what kinds of solutions are available to help bridge the gap, it is hoped that future library professionals will take their place in the good fight to eradicate inequality. Through providing digital access and digital literacy training, library and information professionals are providing something even more meaningful, and that is equal opportunity to succeed.
References


