Meggie A. Lasher. Logging In to Life: Examining the Digital Divide through the lens of ELIP and Library as Place. A Master's Paper for the M.S. in L.S degree. April, 2017. 70 pages. Advisor: Dr. Amelia Gibson.

This study aims to understand how individuals who participate in basic computer classes navigate life within the digital divide. Much of the literature available about the digital divide and literacy takes a reductionist focus on the abilities of those learning how to use computers. This study incorporates the literature and frameworks from Everyday Life Information Practices and library as place to inform the direction of the study. The goal of the study was to examine the information practices of older adults in computer classes and gain insight on how they have developed strategies to live in a technology centric world. Overall, the study found that these individuals are creative and resilient when it comes to navigating the digital divide. The implications of this study can be applied to future understandings of the library as a learning place, a positive approach to LIS research, and accessible and adaptable system design.

Headings:

Digital Divide

Digital Literacy

Everyday Life Information Practices

Library as Place

Public Libraries/ Learning

Interviews/Adult Learners

LOGGING INTO LIFE: EXAMINING THE DIGITAL DIVIDE THROUGH THE LENS OF ELIP AND LIBRARY AS PLACE

by
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A Master's paper submitted to the faculty
of the School of Information and Library Science
of the University of North Carolina at Chapel Hill
in partial fulfillment of the requirements
for the degree of Master of Science in
Library Science.

Chapel Hill, North Carolina

April 2017

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INTRODUCTION

In 2017, it seems that much of our lives involve, or even depend on, a constant connection to the Internet. Access to the World Wide Web is now almost a requirement for many daily activities such as checking bank accounts, contacting others, or navigating to the grocery store. In addition to access, possessing the technology and the skills to use, understand, and evaluate the information presented online are also necessary to fully participate in our world. However, there are portions of the United State's population who have neither the access nor the skills to use these technologies. This lack of access is often characterized as a digital divide and the lack of knowledge about technology is aptly called digital literacy. (Thompson et al., 2014) Together the digital divide and literacy are either facilitating or hindering many of the activities and practices of daily life.

To help bridge the gap in our highly connected, technologically saturated world, libraries have become central community hubs of access, education, and services for those who wish to participate in digital daily life. The library's evolution includes a re-imagination of libraries as places where communities develop digital literacy skills. Understanding what the library represents or facilitates for patrons is helpful to better grasp how different user populations use the library. What people actually do in a library can also elucidate how to create and modify services that will best represent the wants, desires, and interests of library users, as well as potential ones.

In an April 2016 survey, the Pew Center examined the library and its educational role within communities. Those who use the library are more likely to use different types of technology. Library users are also people who use the Internet, own a smartphone, have Broadband Internet at home, and participate in social media. Individuals who did not regularly visit a library did use the Internet, but were less likely to own a smartphone, have Internet at home, or participate in social media. (Rainie, 2016) The library can act as a gateway to learning how to use other types of technology and incorporating it into daily life. Regular library users are what the Pew Center calls “personal learners,” or individuals who pursue self-enrichment and their interests. 84% of the participants who use the library engage in activities for self-development like reading how-to guides or attending meetings relevant to their interests. Over a third of these personal learners utilize the library as their learning launch pad and source for enrichment. Overall, the benefits of being a self-motivated learner at the library include feeling well rounded and capable, open to new perspectives, connected with the community, and able to make new friends. (Rainie, 2016)

Rainie (2016), states how 80% of participants believe that the library should offer programs to teach people of all ages how to use digital tools like computers, smartphones, and applications. A majority of respondents (77%) also believed that closing a library would have a major impact on communities. The researchers found that this impact could be considerable because of the many roles the library plays for different people; it can act as a safe place, gathering space, promote a sense of community, create education opportunities, and spark creativity. (Horrigan, 2016) Altogether, the library represents many things to many people; it is a valuable place across communities.

This study examines the conceptual intersection of *digital literacy* and *library as place* to describe an often isolated population —older members of communities who are new to computers. In this case, I will be concentrating on students in the Community Workshop Series formerly operated by the University of North Carolina at Chapel Hill. These students regularly attend basic computer classes in one of three local libraries; most are older and people of color. They use the library as a place to learn and develop new skills.

To better illustrate how this population uses information, I will be positioning their activities within the Everyday Life Information Practices framework. (Savolainen, 2008) This area of research will help frame the context of this population's information behaviors. In addition, the purpose of this paper is to fill a particular gap in ELIS/ELIP literature. Information seeking and gathering is a readily discussed and researched area, but the implementation and use of information is often not a focus. This deficiency is especially pertinent in the information use behaviors of marginalized or oppressed populations. While this group has regularly been part of information seeking studies, their use and application of information has not yet been examined. Understanding how information is used not only forms a clearer picture of the role of the library in people's lives, but also how it could impact the lives of potential users. Through the lens of Everyday Life Information Practices, we are better able to comprehend the extent of the digital divide and the capacity of the library as place.

Research Questions:

RQ1: How do adults learning about computers navigate a technologically driven world?

RQ2: What function does the library serve in the everyday lives of adult learners?

LITERATURE REVIEW

Everyday Life Information Practices

Foundational Literature

Savolainen's (1995) ELIS model focuses more on non-work information seeking, instead of exploring work or academic settings like much of the contemporaneous research on information seeking. Savolainen proposed that people use information in daily life to maintain the order or their "way of life." He also found that people sought out information to help them get through the day, and that this information was all shaped by their preferences and the relevance to this situation at hand (Savolainen, 1995; Bates & Maack, 2010). The life they lived shaped their needs and thus the nature of the information they sought. ELIS focuses on the roles a user plays in particular situations, demographics, and the context of information needs. Much of ELIS literature has expanded beyond Savolainen's 1995 work, but still centers on everyday life: what is routine, familiar, and ordinary (Savolainen, 2010).

In 2008, Savolainen extensively expanded his ELIS theory. He incorporated a full range of information behaviors to the ELIS model calling these everyday life information *practices*. He calls information practices an "umbrella concept that qualifies the ways in which people, seek, use and share information in work and non-work contexts." (p. 37) The expanded model aimed to be more inclusive of the range of information activities surrounding multiple contexts. Information seeking includes the identification, selection

and acquisition of sources. Information use combines a twofold process: the value assessment people make about their preferred sources and then how they factor in this new knowledge and wield it in their lives. Information sharing blends the social nature of information behavior with our everyday life practices; it describes the give and take of information between ourselves and others (Savolainen, 2008).

To capture contextual factors related to everyday life information practices, Savolainen incorporates the concepts of *life worlds* and *life projects*. Life worlds comprise the totality of our experiences from engaging in life projects. These projects are defined by a habitual way of doing things to keep order or organize our life worlds. Life worlds contain many different projects across space and time. As a whole ELIPs are made of these projects and these projects offer meaning to our practices. Together, practices and projects go hand in hand; they define and structure each other. (Savolainen, 2008) The theory and concepts that helped shape this understanding of ELIP will be defined in the next section.

Cox (2012) discusses the sociological concept, *practice theory*, and how it fits into LIS research, and how information activities mesh with social practices. Practice, by Cox's definition, is the acting, doing, or performing of an action where the meaning of the action is defined by what one is doing. Consequently, the same action can have different meanings when performed for a different purpose. From an information perspective, these practices require knowledge or some sort of understanding whether it is well-established knowledge or an emerging information need. Practices expand beyond an individual's context. Social groups can form around a shared practice; these are communities of practice. (Cox, 2012) For example, a scrapbooking club is a community

of practice. Together they participate in the action of creating and are connected socially by their shared activity and overlapping information behaviors related to the art of scrapbooking. Cox takes note that Savolainen's work contains elements of practice theory. Both Cox and Savolainen demonstrate a shift in interest from information behaviors to *practices.* Because the term information practice encapsulates a broader, and more dynamic, range of information behaviors, this paper will use information practice instead of information behavior.

Theoretical Lenses

Everyday life information practices research draws from several areas of LIS theory. The research detailed in this section of the review of ELIP surveys the contributions of other scholars that informed Savolainen's ELIS model. Dervin's insight on context and Sonnenwald's information horizons theory both provide the theoretical foundations to support ELIS. Chatman introduces, and Jaeger and Burnett then expands on, the relevance of one's world in the meaning of information practices. The literature review on ELIP then concludes with an overview of the population and activity specific practices of the intended participants of the study.

Because ELIPs intertwine with one's own life and meaning, a nod to Dervin's user-centered research is obligatory. Context is an essential facet of everyday life information practices. Without an understanding of context, we would lose much of the meaning surrounding the phenomena we examine. Dervin (1986) defines context as a "container in which the phenomenon resides… it is the 'carrier' of meaning for understanding human behavior." (p. 113) While an absolute definition of context is

difficult to ascertain, Dervin offers overarching themes to context that help supply a more cohesive understanding. These themes are as follows.

- Knowledge is partial and temporary.
- Reality is discontinuous, gap filled, and changeable across time and space.
- The know-er and the known are bound.
- Context is not useful if seen as an individual entity.
- Context requires a focus on process.
- It is a necessary source of meaning.

