TEXAS STATE LIBRARY AND ARCHIVES COMMISSION

Texas Public Libraries: Serving Communities to Enhance Digital Literacy

Prepared for the
Texas State Library and Archives Commission
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TABLE OF CONTENTS

Tables

Charts

Executive Summary

In today's technology-driven world, meaningful participation in the marketplace of ideas is built on reliable and affordable broadband internet access, digital resources, and above all, the digital literacy skills to employ those tools for opportunity and personal empowerment. Texas libraries are often a community's first introduction to the Internet, and library staff play a central and consistent role augmenting Texans' digital skills.

At their core, libraries are instruments for learning and equipping people with information resources and technologies they need. In addition to providing free access to the internet and devices, libraries excel at delivering educational options. Texas libraries are a trusted community partner dedicated to the well-being and vitality of those they serve.

At a time when almost 60% of Texans experience some sort of digital distress, libraries hold a unique and powerful role in helping to bridge the digital divide.[1] They can undertake this work through strategic activities to support people and communities, especially those most in need, in having access to information technologies and possessing the capacity to use them. Digital literacy skills are essential for individuals to possess and communities to embody.

Over the last two years, national and state policy makers have worked aggressively to implement legislation to support the work of increasing digital access. These stated priorities mirror the longstanding work of libraries and align with The Texas State Library and Archive Commission's (TSLAC's) strategic goals. Through support from the Institute for Museum and Library Services from funds provided through the American Rescue Plan Act of 2021, TSLAC sponsored this research into the state of digital literacy training in Texas public libraries.

This report that follows, **Texas Public Libraries: Serving Communities to Enhance Digital Literacy**, describes the substantial primary data that was collected from main and branch (or neighborhood) libraries in Texas. In-depth interviews were conducted with 51 librarians, and two statewide surveys of library directors and branch managers obtained information from 171 library directors and 80 branch managers. In total, more than 300 librarians participated.

[1] Roberto Gallardo and Benjamin St. Germain, "Digital Distress: What Is It? – Purdue Center for Regional Development," Purdue Center for Regional Development – Purdue Center for Regional Development, April 20, 2022, https://pcrd.purdue.edu/digital-distress-what-is-it/.

This comprehensive research effort found that most Texas public libraries are providing needed digital literacy training that should improve the ability of their patrons to become familiar with and thrive in a digital world. This study has further documented successful digital literacy training initiatives throughout the state. Prudent new investments and programming are recommended to equip additional citizens with the tools to pursue current and future digital employment, health, educational, and social opportunities available in Texas.

The outcome of these research goals and excerpts from their findings appear below; the full report includes detailed research methodology, substantial quantitative data, and profiles and case studies of individual libraries.

Research Goals and Findings

Goals 1 and 2: Assess the current practices of Texas public libraries in offering digital literacy training, services, and assistance; determine how current practices in digital literacy training and services differ by size of populations served.
Findings: One-on-one assistance at main and branch libraries is the most common form of digital literacy training, far surpassing onsite and online class offerings. Large proportions of main libraries and branch libraries currently help patrons with basic computer skills, email and chat, office productivity, searching the internet, and with user-owned devices. Smaller numbers assist with social media, online safety, and in languages other than English. Few public libraries are offering classes or one-on-one assistance on advanced content subjects.

Goal 3: Identify if there are particular segments of residents who are seeking assistance and if there are common requests about assistance.
Findings: Older adults/senior citizens are the largest demographic group seeking digital assistance followed by patrons with lower incomes, adults in general, second language learners, and patrons with job-related requests.

Goal 4: Assess the barriers to, and necessary resources for, expanded training and support of community digital literacy.
Findings: Approximately two-thirds of Texas librarians believe there are unmet digital literacy needs. Twenty to 30 percent of librarians say they do not know if such needs exist, although more than half of the librarians in smaller communities say they do not know. The most pressing needs according to library directors were for more trainers, classes, and methods to deal with the low computer skills within their community. Three other needs were: digital literacy materials in other languages, space to conduct training, and spaces to access free wi-fi and computers.

