

**A Model
of
Urban Public Library Service
for
Underserved Groups:
Information & Literacy Triage**

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Dedication

I dedicate my dissertation work to my wife, family, and friends for their boundless support, words of encouragement. To my wife, Camilla, for all that she has done for me and for helping me to learn to savor life and love myself again. To my family for always sacrificing, teaching me to keep pushing forward no matter the obstacles in my way, and for always reminding how far I have come. To my buddies, Emad Khazraee, Diana Kusunoki, and Heather Willever-Farr for being the best, most supportive, support group I have ever known. Thank you for taking a mid-west born, southern boy and showing him how to truly embrace a world of different perspectives.

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Finally, I want to dedicate this work to the friend I lost just under a year before I completed the doctoral program. My dog, Magnus, was the friend a lonely student needed when moving far away from family and friends. Miss you buddy.

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Abstract

A Model of Urban Public Library Service For Underserved Groups: Information & Literacy Triage

Adam M. Townes

This study examines the current model of public library service provision to underserved populations. In the context of this study, underserved populations are understood to be socially excluded urban populations which include those living in low income areas, minorities, the homeless and the socially excluded. Because it is an almost omnipresent institution in communities across the United States, the public library is in the unique position of being able to help underserved communities on a nationwide scale. Services provided by the public library can address some of the most conspicuous disparities in society which disproportionately affect underserved groups—such as poor health practices, low literacy levels, and poor information access.

Consequently, there is merit in studying the current model of public library services for underserved groups, particularly how public library services are addressing the information needs of underserved groups and how they are working to support basic life needs, providing technology access, and supporting educational achievement. Insight gained from a study of this phenomenon would be useful for public library practice because it sheds light on obstacles to provision of public library services to underserved groups, identifies gaps in service provision, expands the literature on trends in library services to guide future research, and presents recommendations for future approaches to service provision.

Chapter 1: Introduction

Introduction

Public-library service to underserved groups was first introduced in the United States in the late 1800's, but only on a limited basis (Lumumba and Branton, 2002; Harris, 1972). In the early 1900's, specific public-library services for underserved groups became widespread in the form of services meant to "Americanize" immigrants and to teach them English. However, it is the 1960's that stand out as the time when the most concerted efforts in public-library outreach to underserved groups began. After the Library Services and Construction Act (LSCA) was passed in 1956, public libraries across the country used federal funding to construct new facilities and to develop a number of new services targeted toward underserved groups (Library Services and Construction Act Amendments of 1970, 1970). In 1970, Title 1 of the LSCA was officially expanded to stipulate that funding would be used for special library services for "disadvantaged" people and for strengthening metropolitan libraries.

While the passage and expansion of the LSCA do not represent the beginning of outreach efforts by the library profession, they do represent a turning point in terms of the availability of funding and of the social atmosphere of the time. Since the passage of LSCA, public-library services for underserved groups have gone through a number of incarnations. These incarnations reflect society's understanding of what constitutes an underserved group, what the purpose of government funding is, what segments of the population are recognized as underserved, and how to provide access to the information needed by those underserved groups in a rapidly changing information society.

Some of the information science literature has characterized public-library service provision to underserved groups as episodic and lacking in any real commitment, dedication, or

consistency (Alexander, 2008; Bundy, 1982; Casey, 1974; Holt, 2006; Koontz, Jue, Bishop, 2009; Lipsman, 1972; Metoyer-Duran, 1993; Sin, 2011; Stern, 1991; Wray, 1976). It is certainly true that, over the decades, public-library services provided for underserved groups in the United States have ebbed and flowed around common themes. Certainly, the types of services and methods used to provide those services largely correspond to “models” (Stern, 1991), “trends” (Estabrook, 1979), or “styles” (Weibel, 1982)—which can be characterized as episodes in service provision.

In terms of library history, four forces appear to have driven the occurrence of these episodes. First, the American Library Association publishes standards for the accreditation of graduate programs offering the master’s degree in library and information science. These standards, first issued around 1926 (Drake, 2005) and periodically revised since then, impose some uniformity in how librarians across the country are trained. Put simply, librarians across the United States receive very similar educations, thus learning very similar methods of service provision. As the standards are periodically updated and the various schools adapt their programs to meet the new requirements, library education, and by extension library practice, reflects the trends embedded in the standards.

A second driving force in library trends is embodied in the library literature and conferences. Publications, reports, and conference presentations serve to publicize and spread information about emerging services and methods, thus serving to drive change in the library profession.

A third driving factor, and perhaps the most influential one, is found in the funding streams that are available to public libraries. For instance, major changes in service provision appear to have followed legislation regulating both the amount of money allotted for public

libraries over time and the ways the funds are to be used. The passage of the original LSCA was meant to provide funding for library service in underserved and/or disadvantaged communities (Daniels, 1989). Changes to the LSCA in the 1990's refocused the emphasis of federal funding from physical infrastructure to technological infrastructure, while services to underserved groups remained a priority despite the change. Increases and decreases in funding have also had an effect. Bundy (1982) and Nauratil (1985) observe that, in the late 1970's and early 1980's, decreases in federal spending on social and educational programs affected public-library service to underserved groups. In particular, Bundy (1982) indicates that decreases in funding at the time led to reductions in service and thus the failure or discontinuation of some services for underserved groups. The literature also indicates that many of the services implemented for underserved groups over time have failed or been discontinued because of lack of funding suggested by low-usage statistics (Bundy, 1982).

A fourth driving factor, may be the inability of public libraries to attract the interest of the target population (Lipsman, 1972) or to represent their interests accurately (Koontz et al., 2009). In either case, public libraries would need to shift the services provided or change the types of usage statistics that are collected.

The observed episodic nature of public-library service provision for underserved groups may actually be more perceptual than factual and may be partially attributable to gaps in the library literature that can be misleading. A review of the descriptive library literature and several public libraries' current service offerings presents evidence that contradicts the observation that many services have failed. For instance, according to the Detroit Public Library's website, TIP (The Information Place) service mentioned by Berry in 1975 is still in existence. Similarly, Enoch Pratt's website INFER (Information for Every Resident), mentioned

by Bundy in 1982, is still active. A lack of citable literature in this instance indeed supports the point that episodes in public-library service provision are at least partially based on gaps in the literature.

There seem to be three possible explanations for discrepancies about services found in the literature. The first is the sporadic reporting on services. Estabrook (1979), Weibel (1982), and Holt and Holt (2010) attribute the small number of references to failed services to the fact that there is typically no follow-up after an initial report on a service is made; therefore, there is no reliable tracking of successes and failures. Indeed, the researcher's literature review and subsequent follow-up did not confirm that many services were failing or being discontinued: while the review confirmed that many of the service reports did not feature follow-ups, Internet searches and a survey of public-library websites almost invariably indicated the continued provision of services named in the reports. This finding could indicate that informal education and professional communication practices enforce a nature of trending because of a focus on emerging trends and a lack of follow-up reporting.

The second explanation may relate more directly to the chronology of reports of failed or discontinued services. Many of the discontinued services appear to have begun in the 1960's, when many public libraries first began to explore the provision of services to underserved groups. Hiatt (1965) points out that, in the early to mid-1960's, public libraries in urban areas were having trouble coping with the influx of less-educated migrants from rural areas who were replacing the comparatively well-educated users to whom they were accustomed. Because of the changing demographics of library users, libraries were hindered both by a lack of knowledge of how to reach the new urban residents and by the new population's unfamiliarity with services offered by the library. Indeed, Colson (1973) notes that Milton Byam, then Director of the

District of Columbia Public Library, stated that all the outreach programs he knew had been failures. Lipsman (1972) indicates that, generally, urban public libraries serving underserved groups had failed in their outreach efforts. However, many services implemented after 1970 did not fail but continue to this day. This situation may be due to the implementation of the information and referral (I&R) service model, exemplified by such services as TIP (Detroit, 2015), INFER (Baltimore) (Enoch Pratt Free Library, 2015) and LINC (Memphis) (LINC Staff, 2015.)

The third explanation for the discrepancies in the literature may lie in whether the term “service” is defined generally (i.e., to indicate that a library is “providing service” to a community) or specifically (i.e., to describe a particular service or program). Note that, in the context of this study, library programs are viewed as a prominent type of service that is provided on a non-permanent, as-needed basis. Lipsman (1972) and more recently Koontz et al. (2009) indicate that public-library service is discontinued to communities when branches are closed because low usage statistics suggest a failure to reach residents effectively. Thus, the discontinuation of public-library service to a community rather than the discontinuation of a specific service may account for some of the discrepancies in reports of the history and current state of service provision to underserved groups.

Statement of the Problem

Given the episodic nature of public-library service provision as well as the inconsistency of service reporting in the library literature, the researcher is compelled to ask: what is one model of public-library services currently provided to underserved groups and what factors underlie the existence of this model? Given that changes have occurred in library practice, technology, education, federal funding priorities for libraries, available resources, preparedness of patrons for research, changing priorities in local school systems, generational differences in

the ways people access information, and government regulatory policies, there is a clear need to identify a current service model. No study has explored and defined a current model of public-library services for urban underserved groups that accounts for the technology-based services that are currently being provided, the existence of gaps in such services, and the obstacles that librarians face in providing the services.

Urban public libraries carry a unique context within public librarianship because many citizens in urban settings who frequent the libraries have low incomes and/or are in need of particular social services that are not necessarily within the realm of traditional public-library service (Irvin Morris, 2012). Insight gained from a study of the contemporary state of affairs would be useful for public-library practice because it would shed light on the issues driving the current style of public-library services provision to underserved groups, expand the literature on trends in library services, guide future research, and enable development of recommendations for future approaches to service provision.

Historically, underserved populations have been defined as those who have been denied full and equal participation in the economic, social, and institutional activities of society (Civil Rights Act, 1964). Populations have been underserved because of geographic location; racial and ethnic traits; and special needs—that is, barriers caused by multiple languages, disabilities, lack of permanent residency or citizenship status, illiteracy, low literacy rates, and age. Underserved populations have variously been identified as poor; needy; culturally deprived; underprivileged; disadvantaged; and, more recently, diverse. The socially excluded segments of society that the library community has identified as “needy” or “underserved” have shifted, just as society’s and the library profession’s conception of who is disadvantaged or underserved has shifted. Recent terms like “have-nots”, used in reference to the digital divide, and “diverse

populations” used in reference to groups that are underrepresented in the professions, highlight the evolution of our understanding of what it is to be underserved. In the context of this study, the term “underserved” is understood to mean new Americans as well as communities with low levels of income, literacy, and education.

Justification of Importance

Comprehensive exploration of how practitioners are currently filling the needs of underserved populations could benefit the public-library service planning literature by detailing successful and useful services that public libraries are already providing to underserved groups. Furthermore, by examining the how public librarians identify the needs of underserved patrons and resultant service coverage as well as how public librarians determine services to meet the identified needs and plan those services would be of great use to libraries and to LIS education programs.

More significantly, exploring and defining a current model of public-library services for urban underserved groups is important in order to fill a gap in the library and information science literature. Outlining the existence of a newer model is necessary given that technological change, economic conditions, and the emergence of new types and methods of service provision can result in new service gaps and obstacles to service provision which were not encountered in the past. Study of the contemporary state of affairs and identification of the issues driving the current style of public-library service provision to underserved groups are important for a number of reasons because it provides an opportunity to expand the existing LIS literature that has examined trends in library services to underserved groups. By continuing to identify, document, and describe new models of service provision, researchers can come to understand the forces that underlie the corresponding set of practices, gaps, obstacles, and

public librarian's responses to various underserved patron needs. Research could thus provide the library profession with a longitudinal record of both underserved patron needs and corresponding service responses.

What an historical perspective on public libraries and underserved groups suggests is that public-library services can have an important impact on the lives of underserved groups. Research indicates that such services have long had positive economic, educational, and occupational effects on communities and individuals able to access them (Becker et al., 2010; Fels, 2010). Because it is an almost omnipresent institution in communities across the United States, the public library is in the unique position of being able to help underserved communities on a nationwide scale. Thus, there is great potential for the public library to reach many underserved segments of the U.S. population with information services that can help to address their information needs (Childers, 1975; Chatman, 1991; Agada, 1999). Services provided by the public library can address some of the most conspicuous disparities in society which disproportionately affect underserved groups—such as poor health practices, low literacy levels, and poor information access (Agada, 1999; Childers, 1975). Another range of issues of particular importance to underserved groups is defined by a deficit in information-literacy and digital-literacy skills (Burke, 2008; Casey, 1972, Childers, 1975; Hersberger, 2005; Philadelphia Research Initiative, 2012). Many of these problems are linked to low education levels, the poor quality of local public schools, and the persistence of poverty in underserved areas.

Public libraries make several economically valuable contributions to local communities and users. Through provision of free and low-cost information resources, they support the development of essential skills and access to information necessary for success in the current knowledge-based economy (Fels, 2010). Assessing the value of the Free Library of Philadelphia

through an analysis of circulation, program, database usage, census and labor statistics, surveys, and interviews of librarians and patrons, the Fels Institute found that the library creates economic value for library users and citizens of Philadelphia both in broad areas that are related to materials circulated and programs and services offered and also in its contribution to higher property values in areas around service outlets.

In a nationwide study, Becker et al. (2010) found that information and communication technologies (ICT) provided by the public library increase personal literacy skills. In particular, patrons used public-library ICTs in order to address needs related to education, employment, and personal health. For instance, Becker et al. (2010) found that people use public-library resources to perform a number of tasks related to personal and communal development—such as locating employment, securing government benefits, finding housing, applying for aid from FEMA, learning about critical medical treatments, accessing materials on small-business development, and applying to graduate programs.

At this point it is important to note that even with all that public libraries have done and are currently doing for underserved groups, the library profession historically has struggled with serving this large and diverse cross-section of the American population. Wray (1976) emphasizes that the profession has striven to come to terms with such service provision. Muddiman et al. (2000) also suggest, that as public libraries continue to modernize their services, the modernization process is unlikely to result in service provision focused on underserved groups. Part of the issue may lie with the complexity of what it means to be underserved in general and with defining what “underserved” means within a local context. The continuous attempts to define “underserved” are indicative of the struggle within the library profession in particular and society in general to come to terms with the need to be culturally inclusive and diverse.

Chapter 2: Literature Review and Conceptual Framework

The literature related to library services for underserved groups is necessarily broad, given, in part, the various terms used over the course of almost 50 years' worth of publications. In order to make the review most relevant to contemporary conditions, documents before 1964 have not been included, except where historical context was needed. The conceptual framework for the study is grounded in this literature and is presented at the conclusion of this chapter.

Nature of the Literature

In an early review of the literature about public libraries, Zweizig and Dervin (1977) found that this literature was situated across three broad perspectives: normative, empirical, and research. The first perspective consisted of narrative literature, which was essentially composed of non-empirical reports and thought pieces. The empirical perspective largely focused on library statistics and library usage. The third perspective, which accounted for the smallest proportion of the literature, focused on research on the use of the public library as well as study of library users' characteristics and needs.

Although Zweizig and Dervin's (1977) observations are still fairly accurate today, the researcher identified the need to alter the categorization scheme to fit the current literature. A survey of that literature revealed a sizeable number of publications that are either literature reviews or discussions of conceptual and theoretical aspects of information behavior and underserved groups. A further survey of the literature suggested an expanded conception of research that includes both quantitative and qualitative works. Consequently, this literature review discusses four types of literature: descriptive literature, conceptual/theoretical publications, literature reviews, and research literature that is both quantitative and qualitative.

Descriptive Literature. The descriptive literature reports on public-library services and offers practical approaches to service provision to underserved groups. Literature in this category typically expresses experience-based advice; suggestions for types of service offerings; descriptions of programs offered by libraries or systems meant to appeal to underserved groups; observations on information-service needs and issues, and thought pieces. This category of literature generally takes the form of articles in library journals (Adeyemon, 2009; Holt, 2006) and, in a few cases, monographs such as Venturella's (1998) or Holt and Holt's (2010) that provide scope and context but do not report research studies or provide much depth in regard to findings or conclusions.

Indeed, Brown (1971) and Weibel (1982) as well as Holt and Holt (2010) indicate that the literature covering services to underserved groups is primarily descriptive and not the product of rigorous investigation. Instead, the descriptive works tend to provide both case-based and situationally oriented examples that depict the interaction between public librarians and underserved populations. Authors of these works do not apply any empirical methodology, consistent data-gathering techniques, data-analysis procedures, or conceptual models in exploring the provision of services to or interaction with underserved groups.

The major descriptive works that cover public-library services to underserved groups include monographs (Brown, 1971; Bundy and Stielow, 1987) and articles (Wray, 1976; Adeyemon, 2009; Orange & Osborne, 2004). Wray's article, originally published in 1976, was reprinted in 2009 by the editors of *Public library Quarterly* because the editors found Wray's article to be a "profoundly contemporary" statement about the issues which public libraries have consistently faced up to the present time. Wray discusses the historical role of the public-library, especially in relation to the poor; the changing demographics of inner-city populations;

and the public-library's continuous struggle to define and serve the underserved groups of the United States. Casey (1974) describes similar issues but does so in relation to specific underserved groups, such as functionally illiterate and elderly people, whom Casey viewed as typical populations found among the urban underserved. Gehner (2010) considers issues related to interaction with underserved populations and describes the impact of national library policies (e.g., ALA Policy 61) that may not be universally applicable across service environments. Adeyemon (2009) describes libraries' interaction with underserved groups and reports practical descriptions of several outreach efforts to them.

The major categories of these works are descriptions of specific services in particular public libraries and/or systems; discussions of professional issues in dealing with people who are poor, disabled, members of minority groups, and hampered by low literacy levels; one-time reports covering implementations of new services; and discussions of the ways that historical circumstances related to class structures and prejudice have biased public-library services. This literature informed the researcher's understanding of the public-library community's motivations for serving underserved groups as well as of librarians' and library researchers' perceptions of service to underserved groups.

Conceptual/Theoretical Literature. The conceptual literature offers models or theories that can be applied to understanding the information behavior of underserved populations. Currently, the major theme in this body of work is the conceptualization of a number of new literacies, the mastery of which is becoming essential to economic success and viability. Works in this category provide insight into the needs and problems faced by underserved groups and offer a clear conception of the environments in which public libraries provide services to underserved groups. Included are works that analyze concepts such as information inequity (Yu,

2006) and information poverty (Thompson, 2006; Haider and Bawden, 2007). A number of works offer critical discussions of such terms as information literacy (Buschman, 2009) and information poverty (Haider and Bawden, 2007). As Chatman (1996) pointed out, the concepts of information poverty and information inequity are often associated with underserved populations.

The conceptual literature includes works such as those of Haider and Bawden (2007), Lievrouw and Farb (2003), and Yu (2006). The major theme of these works relates to a conceptual struggle to identify the relationship between some form of disadvantage and some form of information inequality. Although disadvantage is certainly related to information equality, the relationship and corresponding influence of the former on the latter is not always clear. For example, it may be argued that economic poverty is often associated with lower levels of access, lower-quality education systems, and lower amounts of available information. However, these factors alone do not determine how information literate a person may be. Indeed, Chatman (1996) notes that over the course of her research she found that the link does not necessarily exist. Moreover, Chatman (1996) identified poverty as only one of a number of factors that might contribute to an information-impooverished existence. Some of these factors are explored later in the “Factors that Influence Information Behavior” section of this literature review.

The conceptual literature informed the present study in two ways. First, the researcher developed a broad conception of the library and information science community’s perceptions of underserved groups. Second, this portion of the literature served as a foundation for the model of contemporary library practice presented in this study.

Literature Reviews. A number of literature reviews cover such issues as the impact of socioeconomic status (Bradley and Corwyn, 2002); geographic location and concentration of poverty (Millbourne, 2010); and a confluence of systemic and behavioral issues and the cumulative effect of longitudinal exposure to multiple environmental stressors (Evans, 2004). These reviews discuss the social, environmental, and psychological factors associated with the everyday life of underserved populations. Generally, they point to a convergence of factors (social, structural, economic, behavioral, etc.) that underlie the reasons that underserved populations seek information. The reviews generally find that issues such as poverty, neighborhood crime, domestic violence, housing of low and decaying quality, etc., occur in combination and consequently form a stressful and unsafe everyday environment. These factors can also be understood in terms of mutually reinforcing societal agents such as the absence of institutional services, low-quality public education, low levels of educational achievement, and high crime rates. How these structural and societal agents affect underserved groups is explored in the “Public-library Services for Underserved Populations” section of this document.

Research Literature. Similar to the empirical literature noted by Zweizig and Dervin in the late 1970’s, a strand of contemporary literature still focuses on library statistics. It is also important to note that, while the empirical literature of today is similar in nature to that of the past, the current studies are generally more expansive in character. Publications by Sin (2011), Sin and Kim (2008), and Koontz et al. (2009), and Jue et al. (1999) consider library usage statistics broadly in relation to public-library systems, state and nationwide demographic factors, spatial location, technology accessibility, Internet speed, number of public-access computers, and other factors. While Zweizig and Dervin (1977) noted that the empirical literature of 35 years ago focused on circulation statistics, the contemporary literature uses

quantitative data from the Census Bureau, the Public library Survey, and GIS data sources to profile users and nonusers; to explore disparities in service provision and quality; to identify relationships between use and geo-spatial location; and to classify usage characteristics in relation to social, economic, and demographic factors.

Agada (1999), Chatman (1991), and Chatman and Pendleton (1995) agree that understanding the situational elements (Taylor, 1991) that determine the significance of information to a user and that affect the flow and use of information by that user provide a useful means for predicting user needs.

The literature related to these issues is primarily qualitative and it suggests four main areas of importance to this study: the underlying reasons for information seeking among underserved groups, the nature of the information sources used by these groups, the general factors that influence the information behavior of these groups, and the public-library factors that influence this behavior. The following sections of this chapter detail what the qualitative literature reveals about these areas, and the chapter concludes with a presentation of the conceptual framework for the study derived from the findings and theories this literature suggests.

Underlying Reasons for Information Seeking among Underserved Population

Over 40 years ago, Lipsman (1972) identified many of the same underlying reasons for information seeking among underserved populations as studies published in the past decade (Alexander, 2008; Burke, 2008; Hersberger, 2003). In general, the information needs of underserved groups revolve around such issues as security, crime, education, health, personal finances, housing, and employment. Problems related to these issues – like substance abuse,

legal concerns, etc.— represent a continuity of crisis-oriented practical reasons for seeking information that are indicative of everyday life circumstances among underserved groups.

In a landmark study of low-income workers; Chatman (1990) describes participants' need for news about violent crimes, burglary, and acquaintances in trouble with law enforcement. In a study of a similar population, Agada (1999) identifies race relations, crime, and family concerns as information needs. Other studies such as those by Bishop, Tidline, Shoemaker and Salela (1999) and Hersberger (2003) find that underserved people desire information related to security or crime, health, education, employment, rent money, food, the location of permanent and stable housing, education for children, personal finances and credit, substance abuse, and coping with domestic violence. Still other studies by Burke (2008) and Fisher, Durrance, and Hinton (2004) focus on immigrants: Burke used Current Population Survey data to examine library use by recent immigrants, while Fisher et al. report on a qualitative evaluation study of public-library use by new immigrants in the Queens Borough of New York City. Both studies indicate that immigrants' underlying reasons for information seeking are related to educational goals, hobbies, employment, health information, legal issues, cultural-preservation resources, housing resources, literacy, citizenship, and learning English.

Table 1 summarizes the various reasons for information seeking by underserved populations and the researchers who identified them.

Table 1: Underlying Reasons for Information Seeking			
*synonyms for terms used in the various studies have been used for consistency			
Underlying Needs	Information Source	Population(s) Studied	Source
Computer training	Public library	Poor, low-income residents of service area; immigrants; Spanish-speaking residents;	Alexander (2008); Bala and Adkins (2004); Fisher et al. (2004); Burke (2008)

		unemployed people	
Crime in neighborhood or local area	Close friend; local newspaper or news station; interpersonal sources; community gatekeepers	Inner-city gatekeepers; janitorial workers; low-income residents	Agada (1999); Bishop et al. (1999); Chatman (1990)
Desire for entertainment or leisure activity	Public library	Low-income residents; unemployed people	Alexander (2008); Bishop et al. (1999); Childers (1975)
Desire to learn more about local and ancestral history and culture	Native storytellers; tribal libraries	Low-income residents of the local service area; Native Americans; new immigrants	Armstrong (2000); Burke (2007); Fisher et al. (2004)
Education information for children or continuing adult education	Internet; informal contacts; friends; neighbors; relatives, public library	Historically disadvantaged groups; homeless families; low-income residents; new immigrants; Spanish-speaking residents	Bala and Adkins (2004); Bishop et al. (1999); Burke (2007); Childers (1975); Fisher et al. (2004); Hersberger (2003)
Family planning, child care	Gatekeepers	Historically disadvantaged groups; inner-city gatekeepers	Agada (1999); Childers (1975)
How to become a citizen	Public library	New immigrants	Burke (2008); Fisher et al. (2004)
How to deal with substance abuse	Homeless-shelter staff	Homeless families	Hersberger (2003)
How to increase literacy skills	Public library	Immigrants; low-income residents; Spanish-speaking residents	Bala and Adkins (2004); Burke (2008)
Information about credit	Homeless-shelter staff; other residents of homeless shelter	Homeless families; low-income people	Dervin and Greenberg (1972); Hersberger (2003)
Job announcements/career training	Public-library; public employment services; private-	Historically disadvantaged groups; homeless	Alexander (2008); Bishop et al. (1999); Burke (2007, 2008);

	employment services; unions; newspaper ads; friends, relatives, people on street corners	families; new immigrants; low-income people; Native Americans; poor people; unemployed people	Childers (1975); Fisher et al. (2004); Hersberger (2003)
Legal issues, personal or familial	Close friends; interpersonal contacts; public library	Historically disadvantaged groups; janitorial workers; Native Americans	Burke (2007); Chatman (1990); Childers (1975)
Location and availability of housing	Homeless-shelter staff; other residents of homeless shelters	Historically disadvantaged groups; homeless families; immigrants	Burke (2008); Childers (1975); Hersberger (2003)
Need to learn English	Public library	Immigrants, low-income residents	Burke (2008), Fisher et al. (2004)
Questions about health issues or healthcare	Internet; interpersonal sources; informal sources; public library	Historically disadvantaged groups; homeless families; low-income residents; Spanish-speaking residents	Bishop et al. (1999); Burke (2007); Childers (1975); Hersberger (2003)
Race relations	Interpersonal sources; gatekeepers	Inner city gatekeepers	Agada (1999)

Information Sources Used by Underserved Groups

Like any other segment of the population, underserved groups have access to various information sources. Studies by Bishop et al. (1999); Chatman (1990); Metoyer-Duran (1993); and Warren, Hecht, Jung, Kvasny, & Henderson (2010) have identified the information sources underserved groups use regularly to satisfy their information needs.