(p. 116-117)

In a sense, context is something we swim in like a fish in water, as Dervin describes. (1997) The fish does not know what water is, just that it is all around. Dervin argues that researchers must position themselves between the line drawn by postmodern and modern contextualists. The postmodernists wish to be free of the tyranny of systemization while the modernists worry that studying free form context will end in chaos. Dervin poetically says context may not be tame, but "we must be wild with such a wild beast." (Dervin, 1997, p. 130) Overall, Dervin's focus away from the bibliographic paradigm created room for the examination of information practices as holistic processes. Her research incorporates the individual as part of the process of knowledge construction. (Dervin, 1986) Without Dervin's work much of ELIP would not include context as an important factor in everyday life.

Everyday Life Information Practices also relies on the work of Diane Sonnenwald and information horizons theory. Sonnenwald, Wildemuth and Harmon (2001) investigated students' information source selection and relevance judgments related to

completing assignments and tasks in the sciences. The researchers found the selection of sources is bound in context, be it based on a system or even social aspects. The relevance of sources was also contextual; for example, time constraints or ease of access could all make a source relevant or negligible. Sonnenwald's work also contributes to the method of information horizon interviews. These interviews involve a visual representation of an individual's information horizon as well as a dialogue about the aspects of the map. (Sonnenwald et al., 2001) Together they create a strong tool for qualitative analysis in everyday life settings.

Chatman's work is essential in understanding the theoretical foundations of ELIP research. Her groundbreaking study about the information behaviors of women in prison laid the foundations for her theory. She narrates the role of information in what she calls a small world. Information is a performance with a certain narrative that is only understood by other members in the shared small world. In the case of the 1999 study, this small world was a women's prison. Additionally, information created in this context must also have use within that same context; therefore it must be pertinent to everyday life in this small world. Despite these small worlds often being disconnected or peripheral to the larger mainstream, there are systems of information in place. These systems are series of interconnected ideas, expectations, standards, and values. All of these facets of the system contribute to the specific meaning of information in this context. Life in a small world relies on activities that are routine and predictable, which are then bound by social norms that establish what is valuable and relevant to life within the small world. These constraints create a 'life in the round;' this is a life with an "enormous degree of imprecision and accepted levels of uncertainty," but with well-founded and implicit

understandings, language, norms, codes, and worldviews. A life in the round is also shaped by fellow insiders who employ their own knowledge of social norms to help their own social standing or roles. They can have more say over what is relevant or useless in the small world. This life in the round also receives its shape from boundaries; members in the round will most likely no cross boundaries to find and obtain information from outsiders. (Chatman, 1999) Chatman's work may have emerged from research with a specific population, but has come to be a crucial part of grasping an intimate understanding of the information behaviors of many different groups.

Paul Jaeger and Gary Burnett expand on Chatman's work by introducing the theory of information worlds. Both explain how this theory is a lens to understand the relationship between information, behaviors, and the social contexts wherein they exist. (Jaeger & Burnett, 2010) Information behaviors do not float through space like free forming clouds, but are bound and shaped by context. Influences like friends, family, co-workers, and other trusted sources that fit into an individual's small world give shape to context on a smaller scale. At a larger level, public institutions, media, technology, and politics may also determine contextual factors. There are five social elements of information world theory: social norms, social types, information value, information behavior, and boundaries. All exist on a spectrum and differ between people. These elements mold someone's information world; they interact and interrelate with each other. For example, an information world is its own social group, like a quilting class at a community center. Many small worlds meet in this context where boundaries cross and information is exchanged. The movement of information is important in making sense of

information world theory. Information can cross boundaries, but must be carried through the people who traverse into the different worlds they belong to. (Jaeger & Burnett, 2010)

More movement and exposure to information occurs in public institutions like the library. Libraries, to Jaeger and Burnett, “exist to create pathways for information to flow to small worlds.” (p. 9) Information worlds equally rely on access for this type of exchange. Information can only truly be exchanged if it has a comprehensible use and relevance to the other individual in their small world; it must fit into the rules, norms, and behaviors that exist there. This relevance acts as an “ever present lens” that is highly contextual. (p. 57) Jaeger and Burnett detail the types of access that exist in small worlds: physical access is the process of getting to information and the actual knowledge that it exists and is retrievable. Intellectual access is the ability to understand how to obtain and understand information after the initial process of physical access. Barriers to intellectual access include language, cognitive ability, literacy level, and educational background among others. Social access is driven by the value based norms and types in a small world. There are right and wrong types of information in certain information worlds. This calls to mind the insider/outsider dynamic presented by Chatman. (Jaeger & Burnett, 2010)

The library holds a special role in influencing information worlds. Libraries an offer social access through newspapers, periodicals, the Internet, books, and other media. This exchange calls to mind the feeling of a town plaza or agora. People can interact with others from the community in a free, common space. (Jaeger and Burnett, 2010) This study will be an examination of intellectual access. This study aims to gather insight and

frame the value of information gained at the library in computer classes and its use in the information worlds of participants.

Population Specific Practices

An expanded understanding of older adults' information practices can help us further comprehend the information worlds of the population examined in this study. Williamson (2015) explores the information practices of adults over 75 years old. The researcher conducted interviews at two retirement communities to examine the information needs, information sources, and computer use of this specific community. Older adults in this study had four main information needs. These included daily living like information on consumer goods, wellness, and their families; information pertinent to the small world of the retirement community like the wellness of friends, transportation, recreation, and volunteering; information concerning the outside world like local and global news, weather, and education opportunities; affective information like a religious or spiritual group and other sources of positive information. Information sources of this population extended into several formats: caregivers, friends, family, mass media, small world sources, and outside institutions. Computer use in the fourth age consisted in mostly leisure areas like games, emails with family and friends, searching, and shopping. Half of the participants regularly used a computer, but did not have mastery level skills. Overall, Williamson found that people in the fourth age of life relied on intermediaries and proxies to obtain information. Often, failing physical and cognitive health made keeping up with changing technology difficult. (Williamson, 2015)

Not every information practice or information seeking event is grounded in a lack or a dearth of skill or knowledge. Hartel (2007) argues that there is an overall negative

outlook on people and their information behaviors as if everyone, especially marginalized populations, are all operating with a deficiency in the information world. She presents a positive perspective in ELIP research. Everyday life can extend into areas of the pleasurable or profound; we are not solely defined by checking email or other mundane tasks. The pleasurable phenomena are what we enjoy doing like art, hobbies, or relaxation. The profound phenomena of our lives can be the deep, sublime things that reflect "humanity's possibilities and potential." (p. 1133) These information practices could center on creativity, volunteering, religion, or ethics. As a whole, people have interests and needs that go beyond ordinary or mundane information. Hartel (2006) explains that this is an area of research worth exploring. This call for research on the higher things in life connects to this study because not all information practices are needs or problems. Understanding the higher things in people's everyday life information practices offers a fuller, more intricate portrait of communities and individuals.

Digital Divide, Literacy, and Inclusion

Foundational Literature

The Digital Divide is not a new term in the information and library science world. In fact, it has been circulating since the late nineteen nineties when owning a networked computer was gaining ground in the American household. The term originates from a 1998 publication by the National Telecommunications and Information Administration. The NTIA report called on familiar vocabulary like the haves and have nots to describe the problem of access to the Internet and computers. Describing this access problem using the dichotomy between have and have not introduced the digital divide into the narrative. The NTIA called the lack of access "critical to economic success and personal

advancement." (NTIA, 1998) The perspective of deficiency is one that has defined computer and Internet access since the publication of this report.

The narrative around digital access has not only continued into this century, but also gained its own distinct vocabulary. Now, in 2016, broadband Internet access, or lack of, is a defining feature when describing the digital divide. To understand the infrastructure necessary to be "connected," we will examine several reports from the Pew Research Center. This will also help us understand the context of our population of interest. In a 2016 study, the Pew Center took a closer look at broadband access in the United States. After continued increase for several years, broadband access plateaued and then dropped since a similar 2013 study. 67% of participants have broadband, while 13% are exclusively smartphone users for Internet access. (p. 2) The most cited reason for not having broadband Internet was the cost. 33% of participants were deterred by the subscription and cost of a computer. Using a smartphone for Internet may seem like an economical alternative to paying for broadband and its necessary hardware. There are a unique set of challenges associated with solely using a smartphone; these include data cap limits, difficulty viewing certain types of content, and the expense associated with overages or cancelling a data plan.