Goal 5: Identify collaborations with community partners, specifically schools, institutions of higher education, local workforce development boards, chambers of commerce, and non-profit groups, both locally and nationally.
Findings: The majority of main library partnerships are with state agencies such as the Texas Workforce

Solutions boards of the Texas Workforce Commission. About 20 percent of main and branch libraries currently have partnerships of various kinds.

Goal 6: Compare current practices of Texas public libraries with libraries nationally
Findings: Fewer Texas libraries are providing digital literacy training than libraries elsewhere in the United States: roughly 84 percent of Texas libraries versus 88 percent of libraries in other states. Texas libraries and U.S. libraries also were compared by size or populations served. Small Texas libraries provide less training overall than small libraries in other states. Texas medium-sized libraries also provide less training than medium-sized U.S. libraries. Large Texas libraries surpass the training levels of U.S. city libraries in numerous comparisons.

Goal 7: Compare findings of Texas main public libraries with those from branch libraries.
Findings: Branch libraries uniformly provide more of each type of training and assistance than do main libraries. For example, every branch library offered some type of digital literacy assistance, while 15% of main libraries currently do not. These libraries tend to be smaller, with more than one-fifth of Texas smallest libraries, those serving population of fewer than 5,000 residents, currently not offering any type of digital literacy assistance.

Goal 8: Develop case profiles and case studies of best practices that could assist Texas librarians in implementing more effective and efficient digital literacy services and assistance.
Findings: To illustrate the diversity and richness of the roles public libraries have in facilitating digital literacy within their communities, more than 30 case studies and case profiles were developed. Some illustrate how libraries have helped with specific types of training and assistance. Others show how libraries have helped their patrons with online assistance for job seeking, job training, and workforce development. Several describe services and assistance for specific types of patrons such as older adults and teens. These case profiles may be viewed as best practices and worthy of adoption by other public libraries.

Goal 9: Develop an estimate for public library digital literacy costs.
Findings: Based on the responses to the two statewide surveys and a database about public library expenditures, a preliminary estimate of annual costs was developed. Although an exploratory analysis, in fiscal year 2021, the range for total digital literacy training costs by Texas public libraries was estimated to be between $70 million and $90 million.

These findings serve as the foundation of recommendations for policy or administrative actions. These recommended actions are needed to address critical issues confronting Texas library staff who want to augment their patrons' digital literacy knowledge and skills. With a few exceptions, implementing these recommendations will require additional resources for implementation.

Recommended Actions at the State and Local Levels

Recommendations included in the report focus on potential actions at the state and local levels:

- Initiate new state grant programs to support digital literacy that could focus on one or more of the following areas: sharing best practices; adding capacity for one-on-one assistance; a facilitated peer-to-peer program between small and large libraries; assistance for small libraries; effective communication between branch managers via networking and

professional development; and encouraging innovation through piloting new approaches and sustaining effective programming.
- Increase outreach and awareness of existing tools and curriculums for teaching digital literacy, such as promoting the TSLAC Digital Literacy toolkit, evaluating pre-existing digital literacy curriculums, and promoting best practices from Texas libraries.
- Develop new programming or expand activities that focus on older adults and seniors.
- Identify, procure, or develop advanced digital literacy training modules.

Areas that Require Additional Research and Evaluation

Throughout the research process, several issues were identified that require additional research and evaluation:

- Helping librarians assess individual patron digital literacy needs—TSLAC may wish to review periodically various diagnostic tools that could be used by librarians.
- Gathering statewide data on the digital skills of Texas residents—a statewide survey of Texas residents should be conducted to better assess patron needs, allow comparisons to other states, and provide a baseline for future program evaluations.
- Improving attendance for digital literacy classes—more attention should be devoted to identifying successful methods for improving and achieving attendance goals.
- Determine appropriate metrics for equipment option programs—an analysis is needed to summarize previous studies and provide guidance for Texas librarians about the value and the operational pros and cons of the various equipment option approaches.
- Further work should be performed on cost estimates—systematic, reliable, and objective data on the costs of digital literacy training and services are lacking.