Mass media appears to be an infrequently and intermittently consulted source (Bishop et al. 1999). Armstrong, Lord, & Zelter (2000) note that very few of their participants –fewer

than 10% of the study sample of 99— considered mass media as a useful source to meet information needs. Where there is a preference for mass media, Chatman (1990) indicated that the preference results from a lack of informal interpersonal contacts and a distrust of other informal information sources such as neighbors. In a number of studies, Chatman (1990) identified “parsimony” or paucity of interpersonal information channels among some underserved populations (janitors, single mothers, residents of a retirement home). Other studies by Bishop et al. and Spink and Cole (2001) identified a perception that mass media (newspapers and television news) often contain negative portrayals or stereotypes of underserved communities. These studies also revealed, however, that inhabitants share a communal cultural space that Chatman (1990) defined as a “small world [the inhabitants] ... rely on mass media as an information source on crime and security of the local community (Bishop et al.; Spink and Cole).

Internet use by members of underserved communities appears to be linked to content that is popular and readily available. Warren et al. (2010) indicate that underserved populations’ Internet usage reflects a desire for information that adheres to familiar social norms and internalized communal identities or that portrays them in a positive light. Class-based and ethnic identities play a significant role in underserved groups’ information seeking on the Internet. Warren et al. indicate that content on the Internet is not, however, typically inclusive of class or ethnic identities.

Because the Internet has the potential to engage users not only as consumers but also as producers or generators of content, it presents an opportunity for underserved groups to share content that is directly relevant to their life experiences and needs. Gordon, Moore, Gordon, and Heuertz (2003), however, argue that, as underserved populations begin to use

computer resources and technologies, they learn to use them as consumers, not as producers. Findings from Gordon et al. (2003) and Warren et al. (2010) indicate a cyclical relationship in the use of the Internet by underserved groups: a lack of content leads to a lack of interest and inconsistent use of web 2.0 technologies, which in turn can result in a lack of content reflecting the communal identities of underserved populations. In relation to computer use and ownership, Bishop et al. (1999) indicate that fewer than a fifth of the participants in their study had computers at home and that only around half of those had the Internet connections. Respondents also indicated that, while they might own computers, the machines were often unusable because they were broken or too old. Thus, Bishop et al. indicate that a difficulty for some underserved populations lies in their fragmented access to information technology. Such access can be characterized as scattered, sporadic, and superficial.

A more recent study with findings that echo Bishop et al.'s (1999) comes from D'Elia, Abbas, Bishop, Jacobs, and Rodger (2007). According to D'Elia et al., Internet access at home for underserved populations appears to be low; particularly when the highest level of education in a household is at a high-school level or less. Their research has shown that a smaller percentage of underserved households have Internet at home than might be expected from an average U.S. household (D'Elia et al., 2007). This situation could help to explain why Internet use appears to be the most intensely sought public-library service among underserved populations (D'Elia et al., 2007; Becker et al., 2010). D'Elia et al. find that a higher percentage of minorities and non-English speakers accessed the Internet at the public library than at home. Thus, public-access computing provided by the public library may act as a bridging element in the "splintered information ecology" (Bishop et al., 1999) of underserved populations.

Underserved groups often use a variety of information sources to meet their needs and to bridge splintered information ecologies (Bishop et al., 1999). This phenomenon might best be explained by Jaeger and Burnett's (2007) expanded definition of Chatman's (1990) "small worlds": a small world is a "social environment within which individuals live and work, are linked by a set of common interests and expectations, as well as by a shared set of information needs and behaviors and often—though not always—by geographic proximity and similar economic status" (p. 465). Interaction between and information exchange within small worlds is not always assured for any number of reasons—including prejudice, geographic distance, language differences, and cultural conflicts. To cross social boundaries and compensate for a paucity of interpersonal sources, underserved people often turn to an information source that seems particularly important to underserved groups: the information gatekeeper.

Gatekeepers. The role of gatekeepers in underserved communities has been the subject of a considerable amount of research. In general, a gatekeeper controls the flow of information through a communication channel (Rogers, 2003). More specifically, gatekeepers are intermediaries who move among cultures and consequently are able to link isolated social networks to one another. In other words, they are members of multiple small worlds and act as conduits that pass information from one social context to another (Jaeger and Burnett, 2005). Generally, gatekeepers are defined by characteristics such as higher levels of educational achievement and higher income levels than those in the small worlds they bridge. Similarly to other gatekeeping studies such as Allen and Cohen's (1969) classic work, Agada (1999) also identifies education as the most significant demographic variable in defining a gatekeeper, particularly in the context of underserved populations.

In a study of an urban underserved community, Agada (1999) explores the personal and contextual factors that are likely to influence the information needs and behavior of gatekeepers from a low-income African American community. Agada indicates that the key to the gatekeepers' role as information intermediaries is their ability to move among small worlds and pass information from one context to another. The single most important characteristic of gatekeepers is their access to network ties and information sources that are generated outside of the local community and by sources that are not homogeneous with that community. The gatekeeper provides access points to this information, combining the roles of connected information intermediary and familiar interpersonal contact. Thus, gatekeepers are able to introduce information, perspectives, and ideas from other communities in a form that is accessible as well as compatible with local norms and understandings.

Metoyer-Duran (1993) studied 129 ethno-linguistic gatekeepers in American Indian, Chinese, Japanese, Korean, and Latino communities in Los Angeles, Orange, and San Diego Counties in the State of California. These gatekeepers tended to have one or more college degrees, were multilingual, and were involved with community organizations. The gatekeepers acted as information facilitators in their respective information environments and tended to be good managers of information. Their interpersonal networks served as a means through which information was sought and transferred.

A similar study by Kurtz (1968) focused on the process of the acculturation of Spanish-surnamed rural migrants into urban areas in Denver, Colorado. Kurtz identified networks of gatekeepers as those who "helped" in the acculturation-and-adjustment process of rural migrants. The gatekeepers were found to use informal channels to transfer resources to those in need, though Kurtz does not elaborate on what the informal channels were. The case may be

that gatekeepers were simply transferring information from formal sources such as doctors through informal channels such as interpersonal connections among community members.

General Factors that Influence Information Behaviors of Underserved Populations

According to Taylor (1991), information behavior is the product of the assumptions made by a defined set of people, the character of usual problems deemed important by that set of people, the constraints and opportunities of the world in which the set of people exists, and the assumptions held by the set of people as to what constitutes a resolution to a problem or what makes information useful. Again, Chatman's (1990) "small world" theory provides a useful framework for a discussion of factors that influence the information behavior of underserved groups. Such factors have been identified in various studies, as displayed in Table 2.

Table 2: General Factors that Influence Information Behaviors of Underserved Populations		
Accessibility	Accessibility of information is a predictive factor of information-resource use. Agada (1999) also notes that inaccessibility of information resources can act as a reason for information need. Chatman (1991) states that the things of most interest are those that are most accessible.	Agada (1999); Chatman (1991)
Awareness	Lack of awareness of information sources can be limited by a perceived irrelevance and distrust of information from external sources. The perceived irrelevance may extend from perceived incompatibility with social norms and worldview. Lack of awareness can result from lack of cumulative communal knowledge and incompatibility with established communal standards.	Agada (1999); Chatman (1996, 1999); Childers (1975); Bishop et al (1999)
Education level	Education level can be an influential factor in regard to the use of an information source such as the public-library. In a number of studies, education has been found to be the significant demographic variable in determining information-source use (Sin and Kim, 2008).	Agada (1999); Sin and Kim (2008); Koontz et al. (2009); Berelson (1949)

Experience level	Level of experience within a particular context provides a degree of knowledge relating to immediate concerns and concrete situations. Chatman (1991) asserts that pragmatism is an attribute associated with having knowledge based on experience of a particular situation. Hersberger (2003) indicates that prior experience with a situation (e.g., homelessness) provides firsthand knowledge of what information sources to consult and how to procure basic, necessary resources when such resources are scarce. Longevity provides familiarity with a particular context (social, cultural, environmental). Knowledge of social norms and tactics to make sense of situations and resolve needs extends from experience.	Hersberger (2003); Chatman (1991, 1999)
Fatalism	Fatalism is a pervasive belief that ventures will likely result in failure. A disadvantaged person who is fatalistic will be resigned to his or her fate because of a belief that no personal act will alter life's trajectory. Essentially, a fatalistic outlook includes a resignation to the capricious nature of fate and a belief that no significant outcome will result from seeking and accepting new information.	Agada (1999); Chatman (1991); Childers (1975)
Immediacy of need	The intensity of information need influences information behavior. Pragmatic, short-term, and sometimes survival needs can drive a need for convenient, accessible, and pertinent information sources. The immediacy of need may also be influenced by a need for immediate gratification. The need for instant payoff may contribute to the principle-of-least-effort (Zipf, 1949) approach to information seeking identified by Agada (1999).	Agada (1999); Chatman (1991, 1999); Childers (1975); Bishop et al. (1999); Zipf (1949)
Income level	As a demographic variable, income level can be tied to information-resource use. There is, however, a strong correlation between income and education levels. Studies such as those by Kronus (1973) and Zwezig and Dervin (1977) indicate that	Sin and Kim (2008); Jue et al. (1999); Kronus (1973); Zwezig and Dervin (1977)

	socio-economic variables such as income and occupation appear to be significant factors because of the correlation between education and socio-economic status.	
Level of diffusion	Level of diffusion of information is related to time sensitivity. The more widely information about employment or available low-cost housing is diffused the less valuable the information becomes to underserved populations. When resources such as jobs or housing are very limited, there is an increased amount competition to attain them.	Chatman (1990); Hersberger (2003)
Literacy skills (basic, digital, information)	Literacy and communication skills can be low as a result of a deficient educational background. English may be a second language. Skill acquisition and maintenance may be difficult because of the splintered ecology of technological access. Various literacies can act as enabling resources in accessing information sources and services.	Agada (1999); Childers (1975); Chatman (1991); Bishop et al. (1999)
Perception of usefulness	Perceptions of usefulness are subject to the situational relevance and benefit of information provided, association with information insider/outsider status, information type in relation to source type, and responsiveness of information resource to concern or problem	Chatman (1990); Agada (1999); Hersberger (2003); Chatman (1996); Bishop et al. (1999)
Proximity	Proximity of an information source has a significant association with its use or nonuse. Low-income populations tend to be more affected by distance than high-income populations. Proximity may also negatively influence information-source use because of the immediacy of the information need and the amount of time required to travel to a source.	Bishop et al. (1999); Sin and Kim (2008); Agada (1999); Koontz et al (2005); Hersberger (2003)
Risk	Fear of exposure of personal problems can outweigh negative consequences of not seeking information through familiar and close interpersonal contacts. For example, when subjects such as domestic violence and substance abuse are concerned, participants tend to seek out less familiar, more formal social outsiders to meet their information needs.	Hersberger (2003); Chatman (1990, 1996)

Situational relevance	Situational relevance contributes to which information and sources will be determined to be useful. Underserved populations may avoid or ignore information or an information source because they are unable to see its pertinence to their situations.	Chatman (1996)
Source type (personal, non-personal, formal, informal, insider/outsider)	The need to verify a piece of information with a trusted source, typically a source that is largely homogeneous with the information seeker, leads underserved groups to consult members of their small worlds.	Agada (1999); Chatman (1991); Hersberger (2003); Bishop et al. (1999); Childers (1975); Spink and Cole (2001); Taylor (1991)
Time sensitivity	Information regarding employment and low cost housing can be time-sensitive because of the limited life span of such a resource. Time sensitivity of information will often determine how it is shared.	Chatman (1990, 1991); Hersberger (2003)
Usability	Usability may be constrained by the utility of information resources, and services may be constrained by enabling skills. Usability may depend on a number of other variables-such as literacy skills, financial resources to acquire/afford, availability of transportation, proximity of information source, and past failures to use a resource successfully.	Agada (1999); Bishop et al. 1999)
Work fatigue	Fatigue resulting from the amount of time spent at work restricts the use of information resources, especially in relation to the usability and relative proximity of a source.	Chatman (1990)

The information behavior of underserved groups is characterized by situationally immediate information needs and a social perspective that formal information sources are community outsiders. According to the small-world model, issues and problems that occupy the most immediate attention, such as finance and housing needs, are the highest priority (Metoyer-Duran, 1993). Thus, the information needs of some underserved populations are so situationally immediate that they are difficult for public libraries to meet easily (Chatman, 1991,

Agada 1999). For example, Chatman indicates that in some cases underserved populations often feel resigned to their present position in life because of a perception that there are no useful socio-economic information sources available. Underserved people are often convinced that a long-term effort to improve their own situations is not worth the exertion because a series of negative events are occurring simultaneously and the coincidence of those events negates a chance for success (Chatman, 1991).

Chatman expresses the belief that underserved populations tend to perceive minimal opportunities to improve their own conditions. Underserved groups' perception of a lack of opportunity is tied to their belief that they do not have access to information sources that might benefit them. From a contextual level, the world view of underserved populations is partially influenced by unexpected and frequently occurring problematic situations. Moreover, a fatalistic approach to life colors a worldview in which failure is often an expected consequence of endeavors (Chatman, 1991). Chatman explains that the fatalistic approach to life makes the expectation of failure appear to be a realistic and reasonable perspective. Chatman credits this sense of fatalism as a reason for a myopic focus on present realities and an orientation toward immediate gratification.

Agada (1999) notes that a fatalistic orientation to life positions current public-library services (e.g., educational, recreational) beyond the physical and cognitive reach of underserved groups. Agada further suggests that, among traditionally underserved communities, there is a communal lack of awareness about public-library services that may be beneficial to them (Agada, 1999).

Agada (1999) also contends that the everyday-life problems of underserved communities are not well served by or even considered in the design of public-library services.

Indeed, Dervin and Greenberg (1972) remind us that many contemporary information services were initially designed for users with high levels of education. For example, many information systems and services such as databases and even online public access catalogs require skill in multiple literacies (basic, information, etc.). Even though the intent of the public library may be to support the uplift of all, the actual design of systems may not reflect this intent.

Furthermore, Agada (1999) notes that the profile of a public-library user is unlike that of the typical member of a disadvantaged underserved community and that the design and operation of typical public-library services are not informed by the study of the information environments of underserved communities (Chatman 1996). The design and implementation of public services by people with neither an understanding of local problems nor a stake in the community can lead residents to feel that services were imposed rather than intended to help (Lupton, 2003). The interaction among cultural factors, such as the perceived outsider status of public-library services and issues with service provision, can engender a self-reinforcing process of low use among underserved communities and subsequently low provision of public-library services to them (Koontz et al., 2009). Indeed, in disadvantaged areas, residents have come to expect poor quality or outright absence of public services, and this may contribute to low use of libraries' services (Lupton, 2003).

In terms of public-access computing and underserved groups, Kinney (2010) finds that the public library often plays a key role in providing free public access to information and communication technologies (ICTs). Despite the key role of public-access computing services for underserved populations, however, Kinney cautions that public-access computing alone does not and cannot remedy technological and information inequities which have become intensified over time. Moreover, Kinney contends that public libraries must look beyond the simple

provision of information access and work to understand the information behaviors of underserved communities. An understanding of the small-world context and of factors that influence underserved groups' information behaviors is necessary to address information inequity and to develop effective public-library services.

In other words, in order to understand how the small-world perspective of underserved groups affects their use of public-library services, public libraries need to recognize the durable social, economic, and physical processes which perpetuate themselves in underserved settings (Andersen, 2002). Wilson (2009) observes that the persistence of existential factors and behaviors across consecutive generations can be linked to the persistence of such factors as poverty and the inequality of neighborhood environments. Sharkey (2008) terms these trans-generational factors as "intergenerational contextual mobility," or the "intergenerational transmission of context." Essentially, the chances of the children of impoverished parents remaining in similar circumstances for the rest of their lives is fairly high: Sharkey notes that 7 out of 10 remain in the same or similar circumstance as those into which they were born.

In terms of patterns of public-library use, issues such as an historical lack of public-library service provision to underserved groups, the existence of low-quality public-library services in underserved communities, and episodic or altogether absent public-library services and outlets can influence usage patterns. A culture of use/non-use shaped by social norms can in turn shape continuing social norms. In the case of the public library, the lack of a library in a neighborhood may influence individual familiarity with and subsequent use of libraries from one generation to the next.

Wilson (2009) notes that such self-sustaining social behaviors are not impossible to change. Sampson, Sharkey, and Raudenbush (2008) conclude that the local context of a

neighborhood has the potential to alter the developmental trajectories of its residents. Jargowsky (1997) indicates that, when presented with increased socio-economic opportunity, people can adopt positive behaviors rather quickly. Moreover, Sharkey (2008) points out that increased access to economic opportunity and the presence of public institutions have significant implications for the life chances of individuals. This idea suggests that public-library services can play an important role in addressing inequity in information access, but only if those services are designed with an understanding of the small-world information environments of underserved groups and of the persistence of the transgenerational circumstances in underserved communities.

Neuman and Celano (2006) go so far as to suggest that, while equalization of public-library resources must be the first priority, in the short run, the balance should be tipped to favor underserved communities in order to address the durable and cumulative effects of longitudinal disparity. To redress these effects of longitudinal disparity and to appeal to both the concerns of a local population and a preference for familiar sources, public-library service provision appears to require a paradigm shift. Such a shift necessitates revision not only of traditional public-library services such as reference but also of new types of services, such as digital literacy training, that can address current and emerging needs.

Public-Library Factors that Influence Use by Underserved Groups

A number of studies have explored the factors that affect the use of the public library by underserved groups. These studies have generally focused on the ties among the socio-demographic, economic, and geographic factors of a target group and their observed public-library usage. Sin and Kim (2008) used regression analysis to identify 43 influential variables in order of importance: at the top of the list are educational attainment, income level, household size, and household proximity to a public library. In a later study, Sin (2011) found factors other

than income, such as the quality and type of services offered or the distance to the nearest branch, to be significant indicators of use. Several researchers (Berelson, 1949; Zweizig & Dervin, 1977; Sin & Kim, 2008) note that the significance of income level in determining public-library use is probably a result of a strong relationship between level of education and socio-economic status. Chatman (1986, 1996), Savolainen (1993, 1995), and Agada (1999) confirm that socio-economic status alone is a limited indicator of information needs and use, as it does not consider such contextual factors as preference for information sources, attitudes toward technology, the nature of available services, and cultural factors like language.

Sin and Kim (2008), Agada (1999), Chatman (1986), and Berelson (1949) all indicate that ethnicity may also act as a determinant of public-library usage. For instance, Sin and Kim (2008) found that ethnicity is a statistically significant variable in library use. When other variables (education, income, etc.) were held constant, households whose heads were Native Americans, Hispanics, Asians, or African Americans were not likely to be library users. Sin and Kim note that less-advantaged groups such as minorities, recent immigrants, and disabled persons are less likely to be library users than society as a whole—a consistent finding even when education and income were held constant. Generally, it is quite apparent that, from a number of perspectives, underserved groups both were and currently are less likely to be public-library users than other segments of the population. This conclusion is particularly strong in terms of demographics (Agada, 1999; Sin and Kim, 2008) and geospatial proximity (Sin and Kim, 2008). A number of studies that date back to the 1930's suggest that this disparity has been the case longitudinally.

Overview of Historical and Contemporary Service. Understanding the history of the public-library and public-library services is necessary to situate the underlying role of public-library service to underserved populations. The public library's current focus on underserved

and disadvantaged communities appears to extend from the social upheaval of the 1960's. It was during the 1960's that library literature truly began to examine library and information services in light of poverty and social inequality.

During and prior to the 1930's, the public library generally considered public-service provision only in regard to the 10% of the population that was white, middle class, economically stable, and fairly well educated (Casey, 1974). The visibility of underserved groups in society improved after 1945 with the increase in migration from rural areas to large cities during the post-Second World War period. Public-library research and public-library services were not directed toward underserved populations of Americans prior to the 1960's (Wray, 1976). During that decade, societal changes resulting from social movements and from such legislation as the Civil Rights movement and the national War on Poverty signified major shifts in popular views on equality. The public-library was obliged to shift its focus toward more equal and inclusive practices just as other social institutions such as government, education, the military, welfare, private-sector employment and others were (Casey, 1974; Wray, 1976).

Wray (1976) asked: if public libraries were serving only 10% of the U.S. population during the 1970's, how could they have served even one-half of that number at their inception? Indeed, information-studies research focusing on public-library services to disadvantaged populations does not really appear in the research literature until very end of the 1950's, and only then in very subtle ways. Wray asserts that such terms as "minority," "the poor," and "the disadvantaged" do not generally appear in the research literature and for the most part were not viewed as being professionally appropriate. Yet some earlier library research and reports from the American Library Association do in fact address and approach the topic of library service and information provision to different segments of the population. Wray suggested that

despite the absence of terms such as “minority” and “disadvantaged” from libraries’ professional discourse prior to the 1960’s, there are indications of earlier calls for more inclusive policies to encourage universal and equitable provision of public-library services and outlets.

One of the reports published prior to the Second World War, *The Geography of Reading* (Wilson, 1938) addresses the inequality that existed in access to public libraries and public-library resources among states and regions in the U.S. He explores the effect that inequality in public-library resources may have had in relation to the variation in distribution of cultural, educational, and social institutions and the communication of ideas. In assessing the accessibility of public-library service, Wilson explores the relationship between the number of public libraries and service-area coverage in light of population size. Wilson found that at least one-third of the U.S. population did not have access to libraries. The most consistently underserved populations were rural residents, minorities, poor people, and those located in mountainous areas. At the present time, many of the same regions identified as underserved in Wilson’s study are still underserved by public libraries (Sin, 2011).

In a report published a few years later, Leigh (1950) notes that public-library services should be “adapted to the variant interests and conditions of different communities” (p. 227). Leigh also calls for a differentiation in services and proposes that the library should act as the people’s university by becoming a source of post-primary-school education (Leigh). Yet suggestions and findings from Berelson (1949) and Leigh appear to have gone largely unheeded. It is difficult to say whether the lack of action was the result of the prevailing socio-cultural views of the day, the subtlety with which the findings were presented, their limited distribution outside the research community, or the fact that such notions were frowned upon professionally.

Casey (1974) and Wray (1976) note that it was not until the 1960's that there was a real recognition of the need for change in the provision and focus of public-library services. In 1964 the mandate of the Library Services Act of 1956 was expanded from its focus on rural areas to include various underserved populations such as people who are handicapped, urban and poor, older, and illiterate (Orange and Osborne, 2004). Correspondingly, the breadth of research published in the 1960's expands to study public-library service in the context of literacy, children, schools, young adults, minorities, rural areas, and material selection as well as general services to disadvantaged people and federal legislation and sponsored programs (Copenhaver & Boelke, 1968). Casey attributes the increase in library outreach efforts to underserved populations to the social climate of the 1960's and the increasing societal consciousness about equitable rights and access to resources and services. The enhanced awareness of injustices inflicted on minorities was manifested in the enactment of Civil Rights laws as well as in the federal War on Poverty initiated under President Johnson.

During the 1970's, researchers continued to explore the provision and role of public-library services in the context of disadvantaged populations. A study from Lipsman looks at the "social utility" of public libraries and addresses problems associated with public-library services in low income areas (Lipsman, 1972). Lipsman finds that, among low-income communities with low levels of education and literacy, public-library use was generally low regardless of public-library service offerings. Interestingly enough, Lipsman notes that the failure of inner-city public libraries to reach underserved populations could not be traced to one single or small set of factors and speculates that the confluence of deprivation, callousness, and neglect damaged the recognition of underserved people's "human potential" and thus limited or negated the perception of the relevance to them of the public library. Lipsman also indicates that, where

public libraries were successful in reaching low-income communities, their services often invoked such activities as providing ethnically oriented materials and media. Lipsman's recommendations reflect those of Agada (1999) and Chatman (1990 & 1991) in saying that public-library programs and services should mirror familiar concepts and norms related to user needs. Similarly, an early study from Chatman (1986), which explored information diffusion among low-income workers, also finds that information services provided by public libraries did not generally fit the needs of her subjects.