Despite not having broadband, people without Internet were able to pinpoint key areas where they believe they are missing out in their lives and the digital world. They list knowing about job opportunities and career skills, accessing government services, learning new things that could improve their lives, health information, and news all as information that they do not have a way to find or obtain. Those with broadband access can also reflect on the difficulties associated with no access to the Internet. 52% of these

individuals believe not having broadband can put you at a major disadvantage for access to information and carrying out tasks effectively. (Horrigan & Duggan, 2016)

Comprehending why people do not have Internet and what they believe they are missing helps us better grasp the life worlds of our population of interest. In addition, knowing who is not online and why can paint a fuller picture of the digital divide this user group experiences. In a 2013 study also from the Pew Research Center, 15% of participants over 18 rarely participated in any activities that required an Internet connection. Their reasoning for why they did not participate varied: 34% stated that the Internet was not relevant to them, 32% said they did not know how to use it, and the remaining participants were deterred by costs and lack of access in general. If they did need to access a networked computer, they mostly operated through a proxy like a friend or family member. The demographic breakdown of who is not online also hints at these individuals' life worlds. Most of those not online were 65+ years old, had a high school diploma or less, and were people of color. (Zickhur, 2013)

Digital Literacy

The definition of digital literacy is similar to a moving target, especially in the rapidly changing digital world. There are as many definitions as there are scholars discussing the topic. This type of literacy is rooted in the age old adage "reading, writing, and 'rithmetic." Author and educational theorist, David Warlick presents a new interpretation to the three R's. This new definition of literacy instead relies on information behaviors. Warlick proposes this new definition for e-literacy: a compilation of "those essential information skills required to accomplish goals within one's contemporary information environment." (p. 89) In addition to reading, e-literate

individuals will understand how to access information. Writing is replaced by the ability to communicate or express information in e-literacy. Finally, arithmetic is interpreted as being capable of processing information. In the same volume, *Digital literacies for learning*, education researcher Maryann Kope furthers this evolving definition. She adds that e-literacy tries to "capture the converging and emerging literacies necessary to function in the digital age." (p. 68) Together, these three e-literacy skills and Kope's interpretation begin to form a basic definition of digital literacy.

Digital literacy is perhaps best understood in practice. To illustrate just what these expanding skills and understandings are, we will look at a Finnish library's patron-centered preparation and training initiative to participate in information society. Hakkari and Sihvoven's article, "Digital literacy - a civic skill in the information society," examined local libraries' information society program goals. Overall, these libraries aimed to "promote regional equality and improve citizens' quality of life and well-being through effective use of information and technology." (p. 3) Finnish libraries recognized that there were portions of the population at great risk of being excluded from information society like older citizens, the less educated, low-income citizens, and immigrants. The researchers explained how libraries are free, neutral, and equal places in Finnish society. They are also the only places where many citizens can access new technology. Hakkari and Sihvoven describe digital literacy as basic computer skills, including the ability to retrieve information from the Internet and critically evaluate the search results. (2006)

The new definition of digital literacy is one attempting to interpret constant change, which means there are continually new lessons to learn. Hakkari and Sihvoven

use the Tampere City Library's information society program as the central example to illustrate what digital literacy services look like in practice. The services included "net squares: which were spaces where people could be instructed in information society skills like classes in basic computer use. These classes were free and local. More importantly, the "e-Tampere" program aimed to become a permanent service that aided the development of digital literacy among adults in the community. Net squares at libraries included around twenty networked computers and at least three Internet instructors and an information specialist. Most were librarians by trade. Users could work independently or receive instruction.

Additionally in the 2006 study about the e-Tampere program, librarians noticed that a range of users came in to use computers: from children to students and seniors to the unemployed. In such a rapidly changing world of technology, we are all newly illiterate in certain situations. Seniors can feel especially sidelined. The e-Tampere program tried to reduce the unnecessary fear and prejudices about the digital world by catering some classes to their senior students. They focused on information retrieval skills for this age group like search techniques, analyzing information, and the critical evaluation of information. (2006) Together, both librarians and users shaped the e-Tampere program. This initiative in Finland demonstrates a strong example of user-centered education is slowly in a public library system.

Library Role in Digital Inclusion

The digital divide and digital literacy are not problems without solutions. The public library plays an important role in providing access, training, and support to those on all sides of the divide and at any point on the spectrum of digital literacy. First, we

will establish an understanding of digital inclusion, a new, broader term that encapsulates where the surrounding issues of the digital divide and digital literacy.

Digital inclusion aims to incorporate issues about access, knowledge, opportunity, and the skills needed to participate and succeed in our information society. Thompson et al. (2004) defines digital inclusion, on a simple level, as access to the Internet, and the ability to apply the skills needed to meet information needs. It also elaborates on definitions of access. Thompson defines three types of access: physical, intellectual, and social. Physical access is the capability to reach the document or form that embodies the information. Intellectual access is the ability to know how to reach and to understand how information is obtained. Social access is more nuanced; this type of access emerges from how individuals interpret or understand information. Not all audiences will understand information the same way. (p. 4-6) Libraries can help provide access at all three levels. They can provide physical access through the established technological infrastructure: computers, printers, hardware, and broadband connections. Intellectual access needs are met from many different angles; these could be assistance with complex information, language literacy education, information literacy education, technical skills instruction, and help with employment and government services. Finally, social access is found in the social inclusion found at the library; being present does not require purchasing something. The library is a community centered gathering space. (p. 78-82) The role of the library is central in creating digital inclusion.

The library's role in digital inclusion also reaches a more personal level. In his 1998 article, Tom Wilson argued that digital literacy is a life skill. He sees it as literacy for the information age and expanding beyond the traditional definition. Wilson explains

that digital literacy requires agility and skills to understand and use information from multiple formats and sources. While his definition relies on digital literacy as a central component, many authors discussing digital inclusion refer to this article because it incorporates the self-efficacy necessary to live life in the digital world. Martin and Madigan, in their book *Literacies for a Digital Age*, also call digital literacy a necessary life skill. They define it as a combination of "awareness, attitude, and ability" to work with the tools to analyze, manage, and evaluate information. This set of skills and understandings help individuals navigate different life situations. (2006, p. 156)

In Bertot, Jaeger, and Real's discussion about the 2013 Digital Inclusion Survey highlights the value of digital inclusion has to individual's quality of life. The authors agree that digital inclusion helps people maintain or grow their quality of life. Thus, emerges a significant role of public libraries as bridges over the divide. By offering basic the basic technology infrastructure and training, they are promoting a digitally inclusive culture. (p. 274) Libraries also offer gateways to improved quality of life through the access they provide to different services: employment assistance like resume workshops and information and help with government services and resources. This bridge of digital inclusion allows everyone to be included in the benefits of democracy. (p. 275)

Overall the 2013 survey shows that libraries are certainly offering training in digital literacy and inclusion. 99.6% of libraries included offer at least some type of help with Internet access and use. This assistance can be general information use like web searching, help developing basic computer skills, or offering training with specific software or emerging technology. (p. 278-279) These skills and access to employment assistance and government services highlight the role of advocacy and policy surrounding

libraries' roles in digital inclusion. Access, skills, and understanding the digital world is reaching a political level in our society.

Jaeger and other digital inclusion researchers like Thompson expanded on the digital divide to demonstrate the political nature of the issue. This division is not solely based on the inability to access or use information. Other sources of division are socioeconomic status, education level, geography, language, disability, age, and literacy level. (p. 2) This gap demonstrates that access is unequal down to a personal level. Their definition of digital inclusion incorporates policies aimed to close the divide and teach digital literacy. They include policy in their definition and inclusion efforts because technology is a part of life. It affects people's ability to be full members of society for example through their employment, education, civic participation, and socialization. (p. 3) Additionally, digital inclusion policy tries to demonstrate that as content, like government forms, become exclusively available online, more people are excluded from accessing these resources. Ultimately, there are not any other cultural institutions that are prepared to serve the public need for digital literacy and digital inclusion. As seen in other studies in this section, libraries are putting the practice of digital inclusion into action, but these authors argue that policy efforts are the next step to bridging this ever-expanding divide. (p. 15)

Madalyn Cohron's 2015 piece, "The Continuing Digital Divide in the United States," also illustrates the personal level of exclusion created by the digital divide. She explains that there is a power dynamic within the digital divide and the language that surrounds it. Cohron argues that this dialogue hints at a lack or a shortcoming from those who do not have the access or skills necessary to move about in information society. This perspective

is coming from people who do have access. Cohron puts forth a challenge to libraries; she explains that libraries must see the value of digital literacy and how others can find it valuable from their own contexts and lived experiences. The Internet provides "prominent utility" in people's lives. (p. 84) Access may be increasing on smartphones, but libraries need to increase access to the skills and literacy efforts that are relevant to all patrons and their points of access.

Population: People of Color and Older Adults

While digital literacy is a persistent motivation to continue learning, certain populations meet different obstacles along their path to participating in information society. Some of these difficulties can be so arduous that many choose to not participate in the digital world. This study focuses on older, people of color and their use of local libraries' basic computer classes. Literature about seniors and technology is abundant in our field, especially about accessing health information. Insight on people of color is often researched through the lens of information poverty or some sort of deficiency. This paper aims to fill in the gaps surrounding everyday life information use of older people of color and technology. Despite the lack of research in this area, the following research helps create a fuller understanding of the obstacles this population faces.