This report was made possible by funding from the Institute of Museum and Library Services. Findings and recommendations from this report are presented to the Texas State Library and Archives Commission to help with its roadmap for future efforts. The report may contribute in some small way to helping TSLAC show the librarians of Texas what are the best measurements and practices in building full digital access, so that all Texans are fully participating citizens in the 21st century.

Chapter I. Introduction: Scope, Methodology, Report Overview and Organization

Project Goals

Libraries are certainly well-known for being collections of books and periodicals, sources of access to digital repositories, entry points to municipal, state, and federal government programs, and destinations for children and young adults. Few individuals realize, however, that libraries are the most visited destination among eight common leisure and cultural activities in this country.[2]

In many rural and inner-city areas of Texas, public libraries are the only asset available locally for residents to access online businesses, make an electronic job application, have a remote health appointment, or apply for state and local government programs. Because of their essential roles, many public libraries also are serving as a source of assistance in educating patrons about communicating with digital and electronic devices.

Librarians are trained to serve their patrons and meet their needs if possible. They help residents find information and evaluate sources of information. In short, they often educate patrons while helping them with an immediate request. Because of traditional librarian job duties and current circumstances in many communities, the local library is in a unique position to enhance the digital literacy of residents.

The importance of digital literacy is described more extensively in chapter II. At this point, it is sufficient to state that digital literacy is essential for functioning as an employee, a business owner, a parent, a grandparent, and a friend. Both within Texas and throughout the United States, digital literacy correlates very highly with the economic performance of cities, towns, and suburban communities. If public libraries can be a pivotal entity in furthering digital literacy, there is more chance of rejuvenating

[2] According to a 2019 Gallup national survey, an average U.S. adult visits her/his local library more than 10 times a year. That is far more than an average adult frequents movies, a live sporting event, a live music or theatrical event, museums, zoos, national parks, or several other destinations. See: https://news.gallup.com/poll/284009/library-visits-outpaced-trips-movies-2019.aspx?utm_source=alert&utm_medium=email&utm_content=morelink&utm_campaign=syndication

neighborhoods, preventing population loss in rural areas, and reducing economic disparities across U.S. communities.

This research was designed to obtain primary data and information to:

- Assess the current practices among a representative sample of Texas public libraries in offering digital literacy training, services, and assistance;
- Determine how current practices in digital literacy training and services differ by size of population served;
- Identify if there are particular segments of residents who are seeking assistance and if there are common requests about assistance;
- Assess the barriers to, and necessary resources for, expanded training and support of community digital literacy;
- Identify collaborations with community partners, specifically schools, institutions of higher education, local workforce development boards, chambers of commerce, and non-profit groups, both locally and nationally;
- Compare current practices of Texas public libraries with public libraries throughout the United States;
- Collect data and information among a representative sample of branch libraries in offering digital literacy training, services, and assistance;
- Compare findings of Texas main public libraries with those from branch libraries; and
- Develop multiple case profiles and case studies of best practices that could assist Texas librarians in implementing more effective and efficient digital literacy services and assistance.

Additional objectives were to (a) use the research findings and data to prepare a limited number of recommendations to assist librarians and the Texas State Library and Archives Commission (TSLAC) with future digital literacy programming; and (b) conduct exploratory analyses on the costs of enhancing digital literacy services by Texas public libraries and the relationship of economic and wealth resources to the availability of digital literacy services and training.