Current practice-based literature indicates that today's public libraries are actively trying to meet the needs of underserved groups. Holt and Holt (2010) identify a number of public libraries such as the Enoch Pratt Free Library, the Chicago Public Library, and the St. Louis Public Library that have created services to meet the needs of underserved populations. Put more simply, the research literature has identified the underlying reasons for information needs among underserved groups but has not acknowledged the public-library services that fill those needs. Conversely, the practice-based literature that identifies service provided by individual public libraries and public-library systems does not comprehensively list the needs identified by public librarians or the needs that public libraries have created/modified services to fill.

Similar disparities in the picture of library-service provision continue today. Several studies (Koontz, Jue and Bishop, 2009; Jue et al., 1999; Sin, 2011) indicate that there are continuing disparities in the provision and quality of public-library services offered to traditionally underserved populations. Research from Sin, who studied neighborhood disparities in information access in relation to a variation in funding and service provision across library systems nationwide, found that lower-quality service levels and fewer offerings are generally provided to low-income populations. Using data from the Public Library Survey (Chute, A., Kroe,

E., O'Shea, P., Craig, T., Freeman, M., Hardesty, L., et al., 2006) and Census Bureau (2000a, 2000b, 2000c), Sin analyzed public-library service provision using a combination of Geographic Information System (GIS) techniques and multiple regression analysis. Sin finds that public-library systems located in lower-income or rural neighborhoods generally receive lower levels of funding and tend to offer fewer and lower-quality information services than areas with higher incomes. The study also identifies disparities in the distribution of digital materials, full-time staff with MLIS degrees, and programs offered to underserved populations. Sin concludes that insufficient funding hinders public libraries in their efforts to reduce information gaps, bridge inequities in information access, and generally provide high-quality public-library services to underserved populations.

Findings from Koontz, Jue, & Bishop (2009) appear to support Sin's (2011) assertion that there is a disparity in services that leaves some of the U.S. population underserved. These researchers performed a nationwide telephone survey, supplemented by a GIS analysis of the demographic and socio-economic factors of populations in public-library service areas, to determine the reasons for the closure of public-library branches. They found, first, that the majority of library closures were due to low usage and, second, that many of the closed facilities were in areas with low levels of income and education. Thus, it seems that public-library outlets in areas where underserved populations form the majority of users bear more risk of closure.

In a study similar to Sin's (2011), Jue et al. (1999) used a GIS software package to analyze of digital census map data to study public libraries' provision of technology access to impoverished people. They find that almost 20% of census tracts with poverty levels of 20% or higher are not served by a public-library outlet. Only 2% of public-library outlets are located in extreme areas of poverty. According to Jue et al., an estimated 3 million impoverished

Americans are not served by libraries. This conclusion lends some additional strength to Sin's (2011) and Koontz et al.'s (2009) findings regarding the imbalance of resources and the locations of facilities in relation to demographic factors.

The geographic location of public-library outlets can be tied to public-library management and service planning. Koontz, Jue & Lance (2005) indicate that most public libraries do not delineate service areas and have little knowledge about the communities residing in the service areas from which local information needs emerge. Decisions made about public-library branch location and service planning are not generally informed by an understanding of usage patterns or of the potential information needs of their service populations. Indeed, as the following section indicates, public-library service planning materials do not generally mention or account for underserved populations. Koontz, Jue & Lance's (2005) findings may be indicative of public-library policy issues that do not reflect consideration of underserved populations and their information behaviors.

Public-library Service Planning and Provision. Yet, the literature coming directly from active practitioners provides several examples of how individual public libraries and public-library systems are planning and structuring services to meet the needs of their underserved populations. Much of this literature appears to be guidelines and manuals for public-library service planning, such as the Public Library Association's (PLA) series on public-library planning and the International Federation of Library Associations' (IFLA) guidelines for development. Although they do not present empirical findings, the PLA's manuals offer a comprehensive overview of general public-library services. For example, the Planning for Results manuals provide information to help public libraries plan and manage service provision proactively rather than simply reacting to issues or needs encountered.

These manuals, however, make no mention of specialized populations such as minorities, poor people, or immigrants. Consequently, it is pertinent to ask how much public librarians know about and consider issues in providing services to underserved populations. A literature search for research on public-library service planning to underserved populations returned no results. A broader search on public-library service planning returned only a few results, which are discussed below.

Stephens (1995, 2001, and 2006) surveyed public librarians and published research studies on the topic of public-library service planning. Stephens (2006) suggested that today's public librarians select services as librarians have always done: they read journals; attend conferences; and use the Public Library Association's (PLA) planning manuals to design services based on local patron requests, user surveys, and studies of community demographics. Stephens (2006) also indicates that her suggestions are conjecture because there is a lack of literature addressing the issue and consequently an absence of empirical evidence to support her observations. Through examination of the professional literature, Stephens (2006) concluded there was no definitive answer on the question of how public librarians plan services. The apparent lack of a consistent regimen for service planning suggests that service trends are indeed informed by funding criteria and informal education through conferences and publications.

A report from Heim and Wallace (1990) titled *Adult Services: An Enduring Focus for Public Libraries* found an apparent non-causal link between the services offered by a public library and the use of the PLA guides. A few empirical studies have also reported on public-library use of the guides. A study by Pungitore (1992), for example, reported on the diffusion and use of PLA's 1987 manual *Planning and Role Setting for Public Libraries*. Results from

surveys distributed to many public libraries for this study indicated that approximately 36% (94 of 259) of respondents had adopted the PLA planning process and that another 19% intended to adopt the process in the near future. Another study by Stephens (1995) found that, of 255 libraries surveyed, 224 had used the PLA manual on *Planning and Role Setting* and 130 of the respondents indicated that they had changed their service offerings as a result of consulting the manual. A later study of 52 Alabama public libraries indicates that some librarians rely on historical precedent or examples of service offerings of nearby public libraries. For the most part, public-library service decisions in Alabama were generally influenced by the State's standards for public libraries. Around 25% of the sample used PLA's 1987 planning process; 10% used the 1998 version of *Planning for Results*, which provides lists of services that are potentially useful to underserved populations. One addresses the issue of *be an informed citizen by* providing information on public policy; convening meetings to discuss community, national, and international issues; developing of web resources with links to local, state, and federal information resources; and providing tax forms and volunteer tax advisors (McLure et al., 1987).

Beyond identification of what resources public libraries use to plan or design their services, none of the research mentioned specialized populations aside from those with disabilities. A few books detailing advice and essays on serving poor people are available (e.g., Holt and Holt, 2010), yet these do not present empirical findings. No research literature was found in regard to how public libraries select or plan services for any underserved group. Indeed Koontz and Jue (2005) indicate that public libraries do not generally delineate different "markets" or population segments in their local service areas.

Impact of Public-library Services to Underserved Populations. Beyond the library-service planning literature, there are a small number of research studies on the assessment,

impact, and benefit of public-library services: research from Becker et al. (2010, 2011); Bertot, McLure, and Jaeger (2008); and Gordon, Moore, & Gordon (2003) focuses on determining such effects as the impact on or benefit to users of services. These studies are often tied to issues associated with justifying funding that are beyond the scope of this work. The studies' focus on public-library services, however, yield important and useful insights.

Becker et al. (2010) indicate that public-library services are a critical resource for underserved populations, particularly in the case of public-access computing. In a study of the impact of public-access computers at public libraries, the authors found that public-library services make an impact across a number of aspects of life such as employment, entrepreneurship, health and wellness, managing household finances, and so on. Services identified by the study include helping underserved populations prepare job applications, perform job searches, submit employment applications online, undertake employment-oriented training, make decisions to improve personal health, identify measures to prevail against illness and to manage treatments, and improve management of financial resources. Becker et al. note that online public-library services help address a wide range of needs and therefore promote development of the national workforce, encourage educational achievement among users, and fill a societal need to deliver health information and provide access to e-government resources.

In a smaller study of youths from grades 5-12, D'Elia et al. (2007) observe that, in comparison to other youth, higher percentages of underserved youth use the public-library as an Internet-access point. D'Elia et al. note that underserved youth whose parents' educational achievement is at the high-school level or less often used Internet services provided by the public-library because they generally do not have Internet access at home. They indicate that a

benefit of public-library use by underserved youths is the bridging of the digital divide by underserved people who might otherwise not have Internet access.

In a broad historical sense, the episodic relationship between underserved populations and the public-library mirrors predominant societal perspectives, economic conditions, and social movements in the United States. Underserved populations have benefited from the services provided by public libraries, particularly when those sources meet critical needs such as job searching and locating housing. The information needs of underserved groups have not varied much over past decades, and public libraries' approaches to service provision to meet those needs have largely corresponded to prevailing service models. Studies have identified models from the 1960's (Weibel, 1983) up to the year 2000 (Muddiman et al., 2000). Given the changes in library practice, technology, available resources, and government policies in evidence today, there is a clear need to update this information and to identify a current service model for providing services to underserved groups.

Conceptual Framework

The key issues discussed in the literature above—whether that literature involves research, practice, or planning—can all be addressed most effectively through the framework provided by Chatman's (1990) and Jaeger et al.'s (2010) information model of small information worlds. The work of these researchers concerning information behavior in relation to underserved populations as well as Chatman's work on conceptualizing information poverty in terms of social constructivist theory have thus provided the primary conceptual framework for the current study.

Chatman (1990) was the first information-studies researcher to indicate that, in order to understand the everyday information needs of underserved populations, information-science

researchers must account for such populations' *a priori* association of information with an immediate, time-bound reality—a small world. Agada (1999) and Chatman (1999) indicate that the concept of a small world is especially useful in understanding the information behavior of underserved groups because a “*small world* is a society in which mutual opinions and concerns are reflected by its members, a world in which language and customs bind its participants to a worldview....In its truest form, a *small world* is a community of like-minded individuals who share co-ownership of social reality” (Chatman, 1999, p. 213). Information in a small world is shaped by the subjective meanings, emotions, and vocabularies that are derived from a shared social and environmental context.

A small world is one in which common opinions and concerns are shared by community members. The use of common language and metaphor by a source familiar with the local context can make unfamiliar concepts easier to understand. Chatman (1999) expands upon the notion of a small or localized worldview in saying that an individual's reality is one that is socially constructed and argues that “when people seek information only from others much like themselves or are skeptical of claims not personally experienced, their world has a limited range of possibilities” (ibid., p. 215). Within public-library service areas, different neighborhoods can represent different small worlds—particularly where there are differences in culture, language, and socio-economic standings.

Small worlds thus represent information environments in which individuals rely on familiar interpersonal sources who share a common socially constructed reality, (e.g., friends, family, and neighbors) and are less comfortable with unfamiliar sources (e.g., physicians, librarians, and community outsiders). Burnett, Jaeger and Thompson (2008) explain that these small worlds are the social environments in which individuals live and work. Membership in

these social environments binds people together through shared interests, socio-economic status, information needs and behaviors, and often geographic orientation (Burnett et al., 2008). Jaeger and Burnett (2005) and Jaeger et al. (2010) expand on Chatman's model of small information worlds by demonstrating that the concept can be broadly applied to almost any social group with a set of common characteristics. The Jaeger et al. expansion of *small worlds* into an *information worlds model* that results in a framework that can be applied to studying various marginalized and underserved groups. The small information worlds model provides a conceptual lens through which several themes can be examined: the nature of truth and truth statements; explanation of action; and the characteristics of the inquirer and respondent, including their values.

Chapter 3 Methods

The literature review and the lens provided by the study's conceptual framework suggest the following guiding research questions: What is one model of the current public-library services provided for underserved groups, and what factors underlie the existence of this model? The specific questions related to this guiding question are as follows:

- RQ 1: What services are public libraries currently providing for underserved groups?
- RQ 2: What gaps do librarians perceive that currently exist in service provision to underserved groups?
- RQ 3: What obstacles, besides time and money, do public librarians face in providing services to the "small information worlds" of underserved groups?

In conducting any research study "it is proper to select that paradigm whose assumptions are best met by the phenomenon being investigated" (Guba, 1981, p. 76). The public library is in the unique position of being able to help underserved communities on a nationwide scale. Because of the inherent interactional nature of the information behavior of underserved groups within the context of the public-library, the qualitative paradigm was identified as the most suitable means of exploring and answering the guiding research question and sub-questions. Qualitative research offers an effective approach for researchers to become ensconced within the social environment of interest, thus allowing them to develop an understanding of the interactions of actors from different information worlds.

Qualitative Methods

Three methods in particular make this research approach the most promising for gathering and analyzing the detailed, context-sensitive information necessary to conceptualize a current model of public-library services for underserved groups. The use of *interviews* enables the researcher to explore practicing librarians' insights into the nature and details of service

provision to underserved populations. *Document analysis* enables the exploration of potential issues related to public-library policy, gaps in strategic planning, and the various types of services currently offered to these groups. *Observations* regarding service provision to members of these groups allow the researcher to study the interactions between staff and patrons and among patrons to identify how patrons use services available and what services appear to be the most important for underserved groups.

The researcher used all three methods to investigate eight libraries' levels of awareness of underserved populations, preparedness to serve them, understanding of issues associated with them, and practical approaches to serving them. The contextually rich details that resulted from sustained observation, focused interviews, and careful document analysis for each of these eight libraries have provided many clues as to whether and how current services and service models are meeting the needs of underserved groups. Indeed, the rich data provided by these libraries helped to identify gaps in service coverage and library practice that could serve as the basis for future work.

Each library in the study was considered a "case"—that is, a single urban public-library branch providing services to underserved groups. The case study is an ideal form of inquiry to explore public-library services for underserved groups because the nature of the case study allows for a longitudinal examination of how services for such groups have evolved over time. The guiding research question—what is the current model provided for public-library services for underserved groups?—involves a number of situations which necessitate the use of case study method in general and the use of interviews, document analysis, and sustained observation in particular. Researchers in library and information science began using the case

study method as early as the 1980's, when Raya Fidel used the method to investigate information seeking behavior (Fidel, 1984).

Research Sites. According to the American Library Association (ALA), there are just under 9,000 individual public-library administrative units and around 7,600 branches in the United States (American Library Association, 2013). Of those 7,600 branches, 487 are located in city settings (Swan et al., 2013). The specific criteria for the selection of the public libraries for inclusion in this study are outlined below.

Criterion 1. The research site had to be a public-library. This criterion reflects the study's stated focus on public libraries.

Criterion 2. The library had to be located in an urban area, with a substantial population of at least one traditionally underserved group (minorities, elderly people, etc.). The criterion is stipulated because the study focused on public libraries serving underserved groups within an urban context.

Criterion 3. The library had to be actively providing services to one or more underserved groups. This is a necessary stipulation, given that the study's central focus was existing public-library service to underserved groups within an urban context.

The researcher identified eight branches from two library systems that met the selection criteria. The branches include libraries from a range of urban areas that vary widely in size, population density and composition, diversity, and municipal structure. Although not a representative sample, the eight libraries provide a wide view of the current nature of public libraries' services to underserved populations. The libraries serve a range of social groups ranging from low-income Americans, to Spanish speaking immigrants, to Amish communities in rural Pennsylvania.

Chester County Public Library, Chester County, PA. Two sites were chosen from the Chester County Public Library system, which serves a county with a median income level that is one of the highest in the Pennsylvania. It also serves two low-income communities that differ significantly from the rest of the county. The Chester County Public Library is a federated system, and the two branches selected are the Oxford Public Library and the Coatesville Area Public Library. These sites were selected based on discussion with and recommendations by the Chester County Public Library administration, which identified the locations as underserved areas within their service area. Each library houses around 50,000 items and has approximately 6-10 computer workstations.

One librarian from each of the sites participated in the study. One was an African American male in his 50's, and one was a Caucasian female in her 30's. Each librarian had over 10 years of experience, one exclusively in public libraries and the other with experience in both academic and public libraries.

The Free Library of Philadelphia, Philadelphia, PA. The Free Library of Philadelphia is a large, centralized, urban public-library system located in the city of Philadelphia. The Free Library has a long history of service to traditionally underserved groups, particularly African Americans. Five Philadelphia locations were selected for participation in the study—the Eastwick Branch, Cobbs Creek Branch, Haddington Branch, Durham Branch, Roxborough Branch and Lucien E. Blackwell West Area Regional Library. The research sites ranged from the medium-sized West Area Regional library—with around 20 workstations and an additional computer lab, items numbering in the tens of thousands and five to six librarians—to smaller branch libraries with around 50,000 items, about six computer stations, and around two librarians.

A total of nine librarians from the Free Library participated in the study. The librarians were aged between 30 and 60 and included Caucasians and African Americans. Five of the librarians were male, and four were female. These participants had between 5 and 30 years of experience, mostly in public libraries.

Data Collection. The researcher gained entry into the research sites through both referrals and direct phone calls. When referrals were not available, direct contact with the librarian or library administrator in charge of service provision was made via email or phone call. Once contact had been made with a person who could authorize access to the research site(s), field visits for observation were scheduled. Following the field observations, interviews were conducted with participating librarians.

Observations at the pilot site (Camden County, New Jersey) and topics from the relevant literature provided the baseline from which the researcher developed a basic interview protocol (Appendix A) that was used in semi-structured interviews at the pilot site. Then, observations were performed at two sites from each of the participating large library systems to provide additional data about the contemporary day-to-day workings of each public-library system. The observation and interview protocols used to launch the full study were based on this initial round of data collection. For the study, librarians, library staff, and library patrons were observed at each of the seven participating sites. Observations were interactive in the sense that librarians were questioned about their actions, patron information needs and behavior, and services available to patrons. The interactive character of the observations encouraged librarians to provide insights about phenomena being observed.

Expanded field notes and an analysis of relevant documents (e.g., policies, records of fines, etc.) after the initial observation phase at each site formed the basis for the design of an

expanded interview protocol targeted specifically for each site (Appendix A). Each expanded protocol was geared toward confirming or disconfirming the researcher's observations and insights that emerged during fieldwork at a particular site. The main questions in these interview protocols addressed the general issues that focused the study. Secondary or probing questions addressed specific sub-issues that arose during the observation phase. All interviews were recorded and transcribed by the researcher. Observations and interviews were continued until no new significant findings emerged and saturation was reached.

Document analysis involved the examination of a variety of documents, materials, and web resources at each site. Items included were library policies; web-based descriptions of services; displays on tables and in cabinets; lists of approved programs (where available); resources that met information needs identified from the literature, and educational and training materials. The date and quality of materials used to provide services were also to be noted.

Three types of instruments were developed for this study: a general interview protocol (Appendix A); a targeted interview protocol (Appendix B); and an observation protocol (Appendix C). The instruments were approved by the Drexel University Institutional Review Board on September 24, 2013 (Appendices D and E). Permission from the Camden County Public Library System to conduct the pilot study was received on August 22, 2013 (Appendix F).

The sections of the general interview protocol were drawn directly from the research questions, which were based on themes that emerged from the literature review. The questions were refined based on casual observations at a West Philadelphia branch of the Free Library of Philadelphia, and the pilot site in Camden County, as well as informal conversations with a librarian working at the branch.

Next, a targeted version of the interview protocol was developed for each case. These were based upon preliminary observations and informal conversations with the librarians at the site. The protocols addressed issues that are particularly salient at each branch.

Finally, the observation protocol draws heavily from of Guest, Namey and Mitchell's (2012) list of suggested things to observe during participant observation. These include but are not limited to (1) verbal behavior and interaction, (2) use of library resources, (3) use of personal and library space, (4) patron movements, (5) and activities of frequent patrons or others who stand out. Observations conducted at the pilot site were guided by this list.

Data Analysis

The data that were analyzed consisted of interview transcripts, expanded field notes, and the results of the document analysis. The main approach to analysis involved a detailed content analysis of the data sources through the use of qualitative analysis software known as Atlas.ti. Atlas.ti is designed to help researchers perform content analysis as well as to uncover and systematically analyze complex phenomena hidden in unstructured data. The program provides tools that allow researchers to locate, code, and annotate findings in primary data material.

Using Atlas.ti, the researcher first examined the entire data set exhaustively in order to develop a coding scheme. The scheme was applied to each site, or case, to identify significant themes, patterns, and issues at the site. A coding scheme derived from concepts found in the guiding research questions and the interview protocol is displayed in Table 1.

Table 3. Coding Scheme	
Primary Code	Clarifying Codes

Services	Service Models	Information & Referral	
	Service Types	Reference	
		Computers	
		Literacy Instruction	Basic
			Technological
Targeted	Information Need		
Planning	Formal	Market Segmentation	
		Community Assessment	
		Strategic Plan	
	Informal	Patron Requests	
		Member of Community on Staff	
Gaps	Infrastructure	Public Phone	
		Public Restroom	
Obstacles	Language	Lack of Bilingual Staff	Culture Broker/Gatekeeper
	Space	Insufficient Resources	
Collaborations	Within Library	Service/Program	Health
			Education
	Outreach	Community Awareness	Schools
			Community Centers
Location	Description	Appearance	
		Proximity of Transit Routes	

Security	Problem	Substance Use	Overdose	Solution	Panic Buttons and Cameras
			Patron Visibly Not Well	Solution	Call Police or Welfare Check
		Gang Violence			
		Break-ins			
		Gunfire	Solution	Increased police presence	

Codes common to individual cases enabled the identification of common themes across the sites. Codes that were unique to individual cases suggested anomalies and possible opportunities for additional research. Cross-case synthesis of data from the multiple cases was used to generate patterns that were applicable to all the research sites and to identify those findings that were specific to individual sites.

Preliminary patterns describing the nature of public-library service provision to underserved groups were based initially on concepts identified during the review of the literature. These patterns included (1) information seeking related to crisis-based or situationally immediate needs—such as emergency housing, employment, health issues, and legal problems, and (2) reasons for information seeking and public-library use—such as a desire for information, a need to develop information and technological literacy, and a desire or need for access to e-government services. These preliminary patterns were augmented by concepts that emerged from the cross-case synthesis. Concepts that emerged include a focus on multiple literacies, the

critical nature of library technology services to underserved groups, and the current service gaps.

During the pattern-matching process, data were organized in order to identify current public-library service practices. For example, current service practices revolve around the development and support of multiple literacies (i.e., basic, technological, financial health, etc.) to assist patrons in meeting basic life needs that emerge over the course of life in a “small world.” Based on the explanatory patterns, a descriptive model of how such public-library services are provided to underserved groups was developed. Inconsistencies that emerged during the analysis process were reviewed in order to discover what conditions or issues explained the discrepancies.

Chapter 4: Findings

The findings that emerged from this study fell into the four following categories: patrons' needs, service gaps, service offerings, and service obstacles.

Patrons' Needs

Data collected during this study suggest that the most frequent information needs of underserved groups revolve around basic life needs, educational support, social issues, health, and technology literacy. Patron needs often vary by geographic location, and the situation is complicated by steadily changing neighborhood demographics within many service areas. Further, the situation on site, in the branches, is rarely simple: patron information needs may not fall so easily into cleanly defined categories, increasing the challenges of identifying and meeting them.

Despite the wide variation in patron needs, librarians at participating public libraries noted that the needs of underserved groups typically centered on some kind of basic life service. A basic life service is one that addresses a mundane need or task that is essential to working and thriving in our society. For example, a basic life service might involve helping a patron renew a driver's license, pay a parking ticket, locate a rent-rebate form during tax season, or find a way to print a document. It might support creating and editing a resume, locating foreign-language resources for ESL learners, creating and maintaining an email address, or using online banking tools.

Aside from basic life services, educational support was the mostly widely cited need among underserved groups. Important educational-support services targeted early literacy needs, basic literacy needs, afterschool programming, study materials for standardized tests, Internet and technology access for homework assignments, and research and writing skill development. One-on-one help was a notable educational-support need that emerged during

interviews with study participants. One librarian explained the necessity of one-on-one help for afterschool programs:

Our literacy activities are really ... good in that we have people that [provide] one-on-one help with assignments. So we have four people designated just to help with homework. Of course ... we'll help with homework assignments, but we have four people that are designated just for that. ... Our afterschool leader [and our teen library assistants] are necessary to me in that they can sit and say, "Ok, what's going on with [a student's]math problem [or their] vocabulary?" We are also good from a research aspect, [for instance when a patron needs] pictures on this [or a] biography on so-and-so [we help meet that need]. That's the part we take on as far as homework help. So that's really helped with the community needs. (L-5)

Indeed, the need for educational support among underserved groups extends to whole communities because it often intersects with basic life needs, as another librarian explained:

Trying to serve all areas of the public and providing them the resources they need to enhance their education, learn to read, and [access] information to help them with their everyday needs. Really, [what I do is] guide learning. [I help] the public in enhancing their learning skills and [promote] life-long learning. We do it through programs, like story time and author visits ... that may help to enhance someone's curiosity and education, [their] quality of knowledge and learning skills. (L-8)

Other patron needs are more socially oriented and may involve providing a safe haven for homeless or mentally ill people during the day or even providing help with information about recidivism and expungement of prison records. Still other patron needs relate to physical well-being and encompass information on the location of food banks, nutrition, and healthy

lifestyles. One of the study's participating librarians explained what comprises the needs of underserved groups across the age spectrum:

For kid and teen services ... most of the key is probably after-school and summer reading. So we have this LEAP afterschool program that operates four days a week in the branches that does homework help but also does literacy activities to help support school-age children's literacy development. Then the summer reading program tries to catch all that in the summer.