A 2015 Pew Research Center study examined how older adults, identified at 65 years old or older, used technology. 59% of participants do go online; 47% have an Internet connection at home. A full 77% have cell phones. Though, these numbers mean that there are still portions of this population who do not use the Internet and do not have Internet at home. (Smith, 2014, p. 1-2) These numbers are encouraging, but we must consider the challenges many seniors face when adopting new technology; these could be

physical challenges, skepticism about the benefit of using technology, and the difficulties associated with learning something new. 77% of these seniors participating the study mentioned that they want help with learning new technology. They did not want to "go alone" into this venture. (p. 12) While there is some anxiety present about entering the digital world, the participants who were online noted that their connection was a big part of their life; 82% of connected seniors went online at least three times a week and 71% visited almost everyday. Of this group, 94% agreed that "the Internet ma[de] it easier to find things than in the past." (p. 3) Seniors may be wary to adopt new technology, but those who do incorporate it into their daily lives.

Public libraries have long offered programming for older adults. Holding digital literacy classes at local libraries makes good sense for the senior population. Libraries are an ideal place to learn because they are free, centrally located, and already have the basic infrastructure necessary to teach computer skills. (Xie & Bugg, 2009) In a 2008 study, researchers focused on older adults learning how to find reliable health information. This was a collaboration with the National Health Institute to reduce anxiety around searching for health information and to increase the ability to find high quality information. Local MLS students taught the classes at libraries nearby to their institution. On average, the participant was 68 years old and only half had prior experience with computers. The results of the study revealed much about participants attitudes about computers due to pre and post training questionnaires. Participants were satisfied with the training they received about tools to access health information and the skills they learned to find useful information. They felt that what they learned had an impact on their everyday life. As a

whole, they found the experience empowering because they improved their own self-efficacy with computers and information retrieval. (Xie & Bugg, 2009)

On a related note, Xie and Jaeger saw similar benefits of digital literacy training for adults in an earlier 2008 study. In this survey about services for older adults and computer training, the researchers presented several substantial findings about well being from this type of lifelong learning opportunity. These benefits are social interaction, both online and in person, formal and informal education, and increased trust in library and library staff members. Such benefits created an overall increase in well-being. Xie and Jaeger also included a much broader result of digital literacy training, one that resonates on a more philosophical or personal level. Being involved with learning opportunities like these helps adults realize their own human potential. This type of engagement helps us, and older adults, join in life fully and meet its challenges. (p. 55)

Spink and Cole (2001) examined the information seeking channels of African-American adults in a low income neighborhood in Dallas, TX. They surveyed this portion of the population about the needs of the community and information services available to them. Overall, they found that this group had their own set of information channels that helped them navigate their lives. These methods often involved other people as proxy information sources and print material. Participants recognized that the Internet could provide ample opportunity for self and professional development, but did not know how or where to access these resources. They also connected Internet access and professional development to increasing the quality of life for their family. Two thirds of the participants did not use the library, but did express high levels of interest for a computer class program as a neighborhood service. Spink and Cole reflected on the theoretical

concepts reflected in the participants' responses. The emphasis on interpersonal channels for information calls on Dervin's research while the containment and order of information channels is reminiscent of Chatman's small worlds theory. (2001) Spink and Cole's research certainly delineates the reality of information society for this population, but tends to focus on the negative aspects of their information behaviors. There seems to be a negative slant to the discussion of this population's information needs and use. Problems take central focus rather than the uplifting perspective of reaching our human potential. This was a distinct shift in perspective from examining older adults and digital literacy to people of color and digital literacy. The exploratory research of this paper aims to contribute to the positive approach to LIS and everyday life information practices.

Library as Place

Foundational Literature

Because of the personal nature of place, many researchers in the LIS field have gathered around two definitions from sociology: the public sphere and third place. The German sociologist Jurgen Habermas' theory of place is often summoned in LIS literature. His work describes how place is a human creation; it is specific and centers on where people are. Libraries connect to Habermas' description of the public sphere. He views the public sphere as a space for discussion where we can participate in social life and public engagement. This perspective introduced the "democratic undertones" to our modern understanding of library, especially their role as public, accessible places. (Buschman and Leckie, 2007)

Our understanding of the library as place is shaped by our perceptions of two other places: work and home. Again, LIS calls on sociology for a precise vocabulary to

describe place. Ray Oldenburg, an American sociologist, introduced the "third place," or a place that is neither home nor work, in his 1999 book, *The great good place: cafés, coffee shops, community centers, beauty parlors, general stores, bars, hangouts, and how they get you through the day*. In the book, he qualifies what exactly forms a third place with eight different characteristics.

- *Neutral Ground*: people can come and go as they please, no one plays host, all feel at home and comfortable
- *Be Levelers*: inclusive places, public can access without membership, interact with people beyond immediate family and close friends
- *Conversation is main activity*: "talk is good" where it is free flowing and "eagerly pursued"
- *Accessible and Accommodating*: People can go alone and still see someone they know
- *Have Regular Hours and Customers*: they feel at home and at ease, yet still open to newcomers
- *Low Profile as a Physical Structure:* plain and unimpressive as to "discourage pretension"
- *Playful Mood and Ambience*: serious about conversation, but not having a serious conversation
- *Home away from Home*: comfortable and supportive

(p. 22-42)

Aabo and Audunson's 2012 article, "Use of library space and the library as place" call on library use research to help create a fuller definition of the social role of libraries

and how the support societal goals. The researchers explain that knowing what people actually use the library for reveals the true role of the library in a community. Aabo and Audunson's observational study also used interviews to ask participants how they used the library beyond borrowing. These questions aimed to gather insight on how their library use connected to life areas, roles, and interactions. The findings pointed to a duality to the library's role: it is a public square where one can pursue private purposes. They found that the library is open to all people and their projects, whether this meant working alone or participating in community programming. Together the researchers also discovered that the library was a place where one could be exposed to otherness, yet also hide what often marginalizes oneself. The library was a neutral space within the public sphere where the public could look up information about issues and inform themselves on decisions. With these findings, Aabo and Audunson were able to conclude that the library is a private, public, and parochial realm for different people doing different things. They could move between their life spheres and roles. For example, some participants were unemployed, homeless, or on disability benefits. The library acted as an office or hub where they could connect to society on equal terms. Aabo and Audunson called for more research, especially on the creation of social capital in libraries. (2012) Altogether, this study emphasizes the importance of use studies and how libraries contribute to the greater good in people's everyday lives.

Social Place

To understand the evolving definition of the library as place, we will take a closer look at just how public library patrons use the space. From observations of space, comes the awareness of place.

Vakkari and Serola offer insight on how space becomes place in their 2012 article, “Perceived outcomes of public libraries.” The study based in Finland aimed to examine the benefit outcomes of the library in different areas of life, both on an individual level and in a larger social context. The researchers were curious about how frequently library users benefited from services and if these benefits clustered in certain life areas like day-to-day tasks or leisure. Finnish library users derived the most benefit from the library in their reading and self-education in leisure time. Next in line were benefits from information about travel and vacation, the development of job skills, and health matters. The researchers found that both frequent and infrequent users gained benefits in the same life areas. (p. 40 -41) These smaller benefit outcomes fit into much larger life areas. Overall, the areas of life the library helped were everyday activities (household, social), cultural interests (theatre, concerts, etc.) and career (finding a job, working on skills). Vakkari and Serola also examined demographical factors of those benefitted by using the library. In particular, they found that older people benefited more in their everyday activities life area as library users. (p. 42)

Mckechnie et al. (2004) explores library use behaviors as compared to by customer activities in book superstores. This was an observational study at one central library, four branch libraries, and nearby bookstores in Ontario, Canada. The researchers found that the most routine activities at a library were activities related to reading like browsing and borrowing, community activities and programs, and using computers and study carrels. As a whole, the researchers noted how socializing and exposure to diverse populations were more common at libraries than bookstores. Interactions between library staff and patrons were also more common than customer interaction at the book

superstores. Libraries were a source of social interaction and mingling with people of many different backgrounds.

Given and Leckie employ a seating sweep to better comprehend how people use the library and perceive its importance and role in their lives. Seating sweeps captured the age and general demography of a user, what they were doing, their location in the library, the equipment they were using, and what personal belonging they were using in library space. Such full descriptions of patrons and their activities revealed three common activities. The third most common activity was interacting with other patrons; the second was more individual: writing. The most common activity observed at the library was reading. While reading may seem traditional, the researchers found that these three activities actually encompassed a full range: from reading to snacking and from kissing to holding babies. Given and Leckie concluded that the library was a place where people felt at ease; it was where they were comfortable and social.

A 2007 study at the Seattle Public Library also highlights the many uses of the library; specifically how users and passersby identified the library as a physical, social, and informational space. This study was conducted soon after the then new Seattle Public Library was opened to the public. It featured a unique design; the researchers incorporated these architectural features as their locations for finding participants. They asked people on the street, library users in a several stories high book spiral, and library users in other parts of the building open and closed questions about their perceptions of the library. These questions called on the free association method and interviews to gather data. As a physical space, participants noted how new, foreign, and modern the design of the SPL felt. As a social space, 76.2% of participants said that they came to the

library alone, but eventually brought others (including out of town guests) to the space. The SPL as an informational space pointed to an understanding of how important the library is in users' lives and their learning. Participants identified the library as a place to get information, read for pleasure, and learn. They also mentioned the importance of access to the Internet and computers. Participants also mentioned that they viewed the library as a place to learn *everyday*. Their perceptions of library staff fits into this view of information space; they saw librarians as helpers, no matter the level of simplicity or complexity to their questions. (p. 149-150) As mentioned in the beginning of this section, Ray Oldenburg's theory on third place often links with the library as place. The researchers, Fisher and Saxton, found that the SPL fit into three of Oldenburg's criteria: neutral ground, a social leveler, and serving as a home away from home.