Methodology

A data-intensive research design was developed to compile the information and perform the numerous analyses. The initial major activity was conducting in-depth interviews with library directors and branch managers across the State of Texas. Contact information for the librarians was obtained from a publicly available database at TSLAC. A sample of library directors then was drawn based upon population served categories, with supplemental factors of county wealth and geographic representation of the state's regions. A separate sample of branch managers was drawn based on the number of branches in metropolitan area counties, with a supplemental factor of economic conditions near branches. A total of 59 main libraries and 46 branch libraries were contacted for interviews.

Research team members were assigned individual librarians to contact using a communication sequence.[3] Once a convenient meeting time was set, an undergraduate research assistant assumed responsibility. Interviews took place over the telephone or on a zoom call and followed a qualitative interview script. This interview script served as a pre-test for the ensuing two electronic surveys. Most interviews were semi-structured and permitted librarians to express their views extemporaneously in addition to answering the series of questions posed. Each librarian was asked about:

- their current library digital literacy services, training, and assistance;
- types of patrons requesting digital literacy assistance;
- present and planned digital literacy partnerships with other entities;
- views on the effectiveness of practices used in providing digital literacy assistance;
- examples of unique and innovative practices of interest to other librarians;
- their perception about the need for new services by their patrons;
- constraints and challenges impeding new services; and
- priority of preferred new services, if any.

Upon completion of each interview, a transcript was incorporated into an excel spreadsheet for analysis. Over a period of approximately three months, 51 interviews were completed. Forty-six of the interviews (32 with library directors and 14 with branch managers) followed the qualitative interview script. Five additional interviews were conducted separately to compile information about the costs of starting or operating digital literacy services.

[3] The communication documents, sequence protocol, and structured interview instrument appear in Appendix A.

A second major data-gathering activity began while the initial qualitative interviews were underway. Two statewide surveys were conducted with samples from the 500+ main public libraries and the approximately 300+ branch libraries, which are primarily located in the metro areas, although not exclusively.[4] The sample of main public libraries was stratified to reflect the populations served by each library. The breakdowns by population size were:

TABLE 1.1. MAIN LIBRARIES, CATEGORIES BY SIZE OF POPULATIONS SERVED

Population Served
1,000,000 or more
300,000-999,999
175,000-299,999
65,000-174,999
15,000-64,999
5,000-14,999
Under 5,000

A sample was drawn from the categories of libraries serving smaller populations while all the larger libraries were surveyed.[5] The branch library survey also involved a sample with the main criterion being allocation by metropolitan area. As shown in Table 1.2, the number of branches, by county, varies substantially. As with the main libraries, there was a desire by TSLAC to obtain information from a sample of branches, not all branches.

Both surveys were performed in collaboration with TSLAC. To encourage cooperation in responding, the State Librarian prepared a blog that previewed the online survey program invitations from the project staff for both surveys.[6] Additional assistance from TSLAC was provided in contacting central

[4] Academic libraries, some private libraries, and libraries that do not participate in programs and services of the TSLAC or the federal Institute of Museum and Library Services were excluded from the survey of main libraries. Bookmobiles were excluded from the survey of branch libraries as were systems with fewer than three branches.
[5] TSLAC did not wish all main libraries to be contacted due to possible survey fatigue, particularly those in libraries with smaller staffs.
[6] The email invitation, a reminder, and survey instrument to library directors appear in Appendix B. The email invitation, a reminder, and the survey instrument to branch managers appear in Appendix C.

administrators to encourage responses from branches in multiple main library systems. TSLAC staff also identified main library staff members who could provide supplemental contact information not otherwise available in public databases.

TABLE 1.2. BRANCH LIBRARIES BY COUNTY

County	Number of Branches in County
Harris	69
Dallas	39
Bexar	33
Travis	23
Tarrant	22
Brazoria	13
El Paso	12
Fort Bend	12
Nueces	7
Montgomery	6
Jefferson	5
Collin	5

Note that only counties with five or more are shown. Some counties have branches from multiple library systems.