In terms of adults, obviously we do a lot of reference, a lot of computer reference. Most of the key for adult services is really reference and triage when somebody comes in. When somebody comes in and needs to use the computer, we help them use the computer. If they need to find a book, we help them find that book. If they need a form, we print out that form. (L-3)

Another librarian gave a slightly different, but complementary, statement regarding current needs underserved groups:

Every once in a while, we'll get something unique to the community. But the majority of the time our help is usually with applications: people are getting credit checks and people are trying to get their licenses renewed. The basic life services that we deal with. In many cases, we'll have job seekers that need to learn life skills, or they're trying to create a resume. It's good we have the resume program on our computer, but then sometimes we have to teach them how to copy and paste and save to their flash drive so they can use it on another computer. (L-5)

Another participating librarian explained her perceptions of basic literacy as a need among underserved groups and how those literacy needs intersect with technology-access needs:

The idea is, and I think this is a general idea, that education or a focus on literacy itself really isn't working as it should. So the library has focused more on getting people access to technology, access to computers, and access to the Internet, or taking the time out to teach people how to use it. It's assumed. When we first got computers in and started increasing the amount of computers in libraries, it was assumed that they [underserved groups] would know how to use them. Continually, we see people can't and only help them as they go along and through.

We, as a society in general, have decided to place everything out there ... "Oh, just go fill out this"... I mean, job wise and even for social programs, "Go fill out the application online." Well, how do you do that? Who teaches you how to do that? Where can they find someone that can help them to be able to do that? Access does not equate [to] ability or literacy ... being able to look at it, use [it] comprehensively. (L-9)

The needs described above require skills that many people in both the general workforce and in our educational establishment would consider to be quite basic. Indeed, the ubiquity of information communication technologies (ICT's) and the ways these tools affect the performance of everyday tasks suggest a set of new basic literacies rather than one basic literacy (Buschman, 2009). Reinking (2003) asserts that technologies such as the Internet, email, hypertext, and mobile communication devices represent a change in the nature of literacy from a unitary concept, describing one basic literacy, to a multiple one, describing many different

literacies. One librarian discussed an example of today's intersection of basic and advanced literacy needs:

But, you know, they're kind of looking for something that they're going to be able to print this off and present it as their work sometimes. And, you know, one of the things that I mentioned before, I think, was to some extent people lose the ability to synthesize information or pull information from different sources and try to corroborate what they're finding and actually dig around and probe and form opinions based on information that they're finding as opposed to just finding, you know, one document from Google and also assessing, you know, is this an authoritative source for your topic or is this someone sitting on a farm in Iowa somewhere posting something on the Internet. And a lot times, you know, people won't even consider the source. (L-1)

The preceding quotation emphasizes both a need for underserved groups to have consistent access to information services to meet basic life needs and the need for them to develop the multiple ICT-oriented skills that are increasingly required to use those services effectively. In short, public librarians face the multifaceted challenge of (1) meeting basic life needs, (2) supporting basic and advanced literacies, (3) and providing access to technology.

The data collected address the "what" and implied "how" of research question one. Analysis of that data indicated that the majority of the needs of underserved patrons are related to basic life services, some form of literacy, and technology access. To meet these needs, public librarians continually assess patrons' needs and the amount of assistance that they can offer. Essentially, librarians work in a dynamic environment, helping as much as they can while working within constraints set by time, available resources, the complexity and urgency of the case, and the patron's disposition. The librarian must constantly reassess an ever-changing

confluence of factors. Thus, there is a need to conceive of both the public library and the library's service community as dynamic entities in order to have a clear understanding of how public libraries provide services to underserved groups.

Service Gaps

A number of library service gaps were identified over the course of this study. Many of the gaps revolve around services for underserved groups as a whole—such as technology gaps—while others are related to the language needs of new Americans and the needs of librarians for a deeper understanding of the nature and effects of poverty.

Technology-based Gaps. One of the most notable gaps identified relates directly to public-library personnel's inability to support a range of technology-based services, literacies, and access needs. In general, public-library staff in this study appeared to experience difficulty when assisting patrons with basic life needs related to technology issues—such as email—and others related to basic digital literacies. One librarian explained:

I think other staff members might say ... digital literacy instruction training would help. We don't really have any digital literacy instruction training [available to us]. There's no one in the library, no professional staff who's teaching other library workers how to effectively teach people computer basics or email basics. There are professional resources, there is some help ... We have these early literacy trainings. There is [no] institutional [training] for teen services or adult services especially around digital literacy. (L-3)

While training sessions in digital-literacy instruction or advanced technologies do not appear to be readily available, public-library systems do seem to offer basic training in common types of software, such as Microsoft Office products:

Well ... our system offers [some] training for [staff]. I went down [to the central library], and I wasn't the most versed in Excel. Never had to use it, but I went to a beginners' [class] and an intermediate follow-on [class]. I mean, it wasn't hard to pick up once you do it. So they give the basics, so that we're able to help customers. As far as training, they offer different trainings. (L-5)

Another librarian expressed similar sentiments, particularly in regard to learning new software and having insufficient access to new software and training for using it

We closed the libraries down and discussed whether or not we had ... what would help support us with new technologies. As librarians, we don't have the opportunity, or the pay, to go back to school [or] to update our resumes [so we can] to be competitive with the librarians ... who are just coming out of school. I've already had 11 years here. I'm not utilizing the same skills nor do I have the same training as someone just coming out of library school. I want that training. I need to have access to that training. And my job should provide that training to me or at least the opportunity for it, so that I'm not being passed up for new positions because there is a young person coming who ... has worked with ... these emerging technologies for the last two years. (L-9)

Indeed, public-library systems appear to have recognized the need for technology training for staff. According to the Chester County Library System's 2009-2013 Strategic Plan, "Library customers will be served by staff who can assist them to understand and use emerging technologies" (2009). Several librarians identified staffing-related issues such as lack of clarity in regard to which job classification has responsibility for technology assistance to patrons and the need for an entirely new job classification. Speaking to the first issue, L-5 noted that:

I mean, what happens with the library at this point, whatever you personally know, is what is most helpful to the patrons. Because computers haven't been designated to any job class. It wasn't designated for the LA's [library assistants] to do; it wasn't designated for the librarian to do, but it has to be done because everybody's using it. (L-5)

Speaking to the second issue, L-2 and L-5 agreed:

Here we have a computer lab, which is always full. Partly because people need the training. Not everybody has a computer. That's another reason that we need to provide computers. To do that, we need more people. This sounds like a truism; but for things to work, people are needed. No matter how many machines you have. Machines cannot operate themselves, nor can they repair themselves. So, implied in that is that we need sufficient IT [staff], and the public doesn't see that. You can't have good service, you can't provide good service, unless you have proper maintenance to maintain the machines. (L-2)

The participating librarians noted service gaps relating both to designating technology responsibilities to a particular job classification and providing technology training to members of that classification. In filling that gap, public libraries could have a standardized approach to technology-literacy assistance and thus improve the quality of service offered to the public. Moreover, some of the current guesswork in technology-literacy support could be removed by designating specific public-library personnel to assist patrons with technology. It is thus apparent that public librarians and public libraries have recognized the need for a direct approach to addressing technology-based life services, literacies and access.

Language-based Gaps. Language-based service gaps include issues with foreign-language expertise among staff, with collection development, and with management. Most of the libraries in the study were in the process of improving their collections to reflect the needs of new Americans and non-English speakers in their communities; but most libraries had few, if any, bilingual staff. A librarian explained his situation with Spanish speakers, and conversations with other librarians serving other language groups were similar:

I feel like we could probably do a better job with our bilingual, or our Spanish-speaking population. I don't personally speak any Spanish. ... I would like to develop our collection a little more for Spanish-speaking populations, but I need some direction with that. And it's kind of hard to get. ... We have some staff that speak Spanish, which is nice, and we have ... classes here, but I do definitely think that is something that we could do a little better, across the board in every library. I know there are libraries ... that have Chinese-speaking [staff]; they're developing a Chinese collection and Russian collections to serve the needs of their community, and I think that's great. (L-11)

As the librarian noted, generally public libraries are providing at least some form of language services to non-English speakers; however, the consensus among the participants was that much could be improved. Indeed, analysis of the Free Library of Philadelphia's and the Chester County Library System's strategic plans indicates a renewed awareness of the need to focus on new Americans that reflects an approach used to serve new Americans in the past: creating foreign-language collections, teaching English to immigrants, and helping new Americans assimilate into life in the U.S. through Americanization programs. A related point emphasizes how language materials seem to be location-specific and how they can become unnecessary over time:

We used to have a Vietnamese collection. It got moved to [another branch], which I think makes a certain amount of sense. In the past we started [foreign-language] collections at branches only to have another branch [manager] come into [the] branch and say that the collection wasn't needed. Maybe the branch doesn't need those materials anymore; but it struck me maybe as a little bit odd that it was so location-specific, when most of the rest of our collection practices are moving away from that. And ... well, people are probably going to move in a few years, and you don't know what your neighborhood will be like. But I don't think people are going to stop immigrating to ... [Philadelphia], which is only two hours from New York. (L-4)

The librarian made several important points that have implications for public-library services. First, immigration is an ongoing process that typically happens in waves. Second, a large number of immigrants may settle in one area of a city for a number of years and then move to another. Another librarian provided an example of how rapidly the demographics of a local community may shift:

Oh, my community is and has been changing over from a Caucasian, Italian, White Anglo-Protestant, or White Anglo-Catholic community into a middle-class, African American community. And at this point now, we're seeing [a] declining middle class that are, like I said, high-school educated. Our Friends group [is composed of] older African Americans who have been here since the beginning of the change. (L-9)

Overall, it is apparent that public librarians see weaknesses in language-oriented services but lack staff, policies, and administrative support to address these issues. Language-based gaps are thus persistent and difficult to address and must be managed longitudinally to remain current and relevant to the local community.

Cultural Literacy Gaps. Meaningful public-library service comes from a deep understanding of the library's service community. That understanding can be lacking if those the library serves are significantly different from the staff serving them. Study participants mentioned several types of training provided to help staff develop an understanding of the social, economic, and educational aspects of underserved groups but noted that cultural-literacy gaps persist:

In terms of the library, I think that we should re-center our work, taking into account what it means to be underserved and low income. Over the years, there's been things like *Bridges Out of Poverty* training that maybe 10 or 15 librarians have gone to, when it should be a mandatory training for all librarians. You know, this doesn't necessarily apply to me, but I think a lot of librarians grew up middle class, go to college, go to grad school, remain middle class and then start working with the public. And they've never dealt with anyone who's low-income and they don't know how to deal with poverty and generational poverty. So I think there's a lot of institutional training stuff that we could do, particularly with our professional staff, that teaches them to work better with people who are in generational poverty. (L-3)

Another librarian also discussed a gap centered on differences between patron and staff cultural perspectives:

Cultural literacy is kind of an issue here. But we do have, like I say, a lot of fairly diverse people. We have Hispanics, we have African Americans, we have Africans, and it's an interesting community. I think cultural literacy is something that we have to work with ... Malcolm X was ... I use him as an example for a lot of things. Malcolm, he had street cred, you know. He would go back out on the street and the people would say,

you know, here he gave a talk to them and spoke their language. They talked to him in their language from the street and he could understand what they were talking about.

(L-10)

Participating librarians also offered suggestions about addressing the cultural-literacy gap. For example, one librarian explained the benefit of having a staff member who is also a member of the library's service community:

The young gentleman who was in here just a few minutes ago, he's my executive assistant and he's very much outgoing. He does a lot of outreach into the community and he's very helpful and he's sort of tuned into what's going on in the community. So it's very helpful to have someone like that, who can facilitate a lot of the programs that we have, and he gives suggestions about how we can do it. This cat has been a real outreach person; he's in touch with what's going on in this community. He's in touch with the younger people who are coming through. (L-10)

Another librarian also expressed the importance of common cultural perspectives and social familiarity between library staff and patrons:

It has a customer-service effect. I think it's really important for underserved groups to have a really consistent [contact person] when they come in the library. Their experience should be really consistent; someone should be at the front desk whom they recognize. To say "Hi," if it's their first time in, or first time in a while. It's really great if the person on the desk can recognize that and help orient them. (L-3)

In general, the public libraries in the study employ non-professional staff and volunteers from the local communities to address the gaps in cultural literacy that exist in all the libraries studied. The data directly indicate that this assistance is in place in four of the eight

participating libraries and indirectly suggest a similar situation in at least two of the other libraries. While it is unclear whether such staffing choices were intentional, their ubiquity suggests that they are an important component in providing services to underserved groups.

The cultural-literacy gap along with the technology-based gaps emerged as the most commonly shared among the libraries in the study. Every participant noted challenges in regard to some aspect of technology assistance, such as basic Internet access to technology literacy support. The language-based gaps were an issue across all eight of the participating libraries, but the prominence of these gaps varied somewhat in proportion with the number of non-English speakers within the library's service area.

Current Service Offerings

Just as the branch librarians in this study were well aware of technology-based, language-based, and culture-based gaps and identified and implemented solutions where possible; central library administrations have also identified these issues and the need for solutions. Both the FLP's and the CCLS's strategic plans address these issues and provide important support for the services for underserved groups that the branch libraries offer. Such services fall into two categories: short, limited-run programs and the ongoing provision of information services to meet basic life needs.

Short, Limited-Run Programs. Short, one-time, or limited-run programs generally cover topics like financial literacy, recidivism, and nutrition. In fact, the use of these programs may be partly responsible for the lack of longitudinal findings in the literature. One librarian explained the nature of this approach:

We address issues affecting the community in small doses through short programs, but nothing long-term ... Poverty, obesity, those kinds of things are always

addressed through short programs that take no more than about an hour ... and those things are just informational rather than training. (L-9)

Limited-run programs are generally scheduled events that provide the librarian with defined windows of time to focus on specific issues or topics on an as-needed basis. By hosting such programs the librarian extends and expands the “teachable moment” beyond individual reference interviews and can devote time and attention to a particular issue. A librarian explained the appeal of the “teachable moment” in relation to research skills:

I mean, you can kind of try to, you know, convey to a person, “Go to more than one source. You need to validate your opinions with concrete facts.” But in the limited time we’re interacting with people, [it] might be really hard to get to the core issues there, ‘cause it almost takes kind of a class. You know, you could kind of say that to somebody; but to really have it sink in and [for patrons to] have a full understanding of what you’re talking about, you need to spend more time with people and kind of start from the ground up with that. (L-1)

Another librarian provided an example of this just-in-time approach in relation to issues affecting the local community:

Recently our library Friends group reached out to us and wanted to hold a program that was offered by the city government ... that benefits neighborhoods ... about all of the resources that our city has. Their phone numbers, what the agencies do specifically ... how do you go about addressing issues in your community—crime, blight, [and] even just regular services? That’s one of the things that our library is addressing at this point. (L-9)

The basic premise behind the use of the short program involves drawing on existing resources or those close at hand to address emergent community issues through practical means. Some particularly successful or popular programs often involve partnerships with universities, library Friends groups, local community organizations, community recreation centers, and city agencies. One participant recalled how such a program was useful for both children and parents who are members of an underserved group:

Well, we're not doing ... [programs] in a sense ... [to directly address] childhood obesity. We used to have some programs coming out of Penn State. There are people that would come in and would do programs. One in particular was coming in from Penn State, where she'd do the nutrition thing and show them how they could fix snacks, healthy snacks ... In fact, they did a program for adults that showed them how to eat healthier. We figured it was a good program, and [it] showed kids how to eat [and] make their own snacks. (L-6)

Another librarian described a number of successful programs offered in collaboration with several organizations:

This library is in the process of partnering with [a] nursing school to present a series of health programs. But, in any event, that's [just] one place that we're partnering with. I partnered with [a business development organization], which had some business programs here. That was actually year before last. Last year we didn't do a lot of programming because [we] didn't have staffing to support it. (L-1)

Programs focusing on health and business appear to be the most frequent short-run offerings covering such topics as healthy eating, consistent exercise, understanding health issues associated with poor diet, starting a small business, and entrepreneurship. Other programs

have focused on other aspects of literacy—such as use of e-government services, resume development, GED preparation, legal advice, taxes, and expunging criminal records:

I mean, there's a lot of things that we're involved in, just to meet ... the needs of the community. So I think each library takes on a different face, even though we are all working on the same general goals. So what's needed here might not be what's needed in a Northeast library, and what's needed there isn't necessarily what's needed in a West Philly or Southwest Philly library. (L-5)

Participating librarians recognize the importance of offering programs that meet the needs of particular neighborhoods. Although all the libraries in the study offer programs that focus on some form of literacy, each library appears to have a context-sensitive twist. A public librarian mirrored the comments of many of this study's participants when he described a strategy for providing literacy services to his community, which is heavily populated by underserved groups:

Early-literacy programming, so story times, after-school literacy support, homework help. And then digital-literacy programs ... helping people use the computer more effectively. So that can be in the guise of signing up for an email address, or it could be something more advanced, like composing a resume. ... It's like a resume workshop or an email one-on-one workshop. (L-3)

Several of the study participants shared the view that certain portions of their service communities were disenfranchised and/or marginalized in various ways, and they focused on ways to address those needs. One librarian was very enthusiastic about leveraging library resources and partnerships with local professionals and organizations in order to empower members of the local community. That librarian seeks partnerships and resources that aid

individuals in transitioning back to society after incarceration. His efforts have included hosting a series of legal lectures; providing story times meant to help with children cope with incarcerated relatives; and providing space in his library for the only local unemployment agency (which had recently lost its office space). The librarian explained how helping patrons expunge their criminal records can support their reentry into society:

For example, a person came in to talk about expungements of people's criminal records. Well, in this community, I would say that is something that many people probably experience. You know, just because of the type of community that it is and the type of people who are here. Which is not that unusual for a lot of communities. But to help to look at [social] reentry, how to get from the prison pipeline back into the social pipeline, and jobs and things like that, we brought in a person who's an attorney that talked about expungements. (L-10)

He explained further why this program is important to the families in his service area, particularly children:

We have to get into their mind in a way that will make [the consequences of incarceration] important to them, you know, like [everyone in the community]. There's a prison down the road here, and I think ... the young people don't realize what their impact is [when they go] in there. ... We're going to get into doing a discussion [with families] ... on a children's book [about someone being arrested and taken to prison]. You know, all the stuff that's going on there; and I think it's a valuable resource for a community like this. But we have to find a way. I wouldn't necessarily grab third graders and second graders and what not and sit them down and discuss this book. I'd rather discuss it first with parents.

See, but these are the lives that they live here. ... So we need to wake up. And when people end up going into that system, they don't realize what impact it has on their families. "You know, I broke in this place and I had to get whatever I got out of it that was for me." You know, family has to go visit you there, you know, which is not a fun experience that they go through ... [families] have to figure out what are they going to do, how they're going to survive while you're there. All those kinds of things that people need to wake up to.

So this is what I see as all the challenges that we deal with. And it's having resources ... that are available through our library system, I think are very valuable. We got to get [the long-term implications] into people's face so that they know and they get [an understanding of the wider consequences of their actions] behind their eyes, so that they can actually hear and understand what this is about for them to understand incarceration as well as issues that result from someone being incarcerated. (L-10)

Clearly, library programs related to issues affecting individuals such as incarceration also deal with communal issues that contribute to larger problems such as poverty, marginalization, social exclusion, and equality of access. Librarians are excellent at providing educational and informational programs that increase their patrons' awareness of specific issues that underlie these broader problems, and they need to be connected to the communities in their service area in order to meet the needs of underserved people who live there. As one librarian explained:

You know what it is, I think if we're going to be in a community we have to be involved with the community, all the things the community does. Someone who's just gotten out from being incarcerated and they have children, and they need a place that

they can go, need a place ... for those who may have a computer but can't afford Internet access. Because no matter what's said and done, that's the most expensive thing. A lot of people get computers, they get laptops and stuff, but they can't get Internet access, because that's expensive. (L-7)

While the example of incarceration does not apply to every underserved group, it emerged as a consistent theme across neighborhoods, service areas, and library systems in the study. Further, it serves as an example of a context-specific short-run program. It is these short-run programs that allow librarians to create "teachable moments" targeted toward addressing emerging community needs. The episodic nature of public-library programming for such issues may shed some light on the lack of any longitudinal literature findings and reinforce the perception that library services have been episodic.

Ongoing Provision of Services. While short, limited-run programs targeted to specific needs have an important role in serving underserved communities, participating librarians also recognize the importance of providing regular, ongoing services to meet the basic life needs of underserved groups. Such services consist of brief, individualized one-on-one interactions that meet patrons' everyday needs. In each of the libraries in the study, librarians identified educational support in one form or another is one type of service that is the most applicable to the core needs of underserved groups, regardless of age:

In my community, yes, [the] core set of needs [are] after school, [technology] access, ... [and] education support for schools. Our local schools do not have libraries, do not have librarians, nor do teachers have the opportunity and time to teach children how to do research. They are expected to, through what seems like osmosis, to be able to do these things, without being taught how. So, you know, we reach out to schools by

school visits, teacher visits, and discussion, you know, to support teachers to fulfill their requirements and for children to be able to do their assignments. (L-9)

The participating librarians emphasized the need to focus on these basic educational-support services as a way to encourage the development of underserved groups' advanced skills:

I view it as providing tools, and we will show you how to use the tools. So let's say you're building a deck or something. Here's the nails, here's the right-size board, here are all the tools you need. And I can give you an idea of how to do it. (L-2)

Participants noted that students in underserved groups, at various educational levels, were almost completely unfamiliar with how to perform basic research. Assisting them with source citation and synthesizing information from multiple sources provides librarians with a way to support their development of rather advanced information skills:

A lot of my students that I work with at the high school don't know anything at all about an almanac or an atlas. A lot of the students ... [are] not familiar with an almanac, they're not familiar with an atlas, they do not know how to use an index in a book, they don't know what a bibliography is. So how can you do research without that knowledge? [The only thing] they're familiar with in research is "Google it" or [use] Yahoo, type it, and then they want the computer to do it for them. So, really, they don't have the research skills... In some of the classes, I teach them the basics of research; and without me providing that information, they don't get it. (L-8)

Another librarian provided an example of an interaction with a middle-school student from an underserved group that applies to others in the student's situation as well:

So along with us helping, we are a place where kids can learn how to surf the Internet if they need to look for material. [As well as] how they can learn ... to find authoritative and authentic material to use. Just because websites are coming up first don't mean that that's the best site for you to get your information from. (L-7)

Plagiarism, citation creation, and synthesizing information are important higher-level skills which serve as basic inputs for post-secondary education and skilled employment. As L-7 explained, underserved groups bring advanced literacy issues ranging from plagiarism to formatting:

And I tell them, I say "Hey, ok ... [you can get away with plagiarism in] elementary school, middle school, some high schools, but when you get to college forget that." [People will] say "Ya, you stole it from there, you stole it from there." There's no way you can write anything that people expressed and not plagiarize because, you heard it from somewhere. You may not be able to remember where you heard it from; but when you type and write it down, it came from somewhere. You need to make sure, and that's what we trying to tell them.

[I have also said to them] ... "Now you and I both know what you're doing [by using such a large font] don't we? ... Now it might be, because you want to it [fill up the page], but if you see it ... [standard size font], it's a very small paragraph." ... But [those are the things that] you want to start impressing on them. [Emphasize] that it's important for them. That you can't cut and paste ... say it's yours. [I have said many times] "You don't even know how to clean it up, because one can see you cut and pasted, because the font that they use is different than the font that you're using." (L-7)

Librarians attributed patrons' lack of research skills to a number of different factors, including the lack of school libraries and of early and regular interaction with school librarians; differences in how students used to locate information in past decades and how they do so now (encyclopedias versus Google); lack of time and resources on the part of teachers; and schools focusing on preparing students to pass standardized tests. One librarian provided some additional insight:

People come in and say I'm looking for information on such and such. And sometimes you say, "Well, we have a great book on this." [Then] they say, "Well, can't you just print something off the computer?" And they think that with just a few taps, they get everything presented for them right there. I mean, I don't think plagiarism ... even enter[s] their mind. But, you know, they're kind of looking for something that they're going to be able to print this off and present it as their work sometimes.

One of the things that I mentioned before, I think, was that to some extent people lose the ability to synthesize information or pull information from different sources and try to corroborate what they're finding and actually dig around ... also assessing [whether it is from an] authoritative source ... a lot [of] times, people won't even consider the source. (L-1)

As the librarian suggested, another important part of the continuing provision of services in underserved communities revolves around the intersection of education and technology. Study participants noted that educational support is often paired with technology access and instruction in the use of that technology in an effective and responsible manner. Interestingly, public librarians appear to couple services such as educational support and technology access or technology literacy with literacy instruction.