Similar to the Seattle Public Library study and Given and Leckie's sweep study, Leckie and Hopkins revisited the role of the public library as a public space. They specifically looked at the use and role of a central public library. They used three different methods to capture this data: observation, interviews, and a survey. In this study, they examined two libraries, the Metropolitan Toronto Library and the Vancouver Public Library Central Branch. From seating sweeps, the researchers saw that reading, writing, and using computers were the most common uses of space at both the MTL and the VPL. The most cited reasons for visiting were to look for information and borrow or return materials. From interviews, the two researchers found that participants were looking for information to support different areas of their lives like school, work, or personal projects. Their survey findings revealed that the most important services at the library were reference and information services and personal study space. Participants

viewed the main purpose of the library was the provision of information resources; in particular they mentioned the library as an educational facility. In sum, the central library was central to life activities. The MTL and VPL served as a central place for material and human resources and a source for participants to obtain information to help them navigate daily life.

The library as a meeting place is another emerging understanding of how public libraries function in communities. Aabo et al. examined this relationship in a 2010 study. They were intrigued about what happened at the library, especially related to the different types of meetings that took place. Together, they surveyed participants from three towns in Norway. Their findings unearthed a reasonable amount of variety to the meetings that occurred in libraries, both planned and serendipitous. They observed people of different backgrounds interacting, individuals meeting by accident with neighbors and friends, people talking with strangers, and some users learning about organizations or activities in the community. Due to this variety, the researchers were able to establish four overarching types of meetings that took place. The first was the library serving as a town square meeting space which included the random meetings or conversations and scheduled ones. Next, the interactions between individuals of different backgrounds and related connections fell into the category of meetings of difference. The library as public sphere covered interactions with people like authors or politicians and the discussion of community issues. Finally, joint activity meetings incorporated the interactions where people were working together on things like school work, projects, or other shared tasks. Based on these findings, the researchers were able to conclude that the library was a complex meeting place that overlapped with definitions of a third place and the public

sphere. Overall, they concluded the library was a place where one can interact with what is both different and familiar. (Aabo et al., 2010)

Social Capital

Within the role of the library as place, lies an important facet of social life: social capital. While this trust may not be immediately evident when examining the social impact of a library, it is relevant to this study because it connects to how people use the library. If individuals see the library as a resource for enhancing or building their social lives, we must also consider the role of social capital in this experience and exchange.

Researcher Catherine A. Johnson has published several studies about libraries and social capital. In a 2010 study in *Library and Information Science Research*, she laid out the essential questions surround this connection between place and people. She describes social capital as trust and social cohesion in a community. Her 2010 study examined the relationship between the public library and social capital to see to what extent the public library contributed to social capital at an individual and community wide level. Individual social capital was described as one's connection to esteemed members of the community and how that connection can help one's access to resources and a wider social network. Community level social network was interpreted as the overall trust in neighbors and local institutions and the corresponding community involvement and civic engagement. Johnson was curious about whether the library increased connections on an individual and community level. She hypothesized that the library was a rich source of social capital because all are welcome there and different types of people frequent the space therefore increasing the chances of making new contacts and accessing new resources. Through a questionnaire, Johnson found that frequent library users view the library as more

important to the community at the present than in the past. These frequent users also had a higher level of trust than non-users, had a greater interest in civic engagement like local politics, and were more involved in community happenings. While there was little evidence to point to an increase in individual social capital, Johnson was able to conclude that a connection exists between public libraries and an increase in community level social capital. (Johnson, 2010)

In a later 2012 study, Johnson revisited public libraries and social capital through the lens of staff and patron relationships. She interviewed staff and patrons at three branch libraries in a Midwestern city in the United States. Johnson wanted to better understand the impact of this type of relationship and its influence on patrons' social capital. 80% of staff interviewed reported knowing patrons by name or by face at some personal level. For example, daily exchanges with regular patrons would create this level of recognizability. The interviews revealed that a connection to library staff created a link to resources inside and outside the library. She also found that the library served as a meeting place for patrons to socialize among themselves; they knew each other and library staff. Johnson's study also discovered a facet of the library as place. Patrons viewed the library a safe place. They had a high level of trust in the library; for example, some patrons even saw librarians as surrogate caregivers to their children. Librarians reported this feeling of safety through their understanding of how they reduce social isolation. They felt they could increase the quality of life of homeless, unemployed, or individuals who lived alone because of the library's source of social interaction. (Johnson 2012) The study was on a smaller scale than the 2010 study, but still offered insight on the fostering of trust and connection between patrons and libraries.

Philosophical Place

Understanding the library as place expands into a more philosophical realm. Houghton, Foth, and Miller call on Oldenburg's third place theory to grasp how libraries better their community networks. They investigated the physical and digital support that a libraries in Australia provided to create or foster community networks. They incorporated participants who were regular Internet users and those who did not use the Internet to increase the reach of the study to potential or non-library users. In particular, they used four facets of Oldenburg's definition of third place to inform their research: neutrality, be a leveler, center on conversation, and feel homey and familiar. Their findings revealed that programming is often the source of turning community interaction in a network. For example, a knitting group participant connected her experience in the library to the Classical agora where Athenians would gather to learn, be entertained, and debate over pertinent issues. Houghton, Foth, and Miller detail that lived experiences, like the knitting group, and a connection with others becomes part of how users define the library as place. (2013) Their own personal meaning about the library creates its role as place in their lives. The library is less about a physical space to knit and more about the community created there.

Another interpretation of the philosophical library as place employs Michel Foucalt's concept of heterotopia. G. Radford, M. Radford, and Lingel's conceptual paper for the *Journal of Documentation* discussed the relationship between space and experience. Drawing this relationship helps us understand and articulate the library experience. They call on Foucalt's speech to a group of architects as well as other works by Umberto Eco and Alan Bennett. *Heterotopia* is the "space of otherness." (p. 739) The

library in space is finite, but as a place the connections and relationship one can find there reach towards infinity. One could explore these relationships to other places, ideas, people, or whatever the mind can imagine forever. In essence, the library is a place where one can encounter constant change, excitement, surprise, and discovery. (2015) Again, the library is not a space where books sit on shelves, but possibly where human experience is infinite.

METHODS

The overall expectation of this study is to gain a fuller understanding of how the library creates intellectual access to marginalized populations through this outreach service and how skills and knowledge gained in these classes and other library activities are used in the daily lives of these participants.

From the perspective of digitally literacy, this research aims to understand how the library serves as a fixed source of education amidst constant changes in technology. Using the theoretical lens of ELIP will help reveal the possible answers to these questions. Additionally, this approach using ELIP and the library as place can help shed light on the general consensus that access to information creates a better life.

Due to these expectations, semi-structured interviews were selected as the data collection method. Interviewing has long been a much relied upon method in qualitative research. It has been noted that gathering rich data from interviews is best obtained by three criteria: basing the interview on a participant's experiences in their life world, valuing the narrative of your participant, and providing adequate framework for your participants to express their experiences. (Schultze & Avital, 2011)

The sample for this study was determined by one main factor: participation in computer classes. Participants in these classes tended to be older adults and come from many different backgrounds and identities.

Recruitment began in January 2017 at three local libraries in Orange and Durham counties. After the duration of the class session, I made an announcement about the

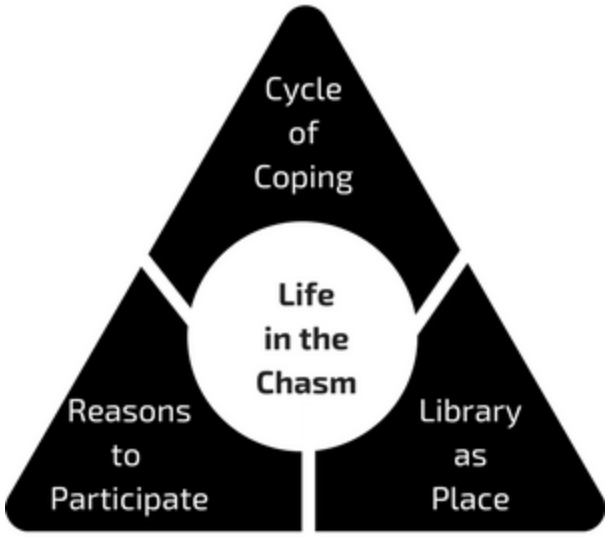
study. I described the context of why I was interested in talking with students in these computer classes and the general nature of what we would discuss in the one-on-one interview. Once I explained these details, I asked students individually about their willingness to participate. If they express interest, I gave them a brief form to fill out with their contact information, available times to talk, and whether they had transportation to one of the library sites to interview. I then gave them my contact information in case they had any further questions. In Appendix A are the forms used during recruitment including the script I used to describe the study and the contact information forms.