Except for minor editorial differences, the surveys of main libraries and branch libraries were identical. Each solicited information about (1) current services and assistance in detail, the degree of success in teaching methods for digital literacy, and who is requesting assistance; (2) what, if any, community needs exist for digital literacy, what are the highest priority needs, what would be beneficial in meeting those priority needs, and what are the library's strategies and plans for the future; (3) potentially unique and innovative approaches or best practices they had implemented that might be of interest to other librarians in Texas; and (4) their views, thoughts, and recommendations to TSLAC regarding possible future assistance on digital literacy.

Based upon the initial cycle of interviews with librarians and the responses from both surveys, a second major cycle of interviews and data collection was then performed. Case studies and profiles were

developed about specific library activities to help patrons with some aspect of digital literacy. In some cases, a unique library program, marketing approach, or teaching protocol is highlighted. Still others illustrate digital literacy training for a particular demographic group such as older adults. Some case profiles illustrate the assistance of a public library to job seekers, and some describe health and telehealth activities. Others highlight ongoing collaborations with different community organizations, businesses, and government agencies. These examples describe various approaches proving successful for teaching digital literacy in Texas public libraries of all sizes and in rural, suburban, and major metropolitan areas.

Extensive data were collected and analyzed during this project. The survey of library directors obtained 171 responses (165 complete, six partial). The survey of branches obtained 80 responses (75 complete, five partial). Combined with the initial set of interviews with library directors, information was collected from 207 main libraries, or approximately 41% of all public libraries in the state. Combined with interviews with branch managers, information was collected from 95 branch libraries, or approximately 32% of branches in Texas. The 300 responses have provided a unique amount of information, which is presented in this report.[7]

Report Overview And Organization

This report has been prepared for different audiences in a "triage format." Key findings and the primary recommendations appear in the executive summary. General materials including more specific findings, case profiles, and expanded recommendations are presented in individual chapters. Detailed materials appear in the appendices. Specialized technical materials and detailed survey responses from librarians are contained in supplemental documents provided to TSLAC. To the extent possible, technical language has been avoided to promote readability.

Chapter II documents what digital literacy is, why it is important, how it is achieved, and the potential of Texas public libraries in furthering the digital literacy capabilities of Texas residents.

[7] More details about the data collection are presented in Appendix D.

Chapter III characterizes the key similarities and differences between the findings about current services and types of training by Texas public libraries and library systems with branch libraries. This chapter also illustrates how such services and assistance vary among libraries serving different sizes of populations.

Chapter IV provides information about the patrons seeking assistance, current partnerships by Texas public libraries with other organizations, and director and manager views about what works and what does not work well in for delivering digital literacy assistance and services.

Chapter V describes the challenges, unmet needs, priorities for addressing needs, and strategies of Texas public library directors and branch managers.

Chapter VI adds perspectives to findings by analyzing Texas survey results in more detail and comparing them with results from other surveys and databases. One section looks specifically at libraries not currently providing digital literacy assistance. Preliminary cost estimates for digital literacy appear in a final section.

Chapter VII presents case studies and profiles that exemplify innovative, collaborative, and unique activities supporting digital literacy services and training. Profiles are presented for more than 30 public libraries and branches as well as a small number of other entities.

Chapter VIII provides possible recommendations and possible options for future TSLAC programming and suggestions for library directors and branch managers emanating from the research.

Multiple appendices appear after the chapters:

- Materials Related to Initial Set of Qualitative Interviews
- Materials Related to the Survey of Library Directors
- Materials Related to the Survey of Branch Managers
- Project Data Collection Overview
- Patron Populations Served by Main Libraries Responding to the Survey
- Additional Analyses and Findings—Branches
- Two Resources for Determining Local Digital Literacy Needs
- Examples of Apps for Older Adults/Senior Citizens

- Two Texas Professional Leadership Programs
- Bibliography and References

Chapter II. The Importance of Digital Literacy

The World – A "Digital Place"

The world has increasingly become a "digital place" with the global pandemic accelerating online use in education, commerce, healthcare, communication, and other applications. Of the 8 billion inhabitants on earth, it is estimated that five billion use the internet and 93% of these, or 4.65 billion people, are active on social media.[8] This is projected to increase to almost six billion by 2027.[9] These staggering numbers indicate that digital access and literacy are key for future well-being in our increasingly digitized world.