In light of the central place of technology in information access and in meeting everyday needs, almost every librarian in the study viewed providing technology-based assistance as the most important ongoing service for underserved groups. One librarian explained:

Well, definitely computers. Because a lot of low-income people still don't have access to computers. They are looking for employment, [and] a lot of employers require that resumes and all correspondence be done ... online. ... I think all of our services [are applicable to the needs of underserved patrons], but the computers are probably the biggest. I guess here and there you might see a discrepancy in terms of who ... [has] access and who doesn't. (L-1)

The need for basic access to technology by underserved groups emerged over and over throughout the study. Based on information from the literature review, principally the work of Becker et al. (2010), the need for basic technology access was expected. However, both the extent and the depth of the basic needs exceeded even the expectations of the researcher. One librarian explained part of the ubiquity of this response:

I mean, a lot of these people don't have computers, either. ... I don't think there are that many Internet cafes with their own computers. I guess people could go to Kinkos or something like that and pay by the minute. I don't think that would really work for job searching, because you'd be paying so much every day in order to [search and apply for jobs.] [Otherwise] I don't know what they would do. (L-4)

Today there is a significant focus on information services, digital resources, and information communication technologies and their usage. Something that runs parallel to the basic need for ICT access is both awareness of and participation in the information society. The level of involvement in the information society that is possible for underserved groups is

inherently limited by what Bishop et al. (1999) call their shattered information ecology. A shattered information ecology can be defined by limited or poor access to ICT's and low levels of competency in their use. Moreover the lack of ITC literacy can put an extra demand on already stretched resources. A librarian explained that the information received by underserved groups can be incomplete, possibly flawed, or even misleading:

We have a lot of people that don't have jobs that are learning that, in order to apply, you have to have an email address first. And so there will be people online, filling out the application, and they get 30 minutes and we continually extend people's time on the computer if there aren't people waiting because we know that we have people that aren't as savvy or don't know as much about the computers ... so we'll have to give them another 30 minutes so they can apply for an email address and then they can go back and put that email address into the application. So then, they have to write down the user name, write down the password—because you're not going to remember it ...

(L-5)

Having an email address in the present time is almost akin to possession of a street address and a phone number 20 or 30 years ago. Digitally speaking, not having an email address is almost like being digitally homeless. By that same line of reasoning, some aspects of what Childers (1975) referred to as information poverty reflect actual poverty. In a more concrete sense, possession of personal information assets often corresponds to a person's economic resources. Another librarian explained:

A lot of people get computers. They get laptops and stuff, but they can't get Internet access, because that's expensive. So, they have to come here for it. They have to come here so they can go online in order to put in for jobs ... Maybe they don't [have

a computer] ... maybe they have a computer, but they don't have Microsoft Word or access to printers to print off. Everybody does not have a computer and those who do have a computer do not have Microsoft on it so they can at least type in Word. (L-7)

The need for basic technology skills ties any discussion of public-library services for underserved groups to the development of literacies—and in the case of technology, multiple literacies which build upon one another. L-7 provided some additional clarification:

They need to learn more about making sure they get USB drives to save stuff. If you're starting to type and you're typing a paper, ... I say you need to ... save your work. And that's saying it not for our sake [but because] ... it allows you to save what you've typed. And next time you write a paper you can look at what you've written before. So, like I said, it's not only a way of saving information, it's a way of ... looking and seeing how far you've come. I mean, the lights could go out, the stuff is gone, unlike, you know, where you might have your own personal computer and ... it will at least save it somewhere so that when it comes back on, at least it's there, where you can retrieve it. (L-7)

In addition to being both a technology-access point and a place to receive informal technology literacy training, many public libraries also provides formal technology training. Beyond limited-run programs, however, there is little in the way of formal or organized technology training offered by the public libraries in their study. One librarian described the situation in her branch's computer lab:

Well, we have the computer lab, which is heavily used. We have a lot of people that are looking for work, so they come in and they and get help, one-on-one help with crafting resumes and posting them, looking online for jobs. ... If we had more computers

in the lab, we only have 6 ... it's a small room. You know, a room like this, it still wouldn't be enough. 'Cause I mean it's free, you know, computer classes. (L-1)

The computer training lab in L-1's library provides an excellent example of the type of facility that was cited by a number of librarians as being a key place where underserved groups could receive focused technology training and assistance for advanced technology-based tasks.

Another librarian explained:

Here we have a computer lab, which is always full, partly because people need the training. Not everybody has a computer. That's another reason that we need to provide computers. If somebody doesn't know how to use a computer properly, should they be punished for that? To me they should be encouraged to do well. They should be encouraged to learn computers. The computer lab we have is not run by the library; it's run by another city agency, which happens to have labs in the libraries. So we need to encourage that in my view. (L-6)

Essentially, there is a real and substantive need for computer-literacy training among underserved groups. An example of the popularity and need for the lab is the wait-line that typically precedes every scheduled session. Several librarians echoed L-6 in discussing technology access:

I mean, in terms of digital literacies ... if I had a computer lab, I would run a computer basics class every single day of the week. And still have people ask the next week, "When's your next class? I need that class." So, you know, I can't promise that all my seats will always be filled, 'cause low-income people have pretty chaotic lives. And like, you know, you might run a digital literacy class five days in a row and have no-one show up; but the next week someone's going to come in who has never used a

computer before, [and] their Social Security counselor or whoever has said, “Go fill this out online.” And they really have to do it. So, you know, in terms of getting people ... using the Internet, and using it effectively for stuff like healthcare management, civic engagement, banking, billing, that kind of stuff, it’s hard to meet the need because we don’t have that many computers ... (L-3)

L-3 provided further explanation of the FLP’s current approach to providing such services:

So, you know, the hotspots were meant to put digital resources so, computer labs ... in a community institution like a school or a church or a community service organization and then with this grant funding also have instructors there who would do a lot of digital literacy instruction, lots of one-on-one computer-buddy kind of help as well as ... small classes. (L-3)

The provision of computer labs that offer computer classes is an important, but not abundant, feature of public-library services for underserved groups. Some public libraries appear to be gradually expanding their provision of technology literacy and technology access; however, there is a need to accelerate the expansion of these services to other public-library locations:

I mean ... increasingly... government services, employers, [and] businesses [are doing everything online]. And ... it’s not something that [underserved] people are terribly familiar with. And it seems to be presumed to be common knowledge. There are enough necessary things in most people’s live that require interaction with ... this online world and with computers as a technology. (L-4)

In many cases, provision of computer labs and technology literacy courses was mentioned in relation to regular staff members who are able to provide dedicated technology support—which is also applicable to the needs New Americans, as one librarian explained:

[New Americans] ... sometimes come in for help using technology to access ... jobs or government agencies and different things they provide. [Common needs are] immigration forms or tax forms or finding death certificates and [using] Careerlink, [applying for] unemployment, things like that. [Our] career development services range from help with job searching, filling out online job applications, [test preparation] booklets. (L-4)

The librarians in the study have found that some services, mainly educational and technological ones, are best provided in an ongoing manner when addressing information needs of underserved people, while other emergent needs are better addressed through the use of limited short-run programs. Indeed, the more generalized and basic services that address the basic life needs of underserved groups appear to constitute the more persistent service offerings. This division in service types illustrates the core of strategies that librarians use on a daily basis to assist patrons.

Service Obstacles. Analysis of the study's data revealed three predominant types of obstacles to providing effective services for underserved groups: shortages in staffing, lack of local autonomy, and issues with communication.

Staff Shortages. The primary obstacle in providing services to underserved groups involves low staffing levels. Staffing shortages have a direct impact on service provision, as noted by several participating librarians:

So, at the Free Library, we've suffered a lot of contraction in the last 6 years. And the two places where it has mostly hit [are] staff and materials. The materials budget has been restored at the state level. ... And then the other [issue] ... is staff. ... I see that, as people retire, they're not replaced, if someone moves to a different city, no one's rehired to replace them. There's just a lot of attrition overall in terms of staff positions. (L-3)

Similarly, L-5 noted that "Our ability for outreach is limited both when one of the other librarians is having a program and when there's only one librarian scheduled."

Participant L-6 echoed that view:

One issue is that it's very hard to do a program in the back [in the story-telling room] and only have one person on the floor. Because [we need two on the floor] for adequate coverage. It's too hectic. So we've shorted our programming]. ... We kind of balance that off by assisting each other wherever you need to be assisted. 'Cause [every department is short]. Then there are times when everybody's thin, even though we're short, but if need be we'll pull somebody from Adult/Teen. That allows us to do an outreach. It's a lot less [likely that we can go] than it would be, let's say, if we had 3 [professional staff]. (L-6)

Staffing shortages also affect service provision in unanticipated ways:

I think a number of staff are not terribly comfortable with opening [the library] without a guard. Ideally, were the staffing situation different, it would be great to be open more often and always have an extra set of eyes that is focused on the task of keeping the building secure rather than [a set] that is working on typing something or helping somebody find a book and not keeping an eye on what patrons are doing. ... It

does mean that certain things can't happen as easily and that there are other things that are on people's minds, rather than serving the community. (L-5)

Of course, public-library staff must create a safe and controlled environment for both staff and patrons. When they cannot count on guards to assist them, service provision can be easily disrupted:

The library can be a haven for ... the disenfranchised or homeless or mentally ill, because it's a comfortable setting to be in ... people wander in who haven't taken their medication and who have outbursts. ... Last week, in fact, a woman, she got upset with me, she thought I was talking about her. Then, the next minute, she accused somebody else of looking at her ... then she got really highly agitated at that point and she had to be taken out. ... People often wonder why ... you need the security guards in the library. There is definitely a need. In fact, ideally it would be great to have two, because [a guard can be] on lunch, or off a particular day, or out of the building. (L-1)

Issues with staff shortages proved time and again to be the most frequently identified obstacle to the provision of services to underserved groups. Moreover, shortages complicate and exacerbate already existing problems. Generally, public-library policy requires that there be a minimum number of staff present before a branch or building can open to the public. Safety and security are concerns for both patrons and staff, and service provision can suffer when staff shortages force librarians to focus on safety issues.

Lack of Autonomy. Another obstacle to effective provision of services to underserved groups is the lack of autonomy available to neighborhood branch librarians:

So ... the people that order the books for us at the main library don't have [an] ... observation of what we need. ... In the past I would have opportunity to work with a

vendor, but I don't have that opportunity anymore. It's all centralized. I don't know how they communicate with the vendors, if there's restrictions or not. (L-8)

Participating librarians expressed the concern that they are increasingly being cut out of the loop in regard to decisions made about collection development:

We used to actually go down to the main library and physically get to handle the book and look at it. Now it's all online. And when we had more staff, I would actually, before each order, you know, kind of go through the stacks. Literally to see how many books we have on a particular topic. (L-1)

Librarians have limited time and independence in which to make collection decisions. Most of the study participants seemed to desire more decentralization in regard to their materials selection practices.

Communication Issues. Problems with a centralized communication structure are exacerbated by poor internal and external communication, since organizational communications are intimately tied to the level of administrative centralization in a public-library as well as to the degree of flexibility afforded to neighborhood branches. One librarian discussed how a centralized communication structure can inhibit external partnerships with non-library organizations:

At one time ... materials management [would receive summer reading lists from schools]. And they would buy some of the books in advance [because] they talk to [the schools] a lot. I mean, they have the connection [with the schools]. ... In past we did many, many more outreaches than we do now. ... Some schools ... had a school librarian who ... could open up the door for you, [but not many schools have librarians anymore]. ... So now you have to go through talking ... and getting to know people more and for

them [to be] willing to, like, help you get inside. [What happens, is when you get to know someone] ... know very well, [they] transfer ... and now you have a new group [at the school] and now you have to go through the whole process again, and that takes time. [L-6]

Another librarian mirrored L-6's comments:

I think the main obstacle is just communicating with the organizations. It's just difficult sometimes in getting contact with someone at an organization to set up times and dates of when they can come to a library or when I could visit somebody. (L-8)

While communication with external organizations such as schools was identified as a challenge, trouble with internal communication also emerged as an element. One librarian discussed how poor internal communications can result in administrative decisions that are not informed by feedback from librarians in underserved areas:

Well, there's this great resource [called] *Black Biography*, which everybody used. And it was decided that we would only have digital access. Then it was decided we have no access at all. So, once again, there's too much top-down decision making [and] not enough decision making at our level. What's good for one branch is not good for another. What's good for one area of the city is not good for another. But to me if ... they say we're neighborhood libraries now, then we need to pay attention to the word "neighborhood." And I think that hurts our service. A certain segment, the more digitally literate segment, benefits. But this is a system, in my view, for the entire city, not just certain segments of the city. (L-2)

Another issue that is intimately tied to communication involves the types of statistics that public libraries record in order to document usage of different resources. These statistics

are used to communicate with library administration, which in turn uses the statistics to understand what is going on in branches. The trouble is that the statistics collected might not effectively represent the types of use in libraries serving underserved groups:

They have a turnstile count, where ... each time someone comes that's counted.

Of course, that doesn't reflect the actual usage. Now, I believe there's a way that we can do that, but it's very labor intensive to count, say, the books on the desk. It's not just a matter of a staff person going around counting ... you have to take the book, and I think it has to be scanned, and then there's somewhere that can be recorded. But ... if my understanding is correct about that, it's not very practical. ... Once again ... [staff] just don't have the time to take each book ... to go into that section of the computer, scan it. So it would certainly be better if everything that people used during the day was counted. But right now ... with the system in place for that, it's just not really feasible.

(L-1)

Commonly collected statistics, such as circulation counts, do not accurately capture the types of library-resource usage common to underserved groups. Librarian observations confirm such a situation:

Unfortunately, the areas that need the libraries the most often have the lowest circulation figures because people check out materials and then they're overdue and so then they have a fine and then they can't afford the fine. So they won't check out any more materials. So they may have a lot of in-house use, but that's not reflected in the circulation counts, because it's not actually leaving the library because people aren't checking it out.

Another librarian confirmed the need for in-house usage counts to capture information about resource use by underserved groups:

I often feel that we are collecting statistics that don't measure need [or that] measure specific kinds of use [and] that we use those to justify our budget as part of a government agency. As a result, some things that are quite important that libraries do for underserved populations are left fiscally unjustified and suffer as a result. ... I just think there are a lot of statistics we can generate with things that might get used a lot by people but not checked out. But I also I think that some of the statistics we collect show that people are using certain things and doing certain things, but they don't necessarily fit too largely into the educational or enlightening or cultural resource role of the library. (L-5)

In general, the types of statistics collected and the difficulty of collecting them can risk leaving very useful services invisible and therefore unjustified in the eyes of central administrations.

Summary of Findings

1. Patrons' needs: In general, the public-library services provided for underserved groups are the same basic services that are provided for all patrons. These general services, however, are often leveraged for underserved groups to focus primarily on literacy-based needs. The services offered vary by location, available resources, and observed needs. However, the services generally include basic technology literacies, basic literacy, school-support services such as researching and development of bibliographies, and literacies that support employment and basic life needs. The services that support

employment and basic life needs include job searching, guidance in the use of e-government resources, and online finances.

2. **Service gaps:** Gaps in public library services for underserved groups revolve primarily around issues associated with technology, language, and staff. In regard to technology, there is a distinct and even urgent need for technology-based literacy support or a stronger focus promoting technological literacies. Across every library and librarian included in the study, technology assistance, literacy, and support were identified as the most pressing needs that public libraries consistently have trouble meeting. Another set of user needs that public libraries have trouble meeting is language based. These needs for bilingual staff and for ESL materials for African and Middle Eastern languages. The third gap, staff cultural literacy, emerged a number of times over the study. Several librarians noted the need for mandatory training on subjects such as poverty, diversity, and non-Western cultures for all library staff working with underserved groups.
3. **Service offerings:** By and large, public library services for underserved groups fall into two broad categories: short-run, limited programs and the ongoing provision of services to meet basic life needs. The short-run programs typically address issues observed to be affecting those in the local service area. Ongoing provision of services deals with chronic needs associated with multiple literacies, information and technology access, pervasiveness of negotiating difficulties with ITC's, and education support. Both types of service revolve around everyday life issues such as filling out applications, personal health, financial management, legal issues, and research skills.
4. **Service obstacles:** The ability of libraries to target a service to a specific sub-population is largely dependent on the availability of staff, time, resources and technology; the

efficacy of communication; and level of local autonomy. Perhaps the most significant current obstacle is chronic shrinkages in staffing. Every aspect of public-library service in the libraries in this study had been affected by staff shortages, from daily operation of a service outlet to assistance with homework and job searching. Another obstacle is an inability on the part of branch librarians to address emerging patron needs quickly because of a centralized administrative structure. Further, the types of usage statistics currently collected do not capture the types of resource usage in which underserved groups often engage. As a result, services favored by underserved groups are often left fiscally unjustified. An additional obstacle related to administrative centralization is poor internal communication. Communication challenges that emerge in the data include a lack of responsiveness from higher administration and a focus on top-down decision making with little provision for bottom-up feedback. These factors lead to difficulty in maintaining communication with external partners, such as schools.

Chapter 5: Service Model

Public-library Practice Model: Information & Literacy Triage

The framework of this study consists of several key components. The first is a historically informed, longitudinal perspective on service provision in general and on public library services to underserved groups in particular found in studies and publications from the last 50 years. The second component is based on the work of Elfreda Chatman and her conception of underserved populations and small information worlds. The third component is comprised of characterizations of older models and the driving forces of ALA standards, library literature and research, and funding. All three components underlie the current model of service provision to underserved groups and suggest the characterization of that model as what might be called “information and literacy triage.”

The results of this study suggest that the current model of public-library services for underserved groups can be labeled “Information and literacy Triage.” The term “trriage” has been used both in relation to information environments and to describe similar efforts in education (Keenan and VanHorn, 1979; Booher-Jennings, 2005). For example, Fox and Duggan (2013) discuss information triage in relation to the use of online health information in self-diagnosis of medical conditions. The Pierce County Library System (Jackman, 2012) has put the concept into use as it alters the physical space of the library to present one service point where paraprofessionals help patrons fulfill basic needs and another to provide classes to the local community, ultimately freeing up librarians for more difficult questions. What is novel in this study is the way it documents and explains the concept of triage in relation to how public libraries have prioritized and deployed resources both in their expected roles and in new ways to meet the needs of their patrons, particularly those who are considered underserved.

The Oxford English Dictionary online defines “triage” as “the assignment of degrees of urgency to wounds or illnesses in order to decide the order or suitability of treatment”(2014). By doing something similar with their patrons, the public librarians in this study are implementing information and literacy triage to serve patrons in underserved groups. As library resources have been increasingly strained and the need for varying degrees of literacy support for different groups of patrons has become more evident, public librarians have faced difficult choices in regard to service provision. They must constantly reassess a dynamic work environment according to the degree of difficulty associated with each patron’s need and the availability of time, staff, resources, and personal skills needed to meet that need. Effectively, this means rationing patron help efficiently because library resources are almost always insufficient to serve everyone fully. As a result, public libraries are setting priorities for certain user groups.

According to an article from *The Philadelphia Inquirer*, the Free Library has stated that it will turn its focus to “job-seekers, pre-K children, entrepreneurs and small-business owners, new Americans, people with disabilities, and consumers of medical and health-care information” (Dobrin, 2014). This focus corresponds well to many of the findings from the Pew Philadelphia Research Initiative’s report, *The Library in the City: Changing Demands and a Challenging Future* (2012). Indeed, the FLP’s initiative codifies the assertion that public librarians use a triage strategy in service provision. Further, the initiative responds very well to the information needs of underserved groups identified in Table 2 of the literature review for the current study.

Analysis of the data from the study revealed the existence of a new model of public library services that builds upon past models but includes some distinctive features. For instance, this study highlights the continuing importance of the educational-support role of the public library, which has been a historically recognized and persistent role of the public-library.

Change in service provision to underserved groups has been partly driven in the past by a number of factors, such as immigration (i.e., Americanization services); social movements (Civil Rights), and government legislation (LSCA, LSTA). Today, economics (the Great Recession) and technological advancements (computers and the Internet) join many of these earlier factors—e.g., immigration—to underlie a current model of library service provision to underserved groups. Recognition of these factors and the resulting trends they cause is worth examination in order to meet the needs of the profession and the people it serves.

Elements of the Information & Literacy Triage Model. The Information and Literacy Triage (ILT) Model includes one primary and five secondary elements as depicted in Figure 1: responding to dynamism, orchestrating staffing to meet patrons' needs, dealing with facilities, coping with issues related to funding, managing communication both internally and externally, and selecting and disseminating resources. Each of these elements includes multiple facets, and both the elements and the facets often interact as public librarians work to meet the needs of patrons in their communities.

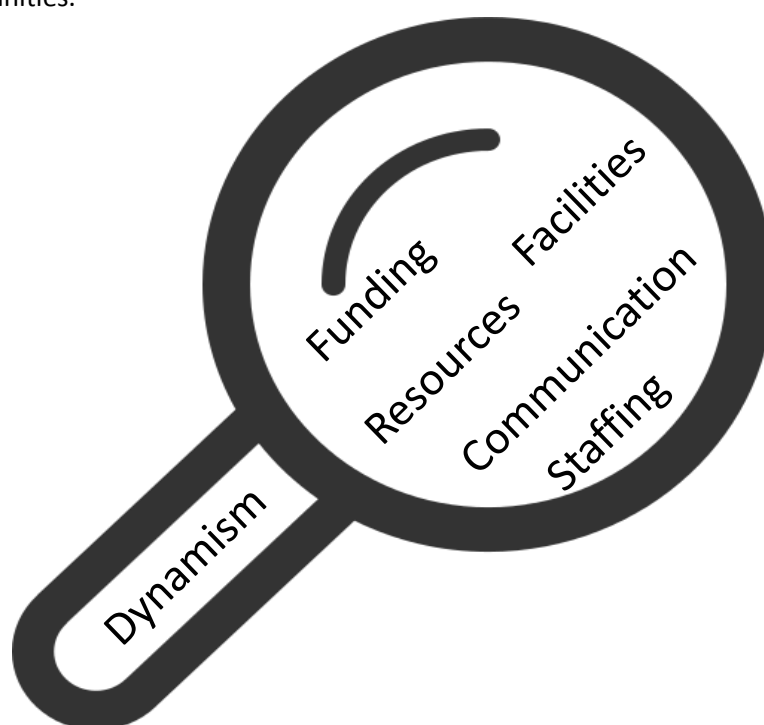


Figure 1. Information and Literacy Triage Model

Dynamism—the primary element—is characterized by continuous change, motion, new ideas, and energy. The five secondary elements are subject to the primary element, as each represents a different task or service that must be addressed within the overall dynamism of today's urban public library. Dynamism requires a reconsideration of the assumption that all libraries are equal and capable of providing the same types and quality of services. Even when the same services or programs are offered in different branches of the same library system, there is variation. The variations on the more or less stable service types highlight the variable nature of the resources available. As one librarian explained:

You'll find, I think, almost every branch does kids' programs; you can find a story time almost everywhere. I'm not sure that you can say that you can find like an adult program everywhere. So, adult programs that we've done here—stuff like book groups, nutrition, or health workshops where we have an outside speaker come in to talk about, you know, that eating healthy on a budget, that kind of thing. You won't necessarily find those programs in every branch in the same way. (L-3)

The interrelationship of stability and variety leads to a kind of dynamism that infuses every other element of the ILT identified during the study: staffing, facilities, funding, communications, and resources.

Staffing. One of the major defining elements of the effective dynamic public library is staffing. Every study participant discussed issues that revolve around staffing: staff shortages; staff skill levels; and staff employment status (full-time, part-time, seasonal). All these staffing issues must be addressed in order to provide effective public-library services to underserved group.

Inadequate staffing levels affect public libraries' ability to provide much of anything beyond basic reference services, as L-1 explained:

The staffing levels again can be an obstacle, because if you constantly have people coming up to you. That can be an obstacle, in that you may not give someone as much time as they might need [during a service transaction]. If you have a lot of people waiting for you, you say "Well I have to get to these other people. ... And then, having the time to weed the collection adequately. ... So there have been times when we haven't weeded. ... I don't think anyone sticks to the weeding schedule, because, and that's throughout the system, that's because it's really more on having the time factor, having the time and the staff to do it. So you kind of do it when you can. (L-1)

Staffing levels affect access to training and opportunities for professional development among staff. Staff development and training are important not only for maintaining the quality of services already offered but also for enabling staff to develop and provide new services and to improve service provision. As one librarian observed:

Technology ... changes so rapidly. ... I think hand in hand with that, though, is having sufficient staffing levels so that you can take the training, because the priority is always maintaining service in your building and staffing the reference desk. So, any additional training need means we have to have staffing levels to support it. (L-1)

The importance of staff development emerged constantly as a component of staffing through which public libraries respond to dynamism. First, there is the issue of maintaining the skill levels among the staff in a given public-library—especially when staff retire, are promoted or leave for other places of employment. Second, there is the matter of hiring part-time staff and seasonal workers. Since the economic recession, public libraries have had to hire temporary

staff as a way to deal with declining budgets, layoffs, staff transfers, and staff leaving for jobs offering better benefits. The librarians in the study recognized the benefit of having part-time staff but articulated a number of drawbacks to such a solution:

When they did a large layoff, maybe in 2008, they didn't rehire a lot of people. So now [the] Free Library's in the mindset of hiring seasonals, part-timers, and what they call "library facility guards." And seasonals and library facility guards are temporary workers. And it's not as good as a full-time person because you're persistently training people to do what the full-time person already knew to do.... And then they're going to be gone after 9 months. They learned [something] last week, they did it last week ... they just forgot [and] did what they thought it was. And they were wrong. So now we have a bunch of books that are stamped a little funny. And it's just stamping books. And if they can't remember [these tasks] from week to week...how is that helping? (L-5)

The need to train and retrain part-time and seasonal workers is clearly a hindrance to operational efficiencies and a persistent drain on knowledge resources. Nonprofessional part-time staff are expected to take on the mundane tasks that are essential to keeping the library running smoothly, but they often have inadequate time and training to perform well: processing new items, returns, and interlibrary-loan requests; handling circulation, library-card applications, and shelving, and overseeing opening and closing procedures as well as other administrative tasks. Shortages of both nonprofessional and professional staff combine to affect essential library services as well as doing routine tasks. As one study participant noted:

[Our staffing situation] makes it hard. Just a micro-example, at this branch we had not had a library assistant 2 [LA2] since October. The LA2 is the person who, you know, if the branch manager isn't here, the LA2 will be the one who knows, like, where

the key to that thing is or who to call for that. We haven't had one of those here. So, as a children's librarian and manager, I've had to do a lot of LA2 work just to keep us running for months. You know, I'm not unique in that. There's many branches operating with just one librarian or, you know, maybe they have a full complement of library assistants but just one librarian or they have some mishmash. So that's a challenge. Because every time, you know, I have to help a staff member who's unfamiliar with how to process a payment, go do that, you know I can't do librarian work. (L-3)

Staff shortages can have a ripple effect that resonates across an entire library system. The ripple moves from branch to branch as well as up and down the administrative ladder. For instance, policy typically requires there to be a minimum number of staff present for a public library to open. When one library is short of staff, the manager will request a substitute from elsewhere in the system in order to allow the library to open. As a consequence, some libraries with good staffing must operate with fewer staff in order to avoid closures in libraries with marginal staffing.