In February, I completed the phone calls to confirm the availability of my potential participants. By mid February, we began the interview process. Participants selected the time and library location that best fit their schedule and transportation available. Each interview was recording using the Recorder App and stored on my tablet. In total, five interviews were conducted.

After the interviews, I then transcribed each interaction by hand into a text document. These transcribed interviews were then coded. The coding process was completed in three iterations: the first was to simply read the conversation, the second was to begin to parse out themes, then the third was to label these themes. As a whole, I took the labeled themes and was able to categorize them into three main areas, which divide the findings section below. These themes are cycles of coping, reasons to participate, and the library as place.

FINDINGS

An outright discussion of the digital divide, loaded with technical jargon, LIS vocabulary, and a thorough examination of available technology was not the goal of these interviews. Instead, this paper aims to create a fuller and more cohesive understanding of why individuals exist on the BLANK side of the digital divide. I would like to introduce a tripartite interpretation of the findings of these interviews. The three parts of this puzzle include coping, reasons to participate, and the library as place.



Together, they interlock to form distinct puzzle that pairs with the individual's own experiences, obstacles, and narrative. Each piece fits together through certain divots and hollows like that of a puzzle piece which are unique to each person dealing with life in the chasm of the digital divide. Employing a puzzle piece for this visual interpretation also illustrates the holistic nature of a person in their information world. They each approach the divide with their own knowledge and perspective in tow. One cannot force a connection between two mismatched pieces, just as you cannot force a singular solution to "treat" or "deal" with digital literacy. This tripartite approach helps create a more integrated point of view of a person who decides to cross the digital divide. Practitioners

and theorist alike can benefit from examining these lines, which at first seem like boundaries, but are in fact the convex and concave curves of a puzzle piece seeking a connection to click into place.

Cycles of Coping: Affect and Behaviors

Unraveling coping mechanisms of individuals new to or abstaining from information society is a layered, complex process. However, the findings from these five interviews elucidates several common techniques that these individuals use to manage life on the borders of the digital world.

Avoidance

Avoidance was by far the most commonly used technique to cope with a lack of skills or knowledge to use a computer with Internet access. The intricacies of avoidance are related to several different factors including fear, anxiety, and the motivation to learn. First, we will examine the exhaustive approach to avoiding technology.

Both Lee and Anthony had similar patterns in their avoidance behaviors. They resisted to the incoming and ongoing changes in the technological world. Lee, for example, mostly resisted due to her lack of knowledge and a sensitive awareness of the costs associated with computers and Internet access. She only began to use a tablet, which was gifted to her, after realizing the free support available to her at the library. Lee used her tablet solely as an Internet radio station because of the applications that were available to her when she opened the tablet. Her avoidance mirrored the “wait it out” attitude that some people adopt during extreme weather events.

Similarly, Anthony has a strong “wait it out” attitude, but his avoidance, or as he calls it “dodging,” lies in his inherent preference to resist change. He mentioned wanting

to be the last person in North America to own a smartphone. He prides himself in "almost" succeeding, though he purchased one when he realized he could not contact his daughter during emergencies. Anthony prefers to use what is comfortable to him- to the point of exhaustion. For example, he memorized the directions from a major east coast city to a historic site in the country. His friends who were also on this journey relied so heavily on GPS to navigate them, that they refused to listen to his input, which he had put to memory before the trip. Anthony subscribes to the belief that if he does not need something he will not get it. So far, Anthony's resistance has truly been avoidance because he does not own a computer or pay for an Internet connection in his home. He believes this is one less thing to worry about.

However, worry is major motivator to remain in these coping cycles. Anthony and his resistance did not make him free from fear over computers. He did not go in to detail- only mentioning that he was once terrified. Another participant, Jeannette, is rooted in her avoidance due to fear and anxiety. She was more outright about her hesitations than Anthony. Jeannette is also aware of the "pile" or the growing number of things she does not know about computers than what she does. Just like a pile of clutter can build up into a seemingly insurmountable task to clear away, so too can the process of learning and using technology. Jeannette owns three devices—all of which were given to her by family and friends. However, despite having the devices, she does not pay for an Internet connection because she does not use these devices at all.

Jeannette's situation is very much defined by past traumatic experiences. She stated that she her bank accounts have been hacked, she caused a system wide problem at work, and suffered from viruses on her desktop. Because of these events she has not used

her devices in over four months. Additionally, her avoidance is tied to the speed and pace of her current work climate. As a health care employee, much of her work relies on computers; in past jobs, she was not able to properly learn and implement the technology that she was required to use at work in the time allotted to her to learn it. This led her to quit three jobs in the past six months. Jeannette is comfortable in her known, established ways, which has also made the switch from paper charts to digital ones especially difficult.

The two other interviewees, Joel and Isabel, also have their own patterns of avoidance, but they are subtle and are determined by outside circumstance. Isabel did not report or define any specific avoidance patterns. She seemed to accept her lack of knowledge and remained hopeful. This optimism could be because of two factors: the technology and Internet available to her at home as well as the support she receives from her husband. Her social support will be discussed in the next section. Isabel does not have her own device—instead she uses one of her husband's tablets to check on the news, weather, and get updates on the lottery drawings. Isabel considers herself a regular user of the computer even though she only interacts with a tablet. However, she did strongly state an interest in having her own desktop or laptop so that she could practice and learn how to do the things she was interested in. This desire to have an independent device made her hold off on learning how to use a computer. This avoidance pattern is similar to the exhaustive pattern that Lee and Anthony follow.

Joel was the outlier of the group when examining avoidance behaviors. As a retired scientist, he continually felt the pull of the evolution of technology in the workplace. To avoid it was to hinder his work in the scientific community. However, he

is hyper-aware of what he calls “junk,” or the unreliable and deceptive content online. His avoidance of this type of information directly connects to his training as a scientist; his analysis is another technique that will be discussed in the proximate section.

Additional Coping Behaviors

Proxies

All participants had additional techniques beyond avoidance to cope with the realities of new technology and participating in the digital world. Most either used a proxy to find information or fill in those gaps while others problem solved independently.

Jeannette and Isabel relied the most heavily on proxy assistance to navigate computers and the Internet. Jeannette bypasses the computer as a source of information and instead incorporates TV, books, and her friends to keep her informed. Her close group of friends are primarily the people who act as her proxies. Jeannette regularly chats with these friends. Instead of reading facebook posts, she talks with her friends over the phone. One friend also helps her with more specific computer tasks like creating a resume specific for the healthcare industry. Her other resources, TV and books, parallel with her preference for using a pen and paper at work. She is comfortable with what she knows and is easily able to figure things out like from the traffic report on TV or a new subject from a book.

Isabel’s proxy preferences are not as pronounced as Jeannette’s, but her interaction with technology is closely tied to her relationship with her husband. She lists him as her primary motivator to learn (see the second section of the findings). He is also her gateway to the technology available to her at home. Together, they attend computer class and ask questions.

Independent Solvers and Systems

The more independent problem solvers are Joel and Lee. They both have developed their own systems and practices that help them fill in the gaps of their own knowledge. Lee regularly uses search engines to answer her questions about technology. For example, she wanted to know how to type on a PDF— so, she asked the question in a search engine and learned about which program to download and how to modify a PDF. Lee actively learns to cope with her deficiencies. She feels empowered by the ability to just look things up and figure things out. She mentioned that "there is so much to find out… you don't have to admit your ignorance."

Joel similarly relies on his own abilities to figure things out. His background and training in science has formed his behaviors surrounding problem solving on the computer. His scientist's skills, or what he modestly calls his "technical background" are key to how he copes with his own growing knowledge and worries. Joel also relies on friends, but these are more for hardware issues or updating anti-virus software.

Anthony firmly sits between completely relying on a proxy for computer use and solving issues independently. Before retiring he worked in the legal world, where it was easy for him to hand off computer tasks to an administrative assistant, coworker, or even call in the IT department available to him. For example, he developed a multistep process to edit legal documents that involved his coworkers and administrative assistant to use the computer while he handwrote his edits in red ink. Additionally, he reflected on how he could leave a client's name and case number with an administrative assistant for this person to look up. After returning from court, he could then pick up the printed document requested thus completely bypassing using a computer. Anthony did eventually have to

confront his dependence on using a proxy at a later job. However, he still developed his own systems, like using a legal pad and a few essential documents in court, instead of relying on a laptop, while he was still in practice. Again, Anthony's comfort in what is familiar and easy was central to his work life. However, Anthony is quite proud of the knowledge he gained independently. These systems he created that were a blend of computer use and his own familiar ways enabled him to get over his fear of computers. While still working, he then began to use trial and error to learn about computers. For example, he caught on to what links are by receiving emails from friends about recent scores for sporting events. Anthony both relies on a proxy, but has the curiosity to problem solve independently.

Fear and Anxiety

From afar, the digitally literate may wonder why people choose to stay in these coping cycles. Discerning what powers these cycles is crucial to comprehending life in the chasm of the divide. Affect churns these cycles—specifically emotions of fear and anxiety. These emotions act as the blinders, guardrails, or even bindings that keep people in behavioral patterns that avoid technology. Untangling fear and anxiety is not easy, but does provide context to individuals' distinctive experiences.