As the pandemic disrupted in-person engagement, sentiment toward digital connectedness changed everywhere. Indeed, the pandemic fundamentally changed how people view the internet. In a September 2021 United States survey, 23% of respondents reported that the internet had become a little more important to their lives due to the pandemic, and 31% reported that the internet had become much more important.[10]

Further, 29% of respondents and 40% among those 65 years and older, reported that the internet made life more bearable during the pandemic. Indeed, adding technology to daily activities connected older adults and senior citizens to family and neighbors, community organizations and kept them active.[11] The survey further found a wide range of activities dominating internet uses in addition to social media.

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[8] Statista Research Department, "Internet Users in the World 2022,"July 26, 2022, https://www.statista.com/statistics/617136/digital-population-worldwide/.

[9] S. Dixon, "Number of Worldwide Social Network Users 2027," Statista, August 22, 2022, https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/.

[10] Press.avast.com, "Avast Digital Citizenship Report: Post-Pandemic Online Behavior," https://press.avast.com/post-pandemic-online-behavior; Grace Macej, "Avast 2021 Digital Citizenship Report: Online life has changed forever post pandemic," Avast, September 16, 2021, https://blog.avast.com/report-online-behavior-post-pandemic-avast.

[11] Kathy Lee, Kate Hyun, Jaci Mitchell, Troyee Saha, Nilufer Oran Gibson, and Caroline Krejci. 2022. "Exploring Factors Enhancing Resilience Among Marginalized Older Adults During the COVID-19 Pandemic." Journal of Applied Gerontology 41 (3): 610–18. https://doi.org/10.1177/07334648211048749.

These are listed below in descending levels of increased use during the pandemic according to the report:

1. Online shopping;
2. Virtual learning;
3. Online healthcare;
4. Online sports classes;
5. Online dating; and
6. Online banking.

Of particular interest was the importance of communication with loved ones. One-third of U.S. respondents said the internet was key to maintaining connectedness. Interestingly, 41% of those 65 and older attributed the key role of the internet to staying in contact.

Limitations to Internet Access

Despite the importance of the internet to function in today's world, digital access is not uniformly available to all. Many U.S. residents lack reliable broadband services, internet-ready devices, or the skills to use online tools. Population groups often lacking access include:

- Individuals living in households with incomes at or below 150% of the poverty line;
- Individuals 60+ years of age;
- Veterans;
- Individuals with disabilities;
- Those with language barriers (including English language learners and those with low literacy);
- Racial and ethnic minority groups;
- Rural residents; and
- The incarcerated.[12]

The data in Table 2.1, adapted from "Libraries Evolve to Bridge the Digital Divide," demonstrate the access limitations based on several criteria.[13]

[12] National Telecommunications and Infrastructure Administration, "The Digital Equity Act: State Capacity Grant Program, Planning Grants, and Competitive Grant FAQ, https://broadbandusa.ntia.gov/sites/default/files/2022-06/DE-FAQs.pdf.
[13] Moridge College of Education's online Master of Library and Information Science program, "Libraries Evolve to Bridge the Digital Divide."