Facilities. Data from this study strongly suggest that facilities are an important element of the ILT model the physical presence of an adequate number of public-library service outlets is essential for providing access and literacy support for underserved groups. The importance of physical facilities for such groups cannot be overstated. For example, some underserved groups, such as the Amish, use little, if any, information communication technology and consequently rely upon physical library locations to access library services. Other groups, such as low-income urban residents, frequently have difficulty accessing information because they are often subject to shattered information ecologies (Bishop et al., 1999, Becker et al., 2010) and thus have some, but not all, of the implements required to access and use digital information:

In terms of getting people ... using the Internet—and using it effectively for stuff like healthcare management, civic engagement, banking, billing, that kind of stuff—it’s hard to meet the need because we don’t have that many computers, and we don’t have any kind of classroom computer space at this branch. (L-3)

Space and workstations are only two aspects of the facilities element; others include the age of the facility, the curb appeal of an outlet, and the physical location of a branch. The age of library facilities varies from branch to branch and helps to determine what a particular library can offer. For example, a number of the participating libraries are either undergoing renovation or have renovations scheduled that will expand meeting spaces, update computer facilities, improve security, and enhance the facilities’ appearance. A participating librarian expressed the importance of having an attractive space:

What we’re doing ... is making our building more friendly ... and it has made a difference, too, in that people come in here. I mean, we look like a library. Before, we didn’t have, this big beautiful, bright sign out there; we didn’t have this beautiful landscape. And we’ve noticed that, [and] they told us that they came in here ‘cause, “Oh, your building’s so beautiful, we just had to come in and see what’s inside.” We’re a library, and they didn’t know that. (L-8)

Indeed, curb appeal is an aspect of the facilities element that directly impacts service provision.

Funding. Closely tied to facility upkeep and maintaining adequate levels of staffing is the corresponding funding. Aside from the obvious facets of funding such as paying for staff, equipment, and resources, there are other reasons to examine funding as an element of the ILT model. At present, funding for public libraries can come from a number of sources such as city,

state, and local governments; the federal government; and grants or other private monies. The duration, consistency, and requirements tied to these funding sources have implications for the focus, availability, and consistency of public-library service offerings.

Both the FLP and CCLS have indicated in their strategic plans that they are looking to increase the amounts of private funding to supplement the public funding they receive. An excerpt from the FLP's five-year strategic plan (2012-2017) notes that "uncertainty of the economic future extends especially to public financing. The public funds the Library receives have been steadily dwindling. Reliance on these funds has left branches with serious physical needs unaddressed, insufficient staffing levels, and collections that do not meet the needs of our constituents" (The Free Library of Philadelphia, 2012). The CCLS' strategic plan for 2010-2013 also called for an increase in the amount of private funding to ensure that public-library services were sustainable.

The move toward more private funding is also taking place at the branch level as noted by one librarian commenting on his fund raising efforts:

We've raised [thousands of dollars] from our Friends group. Out front, that was all private money. That sign, all private. ... What we're doing here at our location [is] starting at an early age. We're building onto education at an early age, [and] that we're hoping that's going to grow onto them, that they'll use the library after grade school, after high school...as adults. So we're spending a lot of money on our preschool programs and our early education so we can teach our young children how to use a library at an early age. And [we hope] that they'll grow with that as a pre-teen/teen. (L-8)

The benefit of locally raised and administered private funds is that there are no significant requirements tied to how the funds are to be used other than that they be used to support and improve the library. Additional private funding in the form of grants is also helping to sustain and even expand library service coverage at this branch. However, it is also important to note securing such funding requires additional staff time and expertise as well.

A good example of a service supported by private grant funding is the FLP's HotSpots program. Part of the city's Keyspot program, this program is intended to provide information access and technology classes to neighborhoods throughout Philadelphia. Six HotSpots and a techmobile were originally funded through a combination of the Broadband Technology Opportunities Program (BTOP) and the Knight Foundation. Now that a portion of that funding has expired, there are only four HotSpot locations; in addition, the techmobile has been plagued by staff and functionality issues. One librarian explained the situation:

You know, at the height of having all the funding, we had 6 HotSpots and one techmobile. I don't know exactly where we are now, but I know that without those funding streams ... the library's just funding whatever is left on its own. And so the number of HotSpots has reduced and the staff positions have changed. And now there's some people [who] are city-funded digital resource-specialists, so they're civil service and they're not full-time. So they're not like full-time permanent civil-service people, but they're on the city time sheet. And some people maybe are still grant funded. (L-3)

Another librarian described his experience with the techmobile:

Well, they've had a lot of staff changes. They were supposed to visit [us] in March. I actually just sent another email; but I email about once a month asking when they can be here, this month or next month? They've only come about 3 or 4 times. I

think it's very useful, but unfortunately we haven't been able to get it as much as we like. [We have only] one, [and it is] its own department. The truck has had a lot of problems; there's been 3 different supervisors. It's been just tough. (L-4)

Funding can impact every aspect of library services, from staff and facilities to availability and location. Another way that funding affects service provision emerges in regard to how funding changes can alter the focus of an existing service or program. The requirements that come with funding often play a role in determining not only the services that a public-library can offer but also the focus of those services. One librarian explained:

In our new service model, we identified people who are new Americans, and also [we have] new programming focused on small children. Early-childhood education and now, with changing funding, we are moving toward the autistic community. It's chasing funding. There's no other reason; there's just no other thing to call it. When you lose funding, when you lose funding for basic needs, you can look at ways and new focuses for a certain amount of time to be able to get it. So again we're just chasing funding and renaming programs that are getting what seems to be new guidelines to do the same thing that we've been doing. Just being a little bit more focused on specific user needs. (L-9)

Communications. Communications emerged as another of the ILT because it a strong effect on the provision of public-library services to underserved groups. There are two facets to this element: external communications, with communities and organizations outside the library, and internal communication up and down the organizational chart.

External. External communications are important for establishing and maintaining partnerships, collaborations, and support networks with other organizations, as one librarian explained:

I think the main obstacle is just communicating with the organizations. It's just difficult sometimes getting in contact with someone at an organization to set up times and dates of when they can come to a library or when I could visit somebody. I believe we can improve our communication links between the school system or other organizations and the library so we can provide a lot better service. At the moment, I just don't have enough staff where I can visit a lot of organizations or schools or camps, to provide them the information ... to improve their everyday work, or [to meet] educational needs. (L-8)

Communication is also important for supporting outreach to underserved groups. Soliciting feedback from such groups about the services they need, want, and like is critical to sustaining meaningful and effective outreach. In this realm, direct communication is often necessary:

I think it's always good to listen to the people that you're serving in the community and the public and get feedback on how they perceive you and how they think you're doing. You know ... that dialogue is good. To kind of keep the channels of communication open so that you know what people want. 'Cause sometimes, you know, you think that they really need this; but that's not what people really want or need. (L-1)

Another librarian explained why he thought it was important to communicate with local communities:

I think there's a major lack of people realizing what is here and how it relates to who they are and where they are going. ... I'm finding that the underserved communities don't get it. All of this [is] available to them; and it's, like, invisible to them. They don't actually [seem to] see it. It's right under their nose. And in a way it's kind of frustrating, but it's a positive challenge...I love to try to get people to use the resources to empower themselves. So...part of that whole thing is to alert young people to the resources that are available to them and the dangers that are [confronting] to them.

Well, and try[ing] to put those things together is somewhat of a challenge 'cause a lot of times they're not listening. You know, you got to figure out the words to use. (L-10)

Several of the librarians made a point of indicating that the medium is often as important as the message that is sent. They suggested that face-to-face contact and other active types of contact—such as flyers, emails, and handbills—are the most useful in reaching underserved groups.

Similarly, communication issues appear to affect the work that the FLP does with the local school system. The study participants noted a number of services designed to support students and the schools: after-school homework help; the Literacy Enhancement After-School Program (LEAP); story time for preschools; programs for special education classes; information-literacy instruction; and preparation for college level assignments in terms of citation styles, plagiarism, recognizing authoritative information sources, and organizing information through good writing practices. Branch librarians find it difficult to maintain communication with colleagues in the schools, as one librarian explained:

We have classes that come in, and I've [also] gone to schools and just talked about library services and what we have to offer. But, the funny thing is, I know with

some of the schools, they have a high turnover rate, too. So, if you start making a connection with a teacher, or the school librarian, or the reading teacher, English teacher, [during one school year] by the time the [next] school year started, there would be a new teacher. ... Maybe you get to know the principal but, the teachers or librarian, or reading instructors are usually more supportive of working with us than the principals are. (L-1)

L-1 noted that communication with the local school system is constrained both by difficulty in maintaining a consistent contact at the local school, and by low staffing levels at the librarian's branch that restrict time for outreach and consequently obstruct the librarian's efforts to follow up with the local school and to locate contact persons. Another librarian further explained the communication situation and her strategy to cope with communication difficulties:

That has been a challenge at times. It's been better recently, and I think that we've really made some headway. It's more about keeping in touch with one another; I mean, everybody's so busy. So we need to keep reminding them about the things that we do and how to be on their radar, so that they can remember. (L-11)

Even though communication between the library branch and the local school can be problematic, it appears that a fair amount of communication typically occurs between the public library and the public schools at higher administrative levels. A branch librarian explained:

Well, what the Free Library just did was a system-wide/school district wide 1st - 12th grade library-card registration drive. Where the collaboration [was] initiated, I have no idea; but every child in the school district of Philadelphia got a library card, whether they [previously] had one or not. And eventually [at] some point in time, records will

merge together where kids got fines. Everyone under 11 has a fine-free card. They have to return the material; but if it's late, they don't get a fine. 12 and up, they do. So it's like a huge thing. (L-5)

Internal Communication. Communication up and down the administrative ladder is central to the efficient operation of a public library and also to the provision of services that meet the information needs of underserved groups. Methods of organizing internal communications vary with the size, centralization, degree of autonomy among organizational units, and administrative culture of an organization. For example, direct, hierarchical lines of communication are appropriate to the FLP because it is a unified library system. Such a pattern would not be appropriate for the CCLS system because it is a federated system composed of member libraries that are largely autonomous and voluntarily bound by formal agreements regarding resource sharing and joint policies.

Data from this study do not shed any light on communication issues at CCLS, but they confirm the need for an improved communication strategy at the FLP—a need recognized by the Free Library itself. During data analysis, a number of issues emerged. These include administrative departments that are disconnected from the situation in the branches, difficulty in getting approval for neighborhood-specific collection-development requests, and frequent communication breakdowns between central administrative departments and branch managers. One librarian provided an example of a communication breakdown:

There have been times we've been kind of pressed to do certain things or order certain books because we have a turnaround time. They suddenly got this little windfall [of money] and then we [were] told we have to get this stuff in by, you know, 4 o'clock [or] within two days. I don't know what caused the situation; but I could think of a

couple of times where it filters down through ranks, and we are rushing to get all the items because there was this money available. But, you know, you couldn't make the best choices because you're too rushed to kind of find out exactly [what] certain things, you need certain things, [or what] other things [you need] ... you just don't have the time to find out what those things are. (L-1)

The rushed selection process that resulted from this communication breakdown illustrates the centrality of communication as an element in conceptualizing the library as a dynamic entity.

The FLP has recognized the need for a more effective internal communication program in order to increase operational efficiency and has taken steps to resolve the issue. An excerpt from the Library's strategic plan notes that "We will review our organizational structure so that staff can be most effective and equipped to meet the challenges ahead. To adapt quickly, we have to execute quickly. That, in turn, requires the removal of barriers that limit and impede communications or which also hamper staff from achieving their goals" (FLP, 2012). Currently, the FLP is actively pursuing this goal of improved internal communications. In a recent job announcement for the position of Chief of Staff to the President and Director of the Free Library, the improvement of internal communications was cited as one of the position's tasks:

The Chief of Staff to the President & Director of the Free Library of Philadelphia will provide ... operational oversight for the internal communications program for the Library. as well as help drive the Director's agenda, in partnership with the organization's Board of Trustees, the Board of Directors of the Free Library of Philadelphia Foundation and the leadership team of the Library. ... A critical component of the work of the Chief of Staff will be to establish, define and grow the Free Library's

internal communications strategy as outlined in the current strategic plan of the organization.

Issues with internal library communications can affect communications with other external organizations such as local schools. The branch librarians are subject to communication breakdowns both vertically (branch to central administration) and horizontally (branch library to local area school). One librarian provided an example:

I could just approach 2nd grade teachers at [my local] school and say I want to come to your faculty meeting and I want to do all that stuff, but I wouldn't really have anything to institutionally offer them. I'd only, like, have classroom programs in the library and materials to offer them. If that interface happened more centrally, it has to happen at the Office of Public Service Support, which is pretty disconnected from the day-to-day work we do in branches. I might get an email from someone informing me that I'm required to meet with 4 teachers from [the local school] and go to their faculty meeting. But there might be no faculty meeting for a year. So there's that. When stuff does happen more centrally, it happens on a bigger scale. But then a lot of stuff can also fall through the cracks because no one is ever following up to see if I met with them. (L-3)

The disconnection between the central offices and branch libraries that L-3 mentioned was echoed several times by other participants over the course of the study. For example, L-8 noted that central administration is out of touch with the local communities:

In the past, a long time ago, librarians would have more opportunity to order things for their collection like community a profile. We knew what our community needed and we would be able to order the books. But now everything is centralized,

and I don't like it. 'Cause they really don't understand what we really need at our communities. It's hard if you're out in the library at the branch. You know what we'll need, but they never visit our libraries. (L-8)

In order to be connected with what's going on in the branch libraries and the communities they serve, the internal communication strategy at the FLP will need to utilize both indirect and direct means of communication with branch libraries and the service areas of those branch libraries. L-8 further commented on how internal communications recently improved at the FLP:

It's slowly getting better, but there's a need to improve communication from the branch to the administration downtown. I mean, we do monthly reports and statistics; but I don't think they could get a good understanding of what's going unless they visit, and they don't visit. Nobody visits. I mean, I could videotape what we do here and send it to them; but they basically rely on our monthly reports and statistics to see what's going on at our branches. (L-8)

In regard to public-library services for underserved groups, mid-level administrators seem very aware of the situation in the branches and are actively working to meet the needs of underserved groups in their respective areas. Of particular note are the efforts of the area administrators of the FLP; who work in the regional libraries; and visit the branches to become aware of the situation there. They are particularly active in regard to communication with higher administration and securing resources that are needed in the branches.

Resources. The resources available to any public librarian necessarily expand or limit the options available to assist patrons, often in dynamic ways. Resources are an important component of ILT because those available at any one branch are probably as variable as the

service communities that public libraries serve and the services that they offer. Ideally, the resources offered by the branches should reflect the needs of the local community including, those of underserved groups. One librarian provided a good example related to ordering language materials:

I've sent a few things to the materials management and the collectors for other languages—French, Arabic, and then a number of others. A number of languages in the Ge'ez alphabet, Ethiopian and Eritrean languages. I was trying to order some fiction, in Arabic. It was a discretionary order, and everything that we had was children's material—which I certainly see the value for. But interestingly enough, I find that the children, amongst new Americans, learn English very rapidly, through school and other things ... but [there] almost might be more need for titles and language materials for adults. And as a branch librarian, I'm not authorized to order any of that. (L-4)

Even though materials in particular languages are often needed at specific locations, other resources—such as computers that are ubiquitous also directly affect underserved groups' ability to use certain resources:

I can't imagine how the youths would react if there were not computers. Now, I've talked to colleagues, and it's the same thing here. When the Internet or computers are down, people leave, and there's empty libraries. ... A lot of our branches now say, "Internet is down; it's cleared out." (L-8)

For underserved groups in particular access to electronic resources is critical to meeting their information needs.

Analysis of data gathered for this study show that the elements identified through this research are essential to the effective provision of public-library services in underserved

communities. They form the basis of the Information and Literacy Triage model proposed here as a description of contemporary practice and as a guide to future practice as well.

Understanding that public library services are based on the dynamic nature of elements such as funding, staffing, facilities, resources, and communication is essential both for identifying problems with service provision and in designing solutions to those problems. Indeed, when public library resources are spread thin, it is important to be able to identify problems as they emerge, determine the causes quickly, and enact solutions fluidly. The Information and literacy Triage Model attempts to capture the dynamic issues that public librarians must address in their daily work practice. In performing information and literacy triage, librarians continually assess ever-shifting situations in which a number of factors determine how they will be able to address patron needs.

Chapter 6: Conclusions

Conclusions

Public libraries have long served and continue to serve underserved groups within urban contexts. However, few studies have examined public-library service approaches for underserved groups over time; still fewer have attempted to articulate models of public-library

services to underserved groups—particularly in the wake of ubiquitous ICT's, the recent economic recession, and rising poverty rates nationwide.

The Information and Literacy Triage model suggested by this study's data serves as both an effective description of contemporary public-library practice and as a metaphor for the direction of public-library services and policies in general and for services to underserved groups in particular. Public librarians must help whom they can with the resources they have at hand. Moreover, public libraries now find themselves needing to prioritize the segments of the underserved populations they must serve. This prioritization is a pragmatic approach, given the limitations on resources and the proven risk of funding cuts or resources that once seemed secure. The findings of this study illustrate the effects and effectiveness of Information and Literacy Triage for underserved groups. The findings point to a number of dynamic elements that underlie triage decisions. In addition, they illustrate service gaps and obstacles to service provision for underserved groups in particular.

It is important to note that the preceding findings uncover only part of the overall picture because the Information and Literacy Triage model illustrates only one side of the service interactions in the library. Within the context of the information worlds model, the public library represents one type of information world—official information sources—while underserved groups can represent a number of different types of small information worlds. Some examples of such small worlds in underserved communities could include the residents of a retirement community, tenants of low-income housing projects, or even the prisoners in a cell block. To uncover the other half of the library service interaction, and to expand the model to encompass a variety of information small worlds further research is needed.

Implications of this study

Major practical and educational implications of this study apply to all elements of the ILT model. Staffing issues are particularly significant. Staff shortages were by far the most prevalent obstacle to the provision of library services to underserved groups. Tied to that shortage is the need to ensure that staff receive more training and have more clearly defined roles for different job classifications regarding technology assistance. These issues are reciprocal, and solving one can alleviate another. For instance, alleviating the staff shortages can allow staff the time to attend training programs that are already available. In regard to technology, more explicit definition of roles among job classifications could serve to better direct the efforts of staff when serving patrons. For example, if administrators assign the role of technology assistance to librarians, librarians would become responsible for supporting patrons with technology in almost any form. The potential downside of such an action would be to add an additional burden to a job classification that is already barely able to cover its current responsibilities.

An organizational implication of the ILT model relates to a multitude of issues surrounding communication, both internally and externally. Improvement of internal communications or a lessening of administrative centralization might allow branch staff to meet newly emerging needs, such as ESL materials in a wider variety of languages.

A major conceptual implication of the model relates to identifying emerging user needs and providing resources to meet those needs. The availability of resources to meet the information needs of patrons is essential to the ability of public librarians' ability to provide services. The resources offered by the branches should reflect the needs of the local community—changing dynamically in order to meet these needs.

Another practical implication relates to the facilities available to public libraries. This study suggests that the curb appeal of a library facility is tied to the local community's awareness of public-library services in its area. Data from the study indicate that higher levels of community awareness can be tied to higher usage rates. The physical presence of a public-library outlet in an underserved community is important because of ICT access needs that emerge from living with shattered information ecologies. In tandem with the physical presence of a library outlet, a sufficient amount of space and terminals is required to provide sufficient capacity to meet demand.

Two major funding-related implications from this study are also reflected in the ILT model. First, data from the study suggest that diversification of funding streams—i.e., using a combination of private and public funds—is an effective means of ensuring a degree of financial security to support continued provision of services. Second, funds that are raised locally can provide a higher degree of autonomy for branch librarians in regard to how those funds can be used.

The findings from this study and the corresponding service model have implications not only for improving services at the local level but also for addressing local, regional, and national policy issues related to the digital divide. Recognition of the factors that perpetuate the digital divide— e.g., inconsistent Internet and technology access, poor technology skills, and low literacy levels—is important for mounting a strong argument for continued government support of programs and for a variety of measures to combat the digital divide. The findings from this study also have pertinent implications for fields and professions beyond libraries. For instance, an in-depth understanding of the information behavior of underserved groups could be useful to

other service-based professions such as healthcare provision, civil services, policing, and social services.

In order to do enable public librarians to perform information and literacy and triage effectively, modifying or adjusting the public-library infrastructure in a way that accepts the nature of this service strategy and the realities that reinforce its use is critical. Addressing the inter-related and dynamic issues of staffing, funding, resources and design of spaces (interior and exterior); communication (internal and external) should be a priority for public library administrators who server underserved groups. Organizing the public-library infrastructure in ways that acknowledge that service these groups involves information and literacy triage could make a significant impact of the effectiveness and efficiency of service provision to all library patrons.

Recommendations

Based on the results of this study and the implications of the ILT model, the researcher provides the following recommendations:

- Two recommendations are proposed as possible solutions to the technology-literacy support gap that could be implemented once the staff shortage obstacle is addressed.
 - A key recommendation is the creation of a new job classification or job sub-classification rather than designating technology assistance to an existing job classification. The increasing presence of technology and its integral place in basic life services, such as the movement of government services into an online environment, is especially problematic for underserved groups because they often have relatively poor technology skills. The creation of a new job classification focused almost exclusively on the maintenance and provision of

technological services could be a major step toward closing the most troublesome service gaps that currently plague public-library service to underserved groups.

- The creation of such a job class in libraries across the nation would have implications for LIS educators and degree programs. Curriculums would need to be adjusted to include new classes designed to equip graduates with the skills necessary to meet the challenges of such a position.
 - From a research perspective, the implementation of a new job classification would offer opportunities to explore the role of that classification within public libraries, in order to examine how the presence of a technology-oriented librarian alters the dynamics of service provision.
- Technology assistance: As an alternative, the specification of responsibility for technology assistance to a particular job classification would reduce confusion about which staff persons need to assist with this growing task. Moreover, designating technology assistance to a particular job classification would focus training and education for that classification and potentially improve provision of technology services for underserved groups. A more focused approach to technology assistance could potentially lead to more effective use of limited staffing and resources for technology training to address the acute need for technological literacies among underserved patrons.
- Another recommendation is improving both internal and external communication processes. Improving communication would allow for more effective external

partnerships with non-library organizations such as public schools. Improving internal communication would improve the public library's ability to respond to emerging needs such as serving new Americans who speak languages that are not currently well represented in collections.

- Given a highly centralized administrative structure, a public library would necessarily need a strong and efficient communication network. With such a network in place, the public library would receive information about the specific needs at the branch level, such as a new language group in one area or high unemployment rates in another, and could develop service responses to address those needs.
- Alternatively, better mechanisms for alerting the higher administration or the whole organization about localized or neighborhood issues may present a solution. Such a mechanism would at least partially ameliorate the disconnect between branches and central administration.
- There may also be a need to explore how librarians communicate during triage situations. Identification of new vocabularies of practice might lead to more effective signage and collection of more representative statistics.
- A recommendation to address the language-based gap is to include materials in various languages as part of the floating collection in which "...items remain where they are checked in, whether because they've been brought in as a customer hold, or ended up in the book drop. Rather than 'routing them home,' materials are simply shelved at the return branch" (Bartlett, 2010). Conceptually, floating collections are meant to be a cost cutting measure that reduces deliveries and routing of materials. A possible benefit of

allowing language materials to float is that particular language materials may begin to accumulate at library service outlets with patrons who speak that particular language. Further, a system feature could be designed so that staff will be alerted to shift an entire collection when a critical mass of floating materials is reached at a branch. This may enable public libraries to accommodate underserved groups who tend not to check out materials and to relocate en-masse over time.