Jeannette and Anthony were the two interviewees who spoke of their fear forthrightly. Jeannette shared stories about previous jobs. In particular, she remembers one event that combines both her fear of computers and the mystery that surrounds them. During new employee training, Jeannette, among other new employees, were learning about the technology used at work. Somehow, Jeannette deleted the recycling bins off of every computer at work. She quit the job the next day. This traumatic experience has

shaped her avoidance behaviors since those feelings of fear were so strong and influential. Jeannette also mentioned being scared of being hacked online. She is especially aware that she cannot always tell what is real or true. This vulnerability is unsettling to her.

Anthony had similar feelings. While he did not supply much background, he did directly state his fear of computers. Though, he was forced to "get over it" at work. However, his apprehension is evident when we discussed others' dependence on technology. His primary fears are rooted in the shift in our morality and values. He explained that technology is changing our mores faster than we can keep up with it. He continues to go into the bank to speak with a teller during banking transactions. Anthony mentioned a segment he saw on morning TV; a man was on a boat in the ocean checking his phone. He completely missed a whale in the distance jumping out of the water and gracefully arching back down. Anthony finds this dependence distracting and unsettling. He is wary of the future because he prefers to interact with the world first hand rather than through a screen.

Joel, while wary, did not report outright anxiety or fear. Instead, he approaches technology with concern. His concern is over security and safety online. He mentioned three separate times his vigilance and consternation over the "junk" or tricky situations one can land in online. Additionally, he was also concerned about others who did not have the skills to seek out reliable and credible information. Joel was aware of his skills to navigate false information, but was even more conscious of the lack of training others could receive.

Isabel and Lee made no mentions of fear or anxiety — or even concern like Joel. Rather, they recognized their lack of knowledge and met it with an optimistic outlook. Isabel spoke with great gratitude about the opportunities and support available to her. Lee reflected on costs related to technology, but then spoke up about how the library helped decrease these costs. Instead of hurdles from negative emotions, they saw open, clear pathways forward.

Reasons to Participate: Motivation and Learning

Each interviewee approached taking on the task of learning about computers with their own motivators, or their reasons to participate. The primary reasons to participate in classes, and thus enter the digital world, were career driven eureka moments which led to a self-motivation to learn.

Jeannette and Anthony both felt the pressure from their careers to learn about computers. While Jeannette has struggled to navigate the current job climate in her profession, she has a deep desire to learn. “I don’t want to be limited to the way that I’m comfortable. Right now, I am limited, so that’s why I go to class.” It took the push of advancing technology to help Jeannette understand the prevalence of computers in daily life, but her own recognition of why she wants to learn continues to lead her to the classroom. Jeannette also detailed this feeling of the pull between computers in her career and her own motivations— “I need a job because I’m one of those people who likes to work; but, I’m mixed up because school always had a purposed. This [computer classes], I am not sure about. Do I take the time to learn? Where am I going? There is no clear direction.” Jeannette is unclear about the strength of her own motivation to learn beyond the push in her profession. Her avoidance and other coping patterns may be easier to

maintain rather than commit to learning new technology. At the same time, she understands that if she does not practice, all her work will be lost. Her knowledge gained about computers will be for her, rather than to complete school. While her motivations originally came from the pressure at work, the agency she could gain from knowing how to use a computer could help combat the confusion over which direction to take.

Anthony similarly felt the professional push toward computers. He had to learn how to do tasks to be part of the changing work environment. If he did not learn, he would not have been able to do his job. Anthony also recognized that he would lose certain connections if he did not take on the process of adopting new technologies. As mentioned earlier, Anthony picks up new technology to stay connected, especially when it comes to keeping in touch with his daughter. He mentioned that he would feel disconnected if he did not regularly interact with computers, so part of his motivation is to stay connected. Anthony also has strong values related to learning, so his motivators also come from a more internal, individual place. During the interview, he quoted Robert E. Lee saying that “a man’s education is never over until he dies.” He sees computers as gateways to opportunity because of their speed and endless information available.

Lee’s primary motivators are split between seeing the professional push and recognizing an internal desire to inform herself. After ending up in an all too early retirement, she needed another job to help support herself. In this job search process, she realized that all of the available position required her to know computer skills. In fact, she got her new job because of her computer skills. Lee worked to gain these skills on her own. She was also motivated to learn independently after finding out about the free

classes available to her. Without these skills, she believes she would not have her current position.

Isabel and Joel find their reasons to keep learning from a the desire to keep learn more. For example, Isabel mentioned that when she comes to class her mind wakes up. She says that to learn makes her feel young again. This keeps her coming to class each week and putting in the time to learn. She also reflected on her years dedicated to helping other people. She stated that now, it was her time to learn. Isabel's motivation also goes beyond this enthusiasm from herself; she also gains a great deal of encouragement from her husband. These two forces help bring Isabel to class—always with a smile on her face.

Joel had first hand experience on the frontlines of the progress of technology. He cites his reasons to learn as a desire to keep up and stay informed. He also mentioned the convenience associated with doing certain tasks online like banking. Joel, in his career as a scientist, has seen Internet gone from a luxury item to a necessity. He understands that it is part of life and he must use it and learn to participate in the modern world. Additionally, he explains that, in retirement, he wants exposure to new technology, things, and ideas. Participating in class and actively seeking other opportunities to learn and practice are important to him in is newly available free time.

Library as Place

The final piece to the tripartite of understanding adult learners in the digital divide lies in their perception of the library as place. Each interviewee associated the library as a place of learning— their interpretation of the library's role in learning was shaped by their own experiences.

Jeannette's thoughts on the library are primarily formed by the purposes behind her most recent visits. First, she usually has her granddaughter in tow. They enjoy reading together. Additionally, the library served as a hub during the events during her job search process. Several times she came to the library to create a resume and resignation letters. She stated that having a librarian there in the computer lab helped her get through the confusion of this process. Jeannette also mentioned that she feels safe and comfortable at the library computer lab rather than frustrated and intimidated like she does at home. Finally, she would define the library as a friendly place to learn and grow, which is, as she said, "exactly what I'm trying to do."

Lee sees the library as a learning place, but her perspective is mostly defined by accessible resources. Frugality is an important factor in Lee's commitment to lifelong learning, so the readily available and free library resources are important to her. In the interview, she explained that she loves the library and wished the library would do a better job at telling others about the opportunities there for them. She views the library as a wealth of information, even an extension of one's own school. Lee recommends that if someone wants to continue their education, then they should go to the library.

Anthony's perspective on libraries aligns with Jeanette's and Lee's. Like Jeannette, he appreciates the library because of the infrastructure available to him as well as the help that librarians provide. Together, having the technology and the support make the library a "warm, helpful, and inviting" place for Anthony. He also gains a sense of community from visiting the library. As a regular patron, he can recognize faces and even started a conversation with someone at the nearby bus stop that he had seen in the library. He reported that they plan to get coffee sometime. Anthony's value of education also

defines his interpretation of the library as place. He ended our conversation stating that "time is never wasted when spent in a library."

Isabel, as an active, self-motivated learner much like Lee, agrees with the previous thoughts on libraries. For her, the library acts as the stepping stone for her as she gains her own knowledge about technology. Additionally, she reflected on how helpful and friendly libraries can be. As a whole, Isabel is motivated to learn, which fits into her definition of a library as a place where anyone can improve themselves.

Joel holds a unique perspective on libraries. In his former career as a scientist, the institution he worked for had a prestigious and impressive library to support the work and research of its employees. At work, he saw the changes in technology take effect during his career, especially in the library. Now, in his retirement, he uses the library to support his leisure time—mostly reading magazines and newspapers and checking out titles from the DVD collection. However, he adamantly sees libraries as places of learning. Computer classes are key to how Joel stays informed, but his digital and information literacy skills are well defined by his scientist's training. He sees libraries as crucial in their role in higher civic function as places where people can gain these digital literacy skills. Joel was especially resolute about how libraries need to factor in their role as sources of education as they market themselves, their worth, and their value in such a technophilic society.

DISCUSSION

The results of this research reveal a distinct facet within the realm of Everyday Life Information Practices. Technology and information society are intertwined in daily life. Interviewees own practices have evolved to incorporate this transition. Similar to those who are traditionally illiterate, individuals caught between the push of technology in everyday life and the mismatch of their skillset, are able to devise, create, and execute complex strategies to continue to move through life and keep the "order of things," as Savolainen lays out in his research on ELIP.

The findings related to information practices emphasize the role, and importance, of context in navigating life in the chasm between participating in information society and developing mechanisms to live around it. To reflect on Dervin's 1997 work, honoring context, not simply acknowledging it, offers a different take on what life is like on the edges of technology's progress and influence. Everyone has the potential to learn and grow; this statement is especially evident when incorporating the context of individual's lives as they approach developing their own digital literacy. The people interviewed for this study, and those who attend these computer classes, are competent, even exemplary, in what they are capable of in everyday life. Placing the digital divide in the context of Everyday Life Information Practices allows practitioners and theorists to better view the threads in an individual's narrative rather than simply the lack of a skillset related to technology.