TABLE 2.1. DIGITAL DIVIDES BY HOUSEHOLD INCOME, AGE, AND RACE OR ETHNIC STATUS

Household Income Level	Percentage of Households with Computer	Percentage of Households with Internet Subscription
<$25,000	67.1	51.7
$25,000-49,999	84.3	71.7
$50,000-99,999	93.9	86.2
$100,000-149,999	97.6	93.3
>$150,000	98.4	95.6

Age Group	Percentage of Households with Computer	Percentage of Households with Internet Subscription
15-34	94.3	81.2
35-44	94.4	84.6
44-64	89.7	80.9
>65	70.9	63.1

Race or Ethnic Group	Percentage of Households with Computer	Percentage of Households with Internet Subscription
White, non-Hispanic	88.0	79.9
Black, non-Hispanic	80.1	64.9
Asian, non-Hispanic	94.1	88.8
Hispanic (any race)	84.2	70.9

In addition to these demographic limitations, individuals living with disabilities struggle with access, with 62% saying that they own a computer compared with 81% of individuals without disabilities.[14] Further, websites are often not designed for navigation by those with disabilities: an estimated 39% of state unemployment sites and 86% of frequently visited websites fail accessibility guidelines for those with disabilities.[15] These data support the assertions made in other studies that household income, age, race/ethnic status, and disability status restrict Internet access for many citizens. Note these limitations focus specifically on access by devices such as tablets and computers, which allow rich engagement with

[14] Andrew Perrin and Sara Atske, "Americans with disabilities less likely than those without to own some digital devices," Pew Research Center, September 10, 2021. https://www.pewresearch.org/fact-tank/2021/09/10/americans-with-disabilities-less-likely-than-those-without-to-own-some-digital-devices/#:~:text=Some%2062%25%20of%20adults%20with,8%2C%202021.

[15] Information Technology and Innovation Foundation. Retrieved September 9, 2022 from https://itif.org/publications/2020/04/15/most-state-unemployment-websites-fail-mobile-and-accessibility-tests.

internet applications.

What is the Condition of Digital Access in Texas?

Texas is a state of contrasting populations. It hosts six of the top 25 largest cities in the United States but also is a state with more than a fifth (approximately 22%) of its 30 million residents living in rural settings.[16] The Texas rural population of 6.4 million is greater than the total populations of 33 individual states. Texas has a robust economy and leads the U.S. in exports and many other economic criteria. Yet 23% of its households have incomes at or below 150% of the national poverty level.[17] Although a relatively young state, almost 20% of the Texas population is 60 years or older. Texas is comprised of almost 59% racial or ethnic minorities, with 27% of its population experiencing English language barriers, including low literacy or current English learning status. Each of these groups, as defined by household income, age, or race/ethnic status, has limitations with regards to internet and computer access as well as skilled use.[18]

The 2020 census provided detailed data about accessibility to the internet and its use in Texas. Texas is one of the more connected states in the U.S. with greater than 85% of households having internet access and only about 5% lacking fixed broadband access.[19] Despite this high level of "access," 11.4% of Texans reported lacking a computer with a broadband subscription. Forty percent of households indicated lack of a computer and/or tablet. Further, 23% reported not using the internet. These numbers about lack of "use" in Texas are among the highest in the U.S. When one views the "rural" aspect of Texas, the Pew Research Center found that 24% of rural residents found high-speed internet access a major problem.[20] This compares with only 13% of urban and 9% of suburban residents noting

[16] Story map series. mtgis. (n.d.). Retrieved September 9, 2022, from https://mtgis-portal.geo.census.gov/arcgis/apps/MapSeries/index.html?appid=a0013a9dcbb9419e855f563d78e892ef.
[17] Group C Media, Inc. (2022, August 3). Business Facilities July/August 2022. Retrieved September 9, 2022, from https://lsc-pagepro.mydigitalpublication.com/publication/?i=755749.
[18] Alexander Seifert, Shelia R Cotten, and Bo Xie. 2021. "A Double Burden of Exclusion? Digital and Social Exclusion of Older Adults in Times of COVID-19." Edited by Deborah Carr. The Journals of Gerontology: Series B 76 (3): e99–103. https://doi.org/10.1093/geronb/gbaa098.
[19] Story map series. mtgis. (n.d.). Retrieved September 9, 2022, from https://mtgis-portal.geo.census.gov/arcgis/apps/MapSeries/index.html?appid=a0013a9dcbb9419e855f563d78e892ef.
[20] Monica Anderson, "About a quarter of rural Americans say access to high-speed internet is a major problem," Pew Research Center, September 18, 2018, https://www.pewresearch.org/fact-tank/2018/09/10/about-a-quarter-of-rural-americans-say-access-to-high-speed-internet-is-a-major-problem/.