- Hiring additional staff is clearly the key recommendation for addressing issues relating to staff shortages that emerged in the study as the most frequently encountered obstacle to service provision. However, given that staff shortages often correspond with uncertain funding situations, hiring more staff may not be a viable solution. A policy of employing part-time and seasonal workers to mitigate staff shortages creates its own difficulties: poor skill retention, problems with adequate staffing coverage during open hours, relatively poor non-professional part-time staff retention rates, and maintaining a consistent relationship with service communities.
- A potential solution for staff shortages could be the implementation of a floating staff system. Floating staff could move from branch to branch within a given administrative area of a public library system to serve where they are needed most. The Free Library is currently doing something along these lines in what FLP is calling “clustering.” Through clustering, a unit of several libraries is created within a given area in order to share resources, staff, and services as a way to overcome gaps in service provision. This strategy also presents an opportunity to observe how well the Information and Literacy Triage model represents operations on the ground.

- A possible solution to lack of funding is diversification of public library funding sources to bolster the resilience of services against funding insecurity that results from cuts or shortfalls in either the public or the private sphere. The ILT model suggests that the diversification of funding streams would both provide more security across most of the service aspects of public libraries, and provide public librarians with additional resources, time, and staff or to perform information and literacy triage.
- In some respects, the curb appeal, or external appearance of a library facility, is just as important as the inside. Results of this study suggest that community awareness of the public library and use of its resources are tied to visual recognition and a degree of curiosity that results from an attractive façade. Improving a branch's curb appeal might be especially important in underserved areas that suffer from urban blight and decay.
- A recommendation for documenting use of services and resources by underserved groups involves collecting new kinds of usage statistics to reflect the usage behaviors of underserved groups could help to justify budget allocations that support services and resources used by underserved groups. For example, collecting statistics on in-house usage of In order to simplify the collection of such statistics, using a cordless scanner, similar to those used in retail stores, that is connected to the library system would make it easy to scan each item used within the library but not actually checked out.
 - Additionally, librarians could solicit verbal feedback from attendees after a program. Another option would to use social media and direct patrons to share their feedback and comments in that way.

Directions for Future Research

Much of the potential value of this study lies in the directions for future research suggested by the patterns and themes that emerged to provide the foundation for the ILT. Future research to validate the model is needed both to confirm the original findings and to lead to a broader understanding of how service provision to underserved groups occurs in a variety of contexts, in order to demonstrate the transferability of this study's findings.

A second area of future research is to address their perceptions of public-library service interactions in order to elicit the views of members of underserved communities. Studies of the users' side of public-library service provision among underserved groups would provide a more complete understanding of the facets of contemporary public-library practice studied here.

A third area for future research is to explore the effects on librarians of working in impoverished and sometimes dangerous urban areas. Further, exploration of public librarians' understandings of and attitudes toward issues such as poverty and cultural literacy would have benefits for both public-library practice and library education.

This study was both eye opening and edifying for me as a researcher. During my time as a student, I have personally struggled in attempting to reconcile my experiences as a public librarian with all that I learned throughout my coursework. The Information and Literacy Triage model is my attempt to do just that. As a model of contemporary library practice, I believe it to be as accurate a representation as I can make it. While the Information and literacy Triage model cannot completely do justice in representing the hard work and difficult situations in which public librarians often work, what it can provide a framework built around a set of basic, tangible concepts that helps to convey the reality of work in public libraries.

Public libraries serving underserved areas are essential resources to the local communities. In a fundamental sense, public libraries serve to bridge the gaps in the shattered information ecologies of the underserved. It is this shattered ecology that necessitates the triage strategy. Never knowing exactly what tasks or needs they will be faced with, public librarians must constantly assess and reassess patron needs against available resources. Given dynamic forces affecting aspects of library services (staff, funding, communication, etc.) the triage strategy is a means of coping with constant uncertainty. The uncertainty public librarians must accommodate is two-sided: on one side, patron needs and requests are relatively unpredictable; on the other, a degree of uncertainty underlies every aspect of service provision. Given that level of uncertainty, Information and literacy Triage should be viewed as an admirable coping mechanism.

References

- Adeyemon, E. (2009). Integrating digital literacies into outreach services for underserved youth populations. *The Reference Librarian*, 50, 85-98.
- Agada, J. (1999). Inner-city gatekeepers: An exploratory survey of their information use environment. *Journal of the American Society for Information Science*, 50: 74-85.
- Alexander, O.D. (2008): Public-library Services to Underrepresented Groups: Poor & Unemployed, Emphasizing Danville, Virginia, *Public-library Quarterly*, 27:2, 111-133.
- Allen, T. J. (1966). *Managing the Flow of Scientific and Technological Information*. Cambridge, MA: Massachusetts Institute of Technology.
- Allen, T. J., & Cohen, S. (1969) "Information Flow in Research and Development Laboratories." *Administrative Science Quarterly* 14(1), 12-19.
- American Library Association. (2014, April). *Number of libraries in the United States*. Retrieved from <http://www.ala.org/tools/libfactsheets/alalibraryfactsheet01>
- Andersen, H. (2002). Excluded Places: the Interaction Between Segregation, Urban Decay and Deprived Neighborhoods. *Housing, Theory & Society*, 19(3/4), 153-169.
- Armstrong, A. L., Lord, C., & Zelter, J. (2000). Information needs of low-income residents in South King County. *Public Libraries*, Nov/Dec, 350-355.
- Assefa, S., Rorissa, A., Alemneh, D. G., & Albright, K. (2012). Content Divide: Africa and the Global Knowledge Footprint Sponsored by: SIG/III. *Proceedings of the 75th ASIS&T Annual Meeting*, 49. Retrieved November 14, 2013
- Bailey, M. N. (1991). Reach Out And Touch: Serving The Un- And Under-Served. *A. T. Quarterly*, 2(5).
- Bala, B., & Adkins, D. (2004). Library and Information Needs of Latinos in Dunklin County, Missouri. *Public Libraries*, 43(2), 119-122.
- Bartlett, W. (2010). Good News: How Floating Collections Enhance Readers Advisory. *Readers' Advisor News*. Retrieved October 4, 2014, from <http://www.readersadvisoronline.com/ranews/mar2010/bartlett.html>
- Bates, M. J. (1976). Rigorous Systematic Bibliography. *RQ*, 16, 7-26.

- Bawden, D. (2001). Information and digital literacies: a review of concepts. *Journal of Documentation*, 57(2), 218 – 259.
- Becker, S., Crandall, M. D., Fisher, K. E., Kinney, B., Landry, C., and Rocha, A. (2010). Opportunity for All: How the American Public Benefits from Internet Access at U.S. Libraries. (IMLS-2010-RES-01). Institute of Museum and Library Services. Washington, D.C.
- Becker, S., Crandall, M. D., Fisher, K. E., Blakewood, R., Kinney, B., and Russell-Sauvé, C. (2011). *Opportunity for All: How Library Policies and Practices Impact Public Internet Access* (IMLS-2011-RES-01). Institute of Museum and Library Services. Washington, D.C.
- Behrens, S. J. (1994). A Conceptual Analysis and Historical Overview of Information Literacy. *College and Research Librarians*, 55(4), 309-322.
- Beniger, J. R., (1986). *The Control Revolution: Technological and Economic Origins of the Information Society*. Cambridge, Mass.: Harvard University Press.
- Berelson, B. (1949). *The Library's Public*. New York, NY: Columbia University Press.
- Berry, John. 1975. A TIP from Detroit. *Library Journal* 100 (July): 1287-90.
- Bertot, J. C., C. R. McClure, and P. T. Jaeger. (2008). The impacts of free public Internet access on public library patrons and communities. *Library Quarterly* 78(3):285–301.
- Bishop, A. P., Tidline, T. J., Shoemaker, S., & Salela, P. (1999). Public Libraries and Networked Information Services in Low-Income Communities. *Library & Information Science Research*, 21 (3), 361–390.
- Bivens-Tatum, W. (2012). *Libraries and the Enlightenment*. Los Angeles, CA: Library Juice Press.
- Bonnici, L., & Burnett, K. (2005). A web model of recruitment for LIS Doctoral Education: Weaving in diversity. In M. B. Wheeler (Ed.), *Unfinished business: Race, equity, and diversity in library and information science education* (pp. 119-130). Lanham, MD: Scarecrow Press.
- Booher-Jennings, J. (2005). Below the Bubble: "Educational Triage" and the Texas Accountability System. *American Educational Research Journal*, 42(2), 231-268.

- Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. *Annual Review of Psychology, 53*, 371-399.
- Brown, E. F. (1971). *Library Service to The Disadvantaged*. Metuchen, NJ: The Scarecrow Press.
- Bundy, M. L. (1982). An advocacy perspective: The public-library and the poor. *Catholic Library World*, 53: 380-84.
- Bundy, M. L., & Stielow, F. J. (Eds.). (1987). *Activism in American librarianship, 1962-1973*. New York, NY: Greenwood Press.
- Burke, S. K. (2007). The Use of Public Libraries by Native Americans. *The Library Quarterly, 77*(4), 429-461.
- Burke, S. K. (2008). The Use of Public Libraries by Native Americans. *Reference & User Services Quarterly,, 48*(2), 164-174.
- Burnett, G., Besant, M., & Chatman, E. A. (2001). Small Worlds: Normative Behavior in Virtual Communities and Feminist Bookselling. *Journal of the American Society for Information Science and Technology, 52*(7), 536-547.
- Burnett, G., Jaeger, P. T., & Thompson, K. M. (2008). Normative behavior and information: The social aspects of information access. *Library & Information Science Research, 30*, 56-66.
- Buschman, J. (2009). Information Literacy, "New" Literacies, and Literacy. *The Library Quarterly, 79*(1), 95-118.
- Casey, G. (1974). "Services to the Disadvantaged." *Library Trends, 23*, 271-285.
- Castells, M., (1996). [*The Rise of the Network Society*](#), *The Information Age: Economy, Society and Culture Vol. I*. Cambridge, MA; Oxford, UK: Blackwell.
- Chang, B. L., Bakken, S., Brown, S., Houston, T. K., Kreps, G. L., Kukafka, R., & Safran, C. (2004). Bridging the Digital Divide: Reaching Vulnerable Populations. *Journal of the American Medical Informatics Association, 11*(6), 448-457.
- Chatman, E.A. (1985). Information, mass media and the working poor. *Library and Information Science Research, 7*, 97-113.

- Chatman, E. A. (1986), Diffusion theory: A review and test of a conceptual model in information diffusion. *Journal of the American Society for Information Science*, 37: 377–386.
- Chatman, E. A. (1987). "Alienation Theory: Application of a Conceptual Framework to a Study of Information Among Janitors." *RQ*, 29(2), pp. 355-368.
- Chatman, E. A. (1990). Title: Alienation theory. *RQ*, 29(3), 355.
- Chatman, E. A. (1991). Life in a small world: Application of gratification theory to information-seeking behavior. *Journal of American Society for Information Science*, 42, 438-449.
- Chatman, E. A., & Pendleton, V.E.M. (1995). Knowledge gap, information seeking and the poor. *The Reference Librarian*, 49/50, 135-145.
- Chatman, E. A. (1996). The impoverished life world of outsiders. *Journal of American Society for Information Science*, 47, 193-206.
- Chatman, E. A. (1999), A theory of life in the round. *Journal of the American Society for Information Science*, 50: 207–217.
- Childers, T. (1975). *The Information-Poor in America*. Scarecrow Press, Inc., P.O. Box 656, Metuchen, New Jersey 08840.
- Civil Rights Act of 1964 § 6, 42 U.S.C. §2000d et seq (1964). Retrieved from The United States Department of Justice website: <http://www.justice.gov/crt/about/cor/coord/titlevi.php>
- Colson, J. C. (1973). The agony of outreach: Some reconsiderations based on the High John Project. *Library Journal* 98: 2817-20.
- Copenhaver, C., & Boelke, J. (1968). *Library Service to the Disadvantaged, A Bibliography. Bibliography Series: ERIC Clearinghouse for Library and Information Sciences, 1.*
- Daniels, B. E. (1989). In defense of LSCA. *American Libraries*, 20(8), 741-743.
- D’Elia, G., Abbas, J., Bishop, K., Jacobs, D., & Rodger, E. J. (2007). The impact of youth’s use of the Internet on their use of the public-library. *Journal of the American Society for Information Science and Technology*, 58(14), 2180–2196. doi:10.1002/asi.20675

- Dervin, B., & Greenberg, B.S. (1972). The communication environment of the urban poor. F.G. Kline, P.J. Tichenor (Eds.), *Current perspectives in mass communication research*, Sage, Beverly Hills, CA, pp. 195–233.
- Dervin, B. (1975). Strategies for dealing with the information needs of urban residents: information or communication. Paper presented at the International Communication Association Meeting, Chicago.
- Dervin, B. (1977). Useful theory for librarianship: Communication, not information. *Drexel Library Quarterly*, 13, 16-29.
- Drake, M. A. (2005). *Encyclopedia of library and information science*. Boca Raton (Fla.: Taylor & Francis.
- Edwards, P. S. (2008). Library Service in the Lower Mississippi Delta Region: Issues and Opportunities. *Rural Libraries*, 28(2), 37-51.
- Enoch Pratt Free Library. (2015). *Information For Every Resident Database*. Enoch Pratt Free Library. Retrieved April 10, 2015, from <http://www.prattlibrary.org/services/index.aspx?id=2318>
- Estabrook, L. (1979). Emerging Trends in Community Library Services. *Library Trends*, 28, 151-164.
- Evans, G. W. (2004). The environment of childhood poverty. *American Psychologist*, 59 (2), 77–92.
- Fahim, K. (2006). Rethinking Revitalization; In Crumbling Camden, New Challenges for a Recovery Plan. *The New York Times*, Retrieved November 13, 2013 from: <http://query.nytimes.com/gst/fullpage.html?res=9C04E2DF113FF936A35752C1A9609C8B63>
- Fels Research & Consulting University of Pennsylvania. (2010). The Economic Value of The Free Library In Philadelphia. Philadelphia, PA: University of Pennsylvania, Fels Institute of Government.
- Fidel, R. (1984). The case study method: a case study. *LISR*, 6, 273-288.

- Fisher, K. E., Durrance, J. C., & Bouch Hinton, M. B. (2004). Information Grounds and the Use of Need-Based Services by Immigrants in Queens, New York: A Context- Based, Outcome Evaluation Approach. *Journal of the American Society for Information Science and Technology*, 55(8).
- Gant, J. P., Turner-Lee, N. E., Li, Y., & Miller, J. S. (2010). *National Minority Broadband Adoption: Comparative Trends in Adoption, Acceptance and Use*. Washington, DC: Joint Center for Political and Economic Studies.
- Garraghan and Delanglez, G. J. (1957). *A Guide to Historical Method*. New York, NY: Fordham University Press.
- Gehner, J. (2010): Libraries, Low-Income People, and Social Exclusion, *Public-library Quarterly*, 29:1, 39-47.
- Geller, E. (1966). Two Blocks Apart. *Library Journal*, 91, 4226.
- Giang, T., Karpyn, A., Laurison, H. B., Hillier, A., & Perry, R. D. (2008). Closing the Grocery Gap in Underserved Communities: The Creation of the Pennsylvania Fresh Food Financing Initiative. *Journal of Public Health Management Practice*, 14(3), 272-279.
- Gordon, M. T., E. J. Moore, and A. C. Gordon. (2003). *Public access computers, libraries, and the poor: Do neighborhood factors make a difference?* Seattle, WA: Evans School of Public Affairs of University of Washington.
- Gordon, M. T., Moore, E. J., Gordon, A. C., and Heuertz, L. (2003). *Kids have access, enjoy computers: Libraries key for many, especially the disadvantaged. Report to the Bill and Melinda Gates Foundation United States Library Program*. Seattle, WA: Public Access Computing Project, Evans School of Public Affairs, University of Washington.
- Granovetter, M. S. (1973). The Strength of Weak Ties. *American Journal of Sociology*, 78(6), 1360-1380.
- Guba, E. G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology Journal*, 29, 75-91.
- Guest, G., Namey, E. E., & Mitchell, M. L. (2012). *Collecting Qualitative Data: A Field Manual for Applied Research*. SAGE Publications.
- Haider, J., & Bawden, D. (2007). Conceptions of “information poverty” in LIS: a discourse analysis. *Journal Of Documentation*, 63(4), 534-557.

- Harris, M. U.S. Department of Health, Education & Welfare, Office of Education. (1972). *The Purpose of The American Public-library in Historical Perspective: A Revisionist Interpretation* (ED 071668). Washington, D.C.: ERIC Clearinghouse on Library and Information Science.
- Heim, K. M., & Wallace, D. P. (Eds.). (1990). *Adult Services: An Enduring Focus for Public Libraries*. Chicago, IL: American Library Association.
- Hersberger, J. A. (2003) Are the economically poor information poor? Does the digital divide affect the homeless and access to information? *Canadian Journal of Information and Library Science*, 27(3), 44-63.
- Hersberger, J. (2005). The Homeless and Information Needs and Services. *Reference & User Services Quarterly*, 44(3), 199-202.
- Hiatt, P. (1965). Urban Public-library Services for Adults of Low Education. *Library Quarterly*, 2, 81-96.
- Holt, G. E. (2006). Fitting library services into the lives of the poor. *The Bottom Line*, 19(4).
- Holt, L., & Holt, G. (2010). *Public-library Services for the Poor*. Chicago, IL: American Library Association.
- Horrigan, J. (2003). The Ever-shifting Internet Population. Pew Internet and American Life Project. <http://www.pewInternet.org/Reports/2003/The-EverShifting-Internet-Population-A-new-look-at-Internet-access-and-the-digital-divide.aspx>
- Irvin Morris, V. (2012). *Reading in mirrors: Using street literature to facilitate practitioner inquiry with urban public service librarians*. (University of Pennsylvania). ProQuest Dissertations and Theses, 367.
- Jackman, A. (2012). Reference Triage and the One Desk Model. Retrieved August 19, 2014: http://www.urbanlibraries.org/reference-triage-and-the-one-desk-model-innovation-179.php?page_id=41
- Jaeger, P. T., & Burnett, G. (2005). Information access and exchange among small worlds in a democratic society: The role of policy in redefining information behavior in the post-9/11 United States. *Library Quarterly*, 75(4), 464-495.

- Jaeger, P. T., Bertot, J. C., & Franklin, R. E. (2010). Diversity, inclusion, and underrepresented populations in LIS research. *Library Quarterly*, 80, 175-18.
- Jaeger, P. T., & Burnett, G. (2010). *Information Worlds: Social Context, Technology, and Information Behavior in the Age of the Internet*. New York, NY: Routledge.
- Jargowsky, P. A. (1997). *Poverty and Place: Ghettos, Barrios, and the American City*. New York, NY: Russell Sage Foundation.
- Josey, E. J. (1985). Library and Information services for cultural minorities: A commentary and analysis of a report to the National Commission on Libraries and information Science. *Libri*, 35, 320-332.
- Josey, E. J. (1993). The challenges of cultural diversity in the recruitment of faculty and students from diverse backgrounds. *Journal of Education for Library and Information Science*, 34, 302-311.
- Jue, D., Koontz, C., MagPantay, J., Lance, K., & Seidl, A. (1999). Using public libraries to provide technology access for individuals in poverty: A nationwide analysis of library market areas using a geographic information system. *Library & Information Science Research*, 21(3), 299-325.
- Kant., I. (1996). An answer to the question: What is enlightenment? (1784). In: Mary J. Gregor (ed.) *Practical Philosophy*. pp. 11-22. [Online]. The Cambridge Edition of the Works of Immanuel Kant. Cambridge: Cambridge University Press. Available from: Cambridge Books Online <<http://dx.doi.org/10.1017/CBO9780511813306.005>> [Accessed 17 October 2014].
- Keenan, D., & VanHorn, R. (1979). Educational Triage. *The Phi Delta Kappan*, 60(5).
- Khazraee, E., Townes, A., and Grubestic, A. (2013). Disparities in Distribution of Information Resources in the City of Philadelphia: Spatial Analysis of Socio-demographic and Information Resource Variables. In *Proceedings from iConference 2013: Scholarship in Action: Data, Innovation, Wisdom*. IDEALS: Urbana-Champaign, IL.
- Kinney, B. (2010). The internet, public libraries, and the digital divide. *Public-library Quarterly*, 29, 104-161.

- Koontz, C., Jue, D., & Lance, K. (2005). Neighborhood-based in-library use performance measures for public libraries: A nationwide study of majority–minority and majority white/low income markets using personal digital data collectors. *Library & Information Science Research*, 27, 28-50.
- Koontz, C. M., Jue, D. K., & Bishop, B. W. (2009). Public-library facility closure: An investigation of reasons for closure and effects on geographic market areas. *Library & Information Science Research*, 31, 84-91.
- Kronus, C. I. (1973). Patterns of adult library use: A regression and path analysis. *Adult Education*, 23, 115–131.
- Kurtz, N. (1968). Gatekeepers: Agents in acculturation. *Rural Sociology*, 33(1), 64-70.
- Lehr, W., & Smith-Grieco, T. (2009). Measurement and assessment of broadband availability. In *Report prepared for John Adams Innovation Institute at the Massachusetts Technology Collaborative*. Cambridge: Massachusetts Institute of Technology.
- Leigh, R. D. (1950). *The Public-library in the United States*. New York, NY: Columbia University Press.
- Library Services and Construction Act of 1956, 20 U.S.C. §§ 351-386 (1956).
- Library Services and Construction Amendments of 1970, 20 U.S.C. §§ 351-1211 (1970).
- LINC Staff. (2015). LINC: Job & Career News from the Memphis Public Library. Retrieved April 10, 2015, from <https://mplicjob.wordpress.com/>
- Lipsman, C. K. (1972). *The disadvantaged and library effectiveness*. Chicago, IL: American Library Association.
- Lumumba, J., & Branton, A. (2002). Historical Survey of Library Services for Blacks in Mississippi: 1866 to 1954. *Mississippi Libraries*, 66(2), 37-40.
- Lupton, R (2003) *Poverty Street: The Dynamics of Neighbourhood Decline and Renewal*. Bristol, The Policy Press.
- Marshall, C., & Rossman, G. (2011). *Designing qualitative research*. Los Angeles, CA: Sage.
- McCook, K. (2011). *Introduction to public librarianship*. (2nd rev. ed.). NY: Neal-Schuman.

- McClure, C. R., Owen, A., Zweizig, D. L., Lynch, M. J., and Van House, N. A. (1987) *Planning and Role Setting for Public Libraries: A Manual of Options and Procedures*. Chicago, IL: American Library Association.
- Metoyer-Duran, C. (1993). *Gatekeepers in Ethnolinguistic Communities*. Norwood, NJ: Ablex Publishing Corporation.
- Millbourne, P. (2010), *The Geographies of Poverty and Welfare*. *Geography Compass*, 4: 158–171.
- Muddiman, D., Durrani, S., Dutch, M., Linley, R., Pateman, J., & Vincent, J. *The Council for Museums, Archives and Libraries, (2000). The public-library and social exclusion volume one: Overview and conclusions*. Wetherby, UK: Library and Information Commission Research Report 84.
- Nauratil, M. (1985). *The economically disenfranchised*. In *Public libraries and nontraditional clientele: The politics of special services*. Westport, Conn.: Greenwood Press.
- Chute, A., Kroe, E., O'Shea, P., Craig, T., Freeman, M., Hardesty, L., et al. (2006). *Public libraries in the United States: Fiscal year 2004*. Retrieved from <http://nces.ed.gov/pubs2006/2006349.pdf>
- Neuman, S. B., & Celano, D. (2006). *The knowledge gap: Implications of leveling the playing field for low-income and middle-income children*. *Reading Research Quarterly*, 41(2), 174-201.
- NTIA. (1999). *Falling through the NET: Defining the Digital Divide*. Washington D.C. U.S. Government Printing Office.
- O.E.D. (2015)"triage, n." *OED Online*. Oxford University Press. Retrieved April 13, 2015, from <http://www.oed.com.ezproxy2.library.drexel.edu/view/Entry/205658?rskey=htPtih&result=1>
- Osburn, C. B. (2009). *The Social Transcript: Uncovering Library Philosophy*. Westport, CT: Libraries Unlimited.
- Orange, S. M. (2004). *Reaching Underserved Populations*. *Bookmobiles Outreach*, 7(1).
- Orange, S. M., & Osborne, R. (2004). *From outreach to equity: An introduction*. *American Libraries*, 35(6), 46-51.