Additionally, examining the everyday life information practices of life in the chasm highlights the collision within information worlds. The continual march of technology perpetually disrupts the five social aspects in information worlds: social norms, social types, information value, information behavior, and boundaries. (Jaeger & Burnett, 2010) This disruption requires individuals to continually adapt their lives around technology as the world around them continues to shift. Ultimately, the coping mechanisms revealed in this study act as the everyday life information practices within the information world of life in the chasm. These information practices and their contexts are rich research settings. Additional research in this sphere of information worlds could be especially insightful.

Life in the chasm, or the space between having digital literacy skills or employing alternative processes, is vibrant, creative, and cognizant. These individuals may be newly, or continually, untrained in digital literacy, but are ingenious in their approaches to problem solving. Using proxies, alternative resources to the Internet (like TV and the radio), and experimenting independently are all examples of how interviewees resourcefully tackle the tasks of daily life. Opting to view these processes as sophisticated practices rather than reducing them to deficiencies opens the pathway to a more positive approach to research in the digital divide.

For example, the disparities in the digital divide and the experiences of those new to Internet interfaces reveal much about system design. A library's webpage may be saturated with helpful information, but to someone new to using the Internet may find the page overwhelming and struggle to develop what is relevant to them and their needs.

Similar to the adaptive technologies for the sight or hearing impaired exist in libraries or even the tiered models in reading levels for children, there could be some sort of new learner "mode" to library resources and systems. If a library has a large population new to participating in information society, they could offer one-on-one help, clear handouts with images, or host an alternate web page that is more straightforward to navigate. Considering the experiences of new digital learners aids a library in its accessible, positive approach to supporting their unique needs.

As stated in the findings section, all interviewees viewed the library as a place of learning. This perspective on library as place can help define the library's role in the lives of active and potential users. New learners to computer skills also serve as an impetus to understand the responsibility of the library of the future. Offering computer skills classes that cater to different levels of expertise offers library staff and other stakeholders to decipher the digital needs of the community; this library as a learning place could incorporate different access points to digital literacy classes according to skill level thus creating multiple, and accessible, opportunities to anyone interested in participating in information society. The findings regarding library as place also present an opportunity for libraries to reflect on their direction, their missions of lifelong learning. Understanding how the library as place fits into the experiences of new digital learners can help libraries revisit the systems they have in place, the resources they have available, and the potential users yet to be reached. People living lives in the chasm are inventive, resourceful, and resilient. Libraries could benefit from their interpretation of what a learning space can be.

CONCLUSION

Life in the chasm between being adept with computers and choosing to begin the learning process is perhaps more crowded than LIS professionals first considered. It is possible to posit that almost anyone could stand between the binary of have and have-not that dictates the shape of the digital divide. The individuals interviewed in this study shared their dynamic, skillful processes used to move through a world brimming with technology and pushed forward by steady progress. Such insight offers a direct pathway to further research in digital inclusion, as described by the Information and Access Policy Center at the University of Maryland, which incorporates the three facets of the tripartite model of life in the chasm. The library as place serves as the access point to learning; digital literacy classes provide the knowledge and skills necessary to create everyday life information practices in the digital world. As a whole, this research points to the role of the library as a catalyst for community development. Life in the modern world requires the presence of technology— to fully realize our potential, we must have the foundation to reach new heights.

APPENDICES

Appendix A: Recruitment Materials

Class Script for Recruitment

Hello, my name is Meggie Lasher.
I am an UNC student and former CWS Instructor. As part of my studies at the School of Library and Information Science, I am working on a research project.

I am conducting a research study about the Community Workshop Series. I'd like to know more about what you do or do not like about the workshops we have here at the Chapel Hill Public Library and the Carrboro Cybrary.

I will be interviewing participants individually.

Your participation is entirely voluntary; you may skip any questions that you don't want to answer.

To participate you must also be 19 years old or older. Does this describe you?

Our interviews will most likely take place at one of the libraries where we have CWS classes. You can pick which one is the easiest to get to for you. It will be around 1 hour long.

Any personally identifiable information collected during this recruitment process will be kept strictly confidential and deleted or shredded after then end of the study. My advisor will read the report I write, but all names with be replaced with pseudonyms, or fake names. Your identity will be kept confidential. If the report is published, I will also use these fake names.

Do you have any questions about the research study?
I would be happy to answer them!

If you have any questions later on you may reach me by email at meggiel@live.unc.edu and by my phone at 828-582-0753.

I will also pass out cards with my information on them.

If you are interested in participating in a focus group, could you please fill out this form?

Recruitment Follow Up

1. Introduction

My name is Meggie Lasher.
I am a student at UNC and conducting a study about how students of the Community Workshop Series use what they learn in class in other areas of their lives. I am working on a research study that was advertised in the Chapel Hill Public Library, Durham SW branch, and Carrboro Cybrary.

Did you attend a class where I described the study or saw a flyer?

- If yes, continue.
- If no, thank person for their time.

2. Opting Out

I'm here to follow up and to see if you are interested in hearing more about our study. Is it OK for me to continue?

- If he/she says yes, then I will continue or make plans to revisit at a more convenient time.

3. Screening Questions

- Have you participated in the Community Workshop series before?
- Do you currently participate?
- Are you willing to talk about your experience with me in an interview?
    - This interview would take approximately 1 hour.
- Are you able to travel to the Chapel Hill Public Library either through a ride from someone or through public transport?

4. Participation

So, are you interested in hearing some details about participating in the research study?

- If not interested, I will thank the individual for his/ her time.
- If interested, I will list the dates for interview times.

I will then thank the respondent for their time.

Flyer for Recruitment in Library Locations

Do you take computer classes at the library?

Have they helped you learn something new?

If **yes**, please contact **Meggie Lasher**, a UNC library science student to learn more about her research study.

She is conducting a study about how people use technology in their daily lives. The interview will last approximately 1 hour.

Send her an email at
meggiel@live.unc.edu
or leave a voicemail with your name and number at **(919) 537-9438**.

The interviews will take place at either the CHPL, Carrboro Cybrary, or the Durham SW Branch. Participants must be 19 years of age or older.

Contact Forms

NAME:
PHONE NUMBER:
EMAIL:

PREFERRED INTERVIEW DATE- CIRCLE ONE

.

Interviews will take approximately 45 minutes to 1 hour.
Wednesday, Feb 8 in the morning
Wednesday, Feb 8 in the afternoon
Thursday, Feb 9 in the morning
Saturday, Feb 11 in the afternoon

Monday, Feb 13 in the morning
Monday, Feb 13 in the afternoon
Wednesday, Feb 15 in the morning
Wednesday, Feb 15 in the afternoon
Thursday, Feb 16 in the evening

I cannot make any of these times.

DO YOU HAVE TRANSPORTATION TO ANY OF THESE THREE LIBRARIES? CIRCLE ONE.
Chapel Hill Public Library Carrboro Cybrary

Durham SW Branch (@ Shannon Road)

Questions?
Contact Meggie Lasher at

meggiel@live.unc.edu
(919) 537-9438

Thank you for your interest!

Appendix B: Interview Guide

Warm Up

Hi BLANK! Thank you so much for agreeing to be interviewed today. Your input is very helpful.

This interview will comply with the University of North Carolina Institutional Review Board's ethics requirements. However, if at any point you want to stop the interview or not answer a question, that's fine; your participation is completely voluntary. Would you like to go ahead with the interview?

IF YES…

Thank you! There is no right or wrong answer to any of these questions. I value anything you'd like to share with me today.

1. Let's start with the beginning…
    a. How did you find out about CWS classes?
    b. When did you first start going to classes?
2. What do you like about CWS?
    a. Do you have any examples in particular?
3. What do you not like about CWS?
    a. Any examples?

Available Technology

1. Do you have a computer at your house?
    a. If so, how often do you use it?
    b. If not, where do you go to use a computer?
    c. Do you use any other devices?
2. Would you feel disconnected if you didn't have access to a computer with internet?

Information Use: Contexts

I am interested in how you use what you learn in class in other parts of your life, like at work, at home, with your family, or in any other places.

1. Can you think of a time when you used something you learned?
2. If not, I can give you some examples.
    a. Example 1: At work
    b. Example 2: Applying for a job
    c. Example 3: Checking the weather
    d. Example 4: Looking up a phone number
3. What has been the most helpful thing you've learned at CWS?

    a. Why?

Other sources of technology education

1. If you didn't go to CWS, where would you go to learn about technology?
    a. Are there other people and places in your life that help you?
2. If CWS didn't exist, how would that impact your life?

Library as Place

1. What else do you do at the library?
    a. Does this support some other project or to-do item in your life?

2. Does the library support any other parts of your life?
    a. Social?
    b. Community?
    c. Entertainment?
    d. Safety?

3. How would you describe a library to an alien visiting our planet?
    a. What words would you use?
    b. What would you want them to know?

Thank you for all that valuable information, is there anything else you'd like to add before we end?

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