- Overall, P. (2009). Cultural competence: A conceptual framework for library and information science professionals. *Library Quarterly* 79(2): 175–204.
- Pew Internet: Pew Internet & American Life Project. (2013). *Health Online 2013*. Washington, DC: Fox, S. and Duggan, M.
- Philadelphia Research Initiative (2012). The Library in the City: Changing Demands and a Challenging Future. Philadelphia, PA: The Pew Charitable Trusts. Retrieved March 25, 2012, from <http://www.pewtrusts.org/uploadedFiles/wwwpewtrustsorg/Reports/PhiladelphiaResearchInitiative/Philadelphia-Library-City.pdf>
- Pungitore, V. L. (1992). Dissemination of the Public-library Planning Process among Smaller Libraries. *The Library Quarterly*, 62(4), 375-407.
- Richtel, M. (2012). Wasting Time is the New Divide in Digital Era. *The New York Times*. Retrieved June 1, 2012, from http://www.nytimes.com/2012/05/30/us/new-digital-divide-seen-in-wasting-time-online.html?pagewanted=1&_r=1
- Rogers, E. M. (2003). *Diffusion of Innovations* (5th ed.). New York, NY: Free Press.
- Ross, C.; Nilsen, K.; Dewdney, P. (2002). *Conducting the Reference Interview: A How-To-Do-It Manual for Librarians*. London: Facet Publishing.
- Ryan, W. (1971). *Blaming the Victim*. New York, NY: Pantheon Books.
- Sampson, R. J., Sharkey, P., & Raudenbush, S. W. (2008). Durable effects of concentrated disadvantage on verbal ability among African-American children. *Proceedings of the National Academy of Sciences of the United States of America*, 105, 845-852.
- Savolainen, R. (1993). The sense-making theory: Reviewing the interests of a user-centered approach to information seeking and use. *Information Processing & Management*, 29(1), 13–28.
- Savolainen, R. (1995). Everyday life information seeking: Approaching information seeking in the context of “way of life.” *Library & Information Science Research*, 17(3), 259–294.
- Scala, K. (2013). "Coatesville library director resigns." *Daily Local New* 2013. Web. 18 Oct. 2014.

- Shafer and Bennet, R. J., & Bennet, D. H. (1980). *A Guide to Historical Method*. Homewood, IL: The Dorsey Press.
- Sharkey, P. (2008). The Intergenerational Transmission of Context. *American Journal of Sociology*, 113(4), 931-969.
- Sin, S.-C. J., & Kim, K.-S. (2008). Use and non-use of public libraries in the information age: A logistic regression analysis of household characteristics and library services variables. *Library & Information Science Research*, 30(3), 207–215.
- Sin, S.-C. J. (2009). *Structural and Individual Influences on Information Behavior: A National Study of Adolescents Use of Public Libraries* Doctoral dissertation, University of Wisconsin-Madison, Madison.
- Sin, S.-C. J. (2011). Neighborhood disparities in access to information resources: Measuring and mapping U.S. public libraries' funding and service landscapes. *Library & Information Science Research*, 33(1), 41–53.
- Smith A. (2010). Mobile access 2010. Pew Internet & American Life Project. pewInternet.org/Reports/2010/Mobile-Access-2010/Summary-of-Findings.aspx.
- Spink, A., Cole, C. (2001). Information and poverty: information seeking channels used by African American low-income households. *Library & Information Science Research*, 23(1), Spring, 45-65.
- Stephens, A. K. (1995). *Assessing the Library Planning Process*. Norwood, NJ: Ablex Publishing, Corp.
- Stephens, A. K. (2001). Formats and Services Currently Provided by Alabama's Public Libraries,. *The Alabama Librarian*, 51(2), 5-12.
- Stephens, A. K. (2006). Twenty-First Century Public-library Adult Services. *Reference & User Services Quarterly*, 45(3), 223-35.
- Stern, S. (1991). Ethnic libraries and librarianship in the United States: Models and prospects. In *Advances in Librarianship*, Vol. 15, Irene P. Godden (Ed.). New York: Academic Press, 77-102.

- Swan, D. W., Grimes, J., Owens, T., Vese, Jr., R. D., Miller, K., Arroyo, J., Craig, T., Dorinski, S., Freeman, M., Isaac, N., O'Shea, P., Schilling, P. Scotto, J. (2013). Public Libraries Survey: Fiscal Year 2010 (IMLS-2013-PLS-01). Institute of Museum and Library Services. Washington, DC
- Taylor, R.S. (1968). Question-Negotiation and Information Seeking in Libraries. *College & Research Libraries*, 29, 178-194.
- Taylor, R.S. (1991). Information use environments. In B. Dervin and M.J. Voigt (Eds.), *Progress in communication sciences*, Vol. X (pp. 217-255), Norwood, NJ: Ablex Publishing Corp.
- The University of Texas at Austin. (ND). The Social Work Research Development Program for Underserved Populations. In *Addiction Research Institute*. Retrieved September 4, 2012, from <http://www.utexas.edu/research/cswr/nida/rdp1.html>
- Thompson, K. M. (2006) "Multidisciplinary Approaches to Information Poverty and their Implications for Information Access". *Electronic Theses, Treatises and Dissertation*.
- Detroit Public Library. (2015). "TIP". Retrieved April 10, 2015 from <http://www.detroit.lib.mi.us/specialservice/tip>
- Triage. (n.d.). Retrieved October 17, 2014, from <http://www.merriam-webster.com/dictionary/triage>
- U.S. Census Bureau (2000a). Census 2000 geographic terms and concepts. Retrieved from <http://www.census.gov/geo/www/tiger/glossry2.pdf>
- U.S. Census Bureau (2000b). Census 2000. Hct32a. Telephone service available. Retrieved from http://factfinder.census.gov/servlet/DatasetTableListServlet?_ds_name=DEC_2000_SF3_U&_type=table&_program=DEC&_lang=en&_ts=269482846522
- U.S. Census Bureau (2000c). Data sets. Decennial census. Retrieved March 22, 2009, from http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=DEC&_submenuld=&_lang=en&_ts=
- United States Department of Agriculture. (ND). Outreach Vs. Civil Rights. In *Natural Resources and Conservation Service*. Retrieved September 4, 2012, from <http://www.mo.nrcs.usda.gov/about/outreach/OutreachvsCR.html>
- U.S. Department of Transportation. (2002). Public Involvement Techniques. In *Transportation Planning Capacity Building*. Retrieved September 4, 2012, from http://www.planning.dot.gov/publicinvolvement/pi_documents/1a-a.asp

- Venturella, K. M. (1998). *Poor people and library services*. Jefferson, NC: McFarland & Company.
- Warren, J. R., Hecht, M. L., Jung, E., Kvasny, L., & Henderson, M. G. (2010). African American Ethnic and Class-Based Identities on the World Wide Web: Moderating the Effects of Self-Perceived Information Seeking/Finding and Web Self-Efficacy. *Communication Research, 37*(5), 674 –702.
- Weibel, K. (1983). The evolution of library outreach 1960-75 and its effect on reader services : some considerations. In *Occasional papers (University of Illinois at Urbana-Champaign. Graduate School of Library and Information Science)*. Champaign, IL: University of Illinois, Graduate School of Library.
- Wilson, L. R. (1938). *The Geography of Reading*. Chicago, IL: American Library Association.
- Wilson, W. J. (1996). *When Work Disappears*. New York, NY: Alfred A. Knopf, Inc.
- Wilson, W. J. (2009). *More than Just Race: Being Black and Poor in the Inner City*. New York, NY: W. W. Norton & Company.
- Wray, W.L. (1976): Library Services for the Poor: Implications for Library Education, *Public-library Quarterly, 28*:1, 40-48.
- Yu, L. (2006). Understanding information inequality: Making sense of the literature of the information and digital divides. *Journal of Librarianship and Information Science, 38*(4), 229 –252.
- Zickuhr, K., & Smith, A. (2012). *Digital Differences*. Washington, DC: Pew Research Center’s Internet & American Life Project.
- Zipf, G. K.(1949). *Human behavior and the principle of least effort*. Boston, MA: Addison-Wesley Press.
- Zweizig, D. L. (1976). With our eye on the user: Needed research for information and referral in the public-library. *Drexel Library Quarterly, 12*, 48–58.
- Zweizig, D. & Dervin, B. (1977). Public-library use, users, uses: Advances in knowledge and characteristics and needs for the adult clientele of American public libraries. In M. Voight & M. Harris (Eds.), *Advances in librarianship, Vol. 7* (pp. 231-255), New York: Academic Press.

Appendix A: Interview Protocol

Do we have your permission to record this interview?

[If “yes”, turn on recorder.

My name is Adam Townes and I am a Doctoral Student at the College of Information Science and Technology at Drexel. I’m conducting a research study the purpose of the study is to learn how public-library services for underserved groups have evolved and what public libraries are currently doing for underserved groups.

This interview protocol will ask you questions about your work practice as a librarian. It should take about one hour to complete, depending on the amount of information you provide and the length of your responses.

Participation in this interview is voluntary. You may stop the interview at any time, and you may skip any question for any reason.

Once we have conducted the interview we will de-identify any notes we take as well as the session recording. The interviews will be transcribed and stored separately from any identifying data concerning you (i.e., name, email address, telephone number, etc.).

We will use quotations in publications and reports based on this research but we will present all data anonymously, making sure that you cannot be implicitly identified through your words or any description of workflows, projects, or institutions.

Once the study is completed we will preserve this anonymized data for potential future use in this and other studies. We may also preserve the data in a data archive.

If you have any questions regarding this survey, you may contact the Research Assistant, Adam Townes, via email at <amt74@drexel.edu>. You may also contact the Principal Investigator, Dr. Delia Neuman, at <delia.neuman@ischool.drexel.edu>.

If you have any questions or concerns regarding your rights as a research participant you should contact Human Research Protection at HRPP@drexel.edu and [215-255-7857](tel:215-255-7857).

Services

1. What types of services do you provide for underserved populations?
 - a. Which of the services that you offer appear to be the most popular among underserved groups that use your library?

2. How are the services offered by your library determined or chosen?
 - a. How much autonomy do you have determining which services your library will offer?
3. Do any of the services offered by your library specifically address issues affecting the library's service community? (Poverty, Obesity, Low literacy, etc., etc.)
 - a. Has your library identified prevalent issues affecting its service community?
 - i. If yes, how did the library identify the problems?
4. Do you find that there is a core set of patron needs that you address frequently or do the needs vary widely?
5. What kind of training, if any, do you feel would improve your ability to provide services to your patrons?
6. How are services planned and implemented at your library?
7. Do you evaluate any of the services that you provide for the underserved?
 - a. If yes, how are the services evaluated?
 - i. How often?
8. Are any of the services that you offer designed to be integrated together or complementary of each other?
 For instance, is job training paired with educational programs, technology training, financial empowerment counseling or information literacy training?
 - a. If yes, how do you integrate the services?
 - b. If no, what are your thoughts on integrating services? Using the same example, assisting a patron with a job application and performing technology training at the same time.
 - i. If you had the opportunity to integrate or pair services, which services would you choose?
 - i. Why?

Gaps

9. Are there any underserved patron needs which you have difficulty with meeting or are unable to currently meet?
 - a. If so, why do you believe that you are currently unable to meet these needs?
 - i. How do you feel that these needs could be addressed?

Obstacles

10. Besides funding and time, what obstacles do you deal with in providing services to your local area?

a. How do you cope or deal with these obstacles?

Library Resources and Materials

11. What is the most used resource in your library?

12. Which resources are essential to your work with underserved groups on a daily basis?

13. How do you select new materials or resources for your library collection?

a. How much freedom or autonomy do you have in selection of materials and resources?

Library Policy

14. Do any existing library policies or practices hinder your work with underserved groups?

15. How are library policies created and issued?

Collaborations:

16. Does your library partner with community organizations?

a. If so, what relationships does your library have to other public or city agencies such as the local schools, welfare or health services?

b. How much autonomy do you have in establishing relationships with other agencies?

Do you have any additional comments or suggestions regarding how public-library services are currently being provided for the underserved or how the library profession could improve service provision for the underserved?

Are there any issues, phenomenon, factors or anything else which we did not ask, but which you believe I should have asked about?

Appendix B: Targeted Protocol

Do we have your permission to record this interview?

[If “yes”, turn on recorder.

My name is Adam Townes and I am a Doctoral Student at the College of Computing and Informatics at Drexel. I’m conducting a research study the purpose of the study is to learn how public-library services for underserved groups have evolved and what public libraries are currently doing for underserved groups.

This interview protocol will ask you questions about your work practice as a librarian. It should take about one hour to complete, depending on the amount of information you provide and the length of your responses.

Participation in this interview is voluntary. You may stop the interview at any time, and you may skip any question for any reason.

Once we have conducted the interview we will de-identify any notes we take as well as the session recording. The interviews will be transcribed and stored separately from any identifying data concerning you (i.e., name, email address, telephone number, etc.).

We will use quotations in publications and reports based on this research but we will present all data anonymously, making sure that you cannot be implicitly identified through your words or any description of workflows, projects, or institutions.

Once the study is completed we will preserve this anonymized data for potential future use in this and other studies. We may also preserve the data in a data archive.

If you have any questions regarding this survey, you may contact the Research Assistant, Adam Townes, via email at <amt74@drexel.edu>. You may also contact the Principal Investigator, Dr. Delia Neuman, at <delia.neuman@ischool.drexel.edu>.

If you have any questions or concerns regarding your rights as a research participant you should contact Human Research Protection at HRPP@drexel.edu and [215-255-7857](tel:215-255-7857).

Services

1. What types of services do you provide for underserved populations?
 - b. Which of the services that you offer appear to be the most popular among underserved groups that use your library?
2. How are the services offered by your library determined or chosen?
 - a. How much autonomy do you have determining which services your library will offer?
3. Do any of the services offered by your library specifically address issues affecting the library's service community? (Poverty, Obesity, Low literacy, etc., etc.,)
 - a. Has your library identified prevalent issues affecting its service community?
 - i. If yes, how did the library identify the problems?
4. Do you find that there a core set of patron needs that you address frequently or do the needs vary widely?
 - a. Has the library identified the needs of the local population?
 - i. If yes, can you name a few of the needs?
 - i. How have you addressed these needs?
5. What kind of training, if any, do you feel would improve your ability to provide services to your patrons?
6. How are services planned and implemented at your library?
7. Do you evaluate any of the services that you provide specifically for the underserved?
 - a. If yes, how are the services evaluated?
 - i. How often?
8. How are your programs selected?
 - a. Are any of the programs that you offer selected/designed specifically with your service population in mind?
 - i. If yes, what is the benefit of doing that?
9. Are any of the services that you offer designed to be integrated together or complementary of each other?

For instance, is job training paired with educational programs, technology training, financial empowerment counseling or information literacy training?

- a. If yes, how do you integrate the services?
- b. If no, what are your thoughts on integrating services? Using the same example, assisting a patron with a job application and performing technology training at the same time.
 - i. If you had the opportunity to integrate or pair services, which services would you chose?
 - i. Why?

Teen anime club and anime selection
Yoga classes,

10. In regard to service usage statistics, are the statistics for your branch analyzed in the same way as those of other branches in Camden County?
 - a. Do you believe that there is a need to analyze of view usage rates differently in regards to demographic composition of your service population in comparison to the rest of the county?
11. In regard to computer usage, do you find that patrons prefer the twenty college access lab computers to the fourteen library only computers?
 - a. If yes, why do you think that is?
 - b. Why do many patrons ask for guest passes in order to use the computer?
 - c. Do patrons ever take issue with the need to close the college access lab for periods of the day?
 - d. Do you know if many of your patrons have computers at home?
 - i. Internet?
 - ii. Do they use movie services like Netflix or Amazon Prime?
 - iii. Do they use music services such as Pandora or Spotify?
 - iv. Do they have Internet capable mobile devices?

Libraries in Camden

12. Before the Rutgers/Camden branch was opened, how many libraries were in the city of Camden?
 - a. What provided the impetus for county library system to step into the vacuum left by the city library?
13. Did the closure of the Free Library of Camden have any impact on the local community?
 - a. Did it affect local resident's trust of the library as an institution?

- b. Did it affect resident's awareness of library services?
14. Could you briefly describe the situation of being a branch in a county library system?
- a. How does your branch's county system affiliation affect your ability to provide services to the city of Camden?
 - i. Does the County have different needs than the city?
Really interested in positioning themselves in being invested Camden
15. Could you briefly describe the situation of being a public-library branch on a university campus?
- a. How does this affect your ability to provide services to the public?
 - i. Is there any benefit or added value to being located on a university campus?
 - ii. Drawbacks?

Gaps

16. Are there any underserved patron needs which you have difficulty with meeting or are unable to currently meet?
- a. If so, why do you believe that you are currently unable to meet these needs?
 - i. How do you feel that these needs could be addressed?

Obstacles

17. Besides funding and time, what obstacles do you deal with in providing services to your local area?
- a. How do you cope or deal with these obstacles?
 - b.

Library Resources and Materials

18. What is the most used resource in your library?
- a. Do you have materials that are frequently checked out but not returned?
19. Which resources are essential to your work with underserved groups on a daily basis?
20. How do you select new materials or resources for your library collection?
- a. How much freedom or autonomy do you have in selection of materials and resources?

Staffing

21. How many staff does your library have?
- a. Full time?
 - b. Part time?

- c. Number of librarians?
- 22. What issues do you have with staffing?
Don't have enough, bilingual, only two that are full time
- 23. Is there any reason for the particular selection of staff that you have in your branch?
- 24. Is there anything else you want to tell me about staffing?

Library Policy

- 25. Do any existing library policies or practices hinder your work with underserved groups?
 - a. Do you think that library policy requiring an ID and a proof of address affects your patron's abilities to use your library's services?
 - i. For example, circulating materials and/or computer use?
 - ii. Do you ever make exceptions?
- 26. Are there any library policies created and issued specifically for your branch?
 - a. Do you perceive there being a need for this?

Security

- 27. What are the major issues you have with security?
 - a. How are you addressing these issues?
- 28. Do other branches in your system have similar issues?
 - a. How do issues with security affect service provision?

Patrons

- 29. You mentioned that you have patrons that you would categorize as power users. Could you explain that a little further?
- 30. Many of your patrons appear to carry around very full/heavy backpacks, what is the reason for this?
 - a. Are a lot of these patrons "power users"?

Collaborations and Outreach:

- 31. Does your library partner with community organizations?
 - a. If so, what relationships does your library have to other public or city agencies such as the local schools, welfare or health services?
 - b. How much autonomy do you have in establishing relationships with other agencies?
 - c. What sorts of outreach have you done?
 - i. Ex. You mentioned before that it was necessary to do outreach with the local Spanish-Speaking population.

ii. Do you currently have any ongoing outreach projects?

Do you have any additional comments or suggestions regarding how public-library services are currently being provided for the underserved or how the library profession could improve service provision for the underserved?

Are there any issues, phenomenon, factors or anything else which we did not ask, but which you believe I should have asked about?

Appendix C: Observation Protocol

Observation Protocol

The researcher will enter the research site; announce his/her presence to the associated contact person for the research site.

The researcher will be seated at a table in the area of the public-library where adult services are primarily provided. An available table will be selected that provides a good view of the portion of the library to be observed.

How field notes will be taken

Field notes will be recorded in Microsoft Word on the researchers's laptop. If an outlet is not available and the laptop's battery begins to fail, the researcher will continue to record observations in a research notebook. Any notes taken in the research notebook will be transferred to Microsoft Word within 24 hours of the end of the day's observations.

The researcher will sketch the layout of the observation as a point of future reference.

What will be observed during observations?

Verbal Behavior and Interaction: Who speaks to whom, the approximate amount of time, who initiates interaction and for what reason, as well as tone of voice.

Verbal exchanges and interactions between library staff and patrons: The researcher will attempt to record who initiates interaction with whom, what the relative ages of the actors are, the tone of voice used, duration of interaction, number of interactions, reason for interaction and positioning of actors.

Verbal exchanges and interactions between patrons: The researcher will attempt to record the details of interactions between patrons. Aside from appearance of actors, the researcher will record who initiates interaction with whom, what the relative ages of the actors are, the tone of voice used, duration of interaction, number of interactions, reason for interaction and positioning of actors.

Use of library resources: Which library resources are used, how often they appear to be used and what they are used for.

The researcher will identify which library resources appear to be used and how often they are used. Additionally library materials on display, left in reading areas or on shelving carts will also be examined. Additionally, where possible, the researcher will observe what patrons are utilizing library resources for, such as in the case of library computers or items in the library collection.

Personal and Library space: How close patrons sit and stand next to each other, and how they utilize library space.

The ways, in which patrons use library space, where they sit in relation to the librarian(s) and one another will be recorded. What areas of the library are frequented the most, which seating arrangements and types seem the most preferred.

Human Traffic: Patrons who enter, leave and spend time at the library.

The researcher will record where patrons enter the library, about how long the patrons stay, who they are (ethnicity, age, gender) if they enter alone or accompanied and how many people enter.

Frequent Patrons and those who stand out: Identification of patrons who frequent the research site or who stand out.

The characteristics, behaviors, resource usage and Identification of patrons who frequently appear at the library and recording of their characteristics, behavior, and use of library resources. Also patrons who stand out for various reasons such as frequent requests for help, make interesting uses of technology or who exhibit interesting behaviors.

Expansion of field notes

The researcher will review the field notes immediately after observations have ceased for the day. Brief notations in the form of the comment function will be added to provide memory cues for the researcher. Within 24 hours of the observation period, the researcher will expand the notes taken during the preceding observation period.

Appendix D: IRB Requested changes

Requested Changes: 8/22/13

PRINCIPAL INVESTIGATOR: Mary Delia Neuman

PROJECT TITLE: Urban Public-library Service for the Underserved

PROTOCOL NO: 1308002270

It has been determined that modifications are required to approve the protocol. The modifications required and their reasons are listed here:

Required Change	Reason for Change
There are no recruitment materials included. How will the subjects be informed of the study? What will be said to them?	All email, introduction and phone scripts must be submitted. All documents being presented to the participants must be reviewed and approved by the IRB
There are no permission letters included in the submission.	The IRB cannot approve studies conducted at other locations without permission from that location.
The contact information listed in the interview introduction is incorrect. Subjects should contact Human Research Protection at HRPP@drexel.edu and 215-255-7857	Revisions Required
Section 14, Participation in this study is completely voluntary. Participants should not be reminded that they were recommended for the study if they wish to withdraw.	Revisions Required
Section 15, the Office of Regulatory Research Compliance is now Human Research Protection.	Please revise throughout
Section 21 mentions libraries in Washington DC but there is no mention in the other documents.	Revisions required to ensure consistency
Section 10 states observations will be for 20 hours. However, section 22 states 20 hours per week for one year. The total number of observation hours must be included in the document.	Revisions required to ensure consistency
Section 26, All data must be retained according to University Policy.	Please visit http://www.drexel.edu/generalcounsel/drexelpolicies/OGC-6/

Requested Changes: 9/11/13

PRINCIPAL INVESTIGATOR: Mary Delia Neuman

PROJECT TITLE: Urban Public-library Service for the Underserved

PROTOCOL NO: 1308002270

It has been determined that modifications are required to approve the protocol. The modifications required and their reasons are listed here:

Required Change	Reason for Change
There are no recruitment materials included. How will the subjects be informed of the study? What will be said to them?	All email, introduction and phone scripts must be submitted. All documents being presented to the participants must be reviewed and approved by the IRB. The documents in the response only include what will be said to obtain permission from the libraries not the librarians themselves.
There are no permission letters included in the submission.	The IRB cannot approve studies conducted at other locations without permission from that location.

Approval Received: 9/24/13

Dr. Neuman,

Attached is the approval letter for the above mentioned protocol. The original will be sent via interoffice mail. If you have any questions, please do not hesitate to contact me.

Good Luck with your research!!!!

Danyelle S. Gibson
 IRB Project Coordinator II
 Social Behavioral IRB #3
 3 Parkway Building - 1601 Cherry Street
 10th Floor Suite 10444
 Philadelphia, PA 19102
[215-255-7864](tel:215-255-7864) (phone)
[215-255-7874](tel:215-255-7874) (fax)
Dsg32@drexel.edu

Appendix E: IRB Letter of Approval



APPROVAL OF PROTOCOL

September 24, 2013

Delia Neuman, Ph.D.
 College of Information Science and Technology
 Mailstop: Drexe

Dear Dr. Neuman,

On September 24, 2013 the IRB reviewed the following protocol:

Type of Review:	initial
Title:	Urban Public Library Service for the Underserved
Investigator:	Delia Neuman, Ph.D.
IRB ID:	1308002270
Funding:	Internal
Grant Title:	None
Grant ID:	None
IND, IDE or HDE:	None
Documents Reviewed:	Application Form, Contact Forms, Conflict of Interest Forms, Template Protocol, Data Collection Tools, Recruitment Materials, Permission and Proposal

According to 45 CFR 46, 101 (b) (2), the IRB approved the protocol on September 24, 2013. The protocol is approved Exempt Category 2, this study will enroll 30 subjects recruited from Camden County (Nilsa I. Cruz-Perez Downtown Branch) and Philadelphia (West Area neighborhood branches) to complete observations and interviews.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (IRP-103).

Sincerely,

Danyelle S. Gibson
 Member, Social and Behavioral IRB #3

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Vita

Adam was born in Cleveland, Ohio and lived there until he was 10, when his family moved to Alabama. He grew up in the Birmingham area, and eventually went on to attend the University of Alabama (UA). During his time there, he majored in History, and became interested in libraries while working as a student assistant in the University's library system. After completing his undergraduate degree, Adam applied and was accepted to UA's School of Library and Information Science (SLIS). He eventually went on to accept a job with the Free Library of Philadelphia. While working as a librarian in West Philadelphia Adam became increasingly interested in the intersection of the digital divide, information access, literacy levels, cycle of poverty, and access to opportunity. Feeling frustrated by an inability to make a broader impact, he sought other ways to make a difference in the world. Eventually he found himself at Drexel University, where he worked diligently to gain a deeper understanding of the issues surrounding the digital divide.