internet access was a major problem. These data suggest that many Texas rural residents struggle with high-speed internet access.

The lack of internet access also is a problem for many Texas cities as they seek to become "smart cities."[21] A smart city incorporates and uses information and communication technologies to enhance the quality and performance of urban services such as transportation, energy access, and infrastructure, [22] but its success is tied to its residents' digital involvement and access to a robust infrastructure for connectivity. That will hold back some medium and smaller Texas cities: Brownsville and Laredo were ranked among the worst connected United States cities on one list that utilized U.S. Census data.[23] These data illustrate that access is a widespread problem for many Texas population segments, rural Texas (as of 2016, only 69% could have access to high-speed internet), and some Texas cities.[24] The Texas Broadband Development Office will improve connectivity for Texans currently lacking in-home access,[25] and that will help tens of thousands of Texans in taking the first step in their journey toward becoming digitally literate. Additional affordable service providers, more availability of devices, and increased skills with online platforms also are needed to continue improving the digital readiness of Texas residents and its workforce.

What Does it Mean to Equip Everyone with Digital Access?

[21] Price, S. (2022, February 9). Texas' digital divide spans state. could 5G help close the internet gap? *Laredo Morning Times*. Retrieved September 9, 2022, from https://www.lmtonline.com/news/article/Amid-5G-rollout-Texas-s-digital-divide-remains-16826716.php; Plautz, J. (2018, July 16). For many US cities, the digital divide is more than an infrastructure problem. Smart Cities Dive. Retrieved September 9, 2022, from https://www.smartcitiesdive.com/news/us-cities-digital-divide-infrastructure-problem/526881/.

[22] Ed Burns and Sharon Shea, "What is a Smart City?" *Tech Target*, https://www.techtarget.com/iotagenda/definition/smart-city; Navaneenth Kamballur Kottayil, "What is a Smart City?" Techopedia, January 15, 2021, https://www.techopedia.com/definition/31494/smart-city.

[23] Lauren Mulverhill, "Texas' Digital Divide," Texas Comptroller, October 2019, https://comptroller.texas.gov/economy/fiscal-notes/2019/oct/divide.php; Monica Anderson, "About a quarter of rural Americans say access to high-speed internet is a major problem," Pew Research Center, September 18, 2018, https://www.pewresearch.org/fact-tank/2018/09/10/about-a-quarter-of-rural-americans-say-access-to-high-speed-internet-is-a-major-problem/.

[24] Lauren Mulverhill, "Texas' Digital Divide," Texas Comptroller, October 2019, https://comptroller.texas.gov/economy/fiscal-notes/2019/oct/divide.php.

[25] Connectednation.org, "Bills signed by Governor Abbott provide new approach to closing the Digital Divide across Texas," June 22, 2021. https://connectednation.org/texas/2021/06/22/bills-signed-by-gov-abbott-provide-new-approach-to-closing-the-digital-divide-across-texas/.

The NTIA notes that the importance of ensuring individuals have access to robust broadband connections, internet-enabled devices that meet their needs, and the skills to explore, create, and succeed in the digital world. NTIA's statutory requirements for state plans for federal funds underscore availability and affordability of broadband and technology, online accessibility of public resources, digital literacy, cybersecurity measures, and technical support, among other components needed for state plans.[26]

Digital access remains a significant challenge for many Texans, and the consequences are substantial for them and for the state as whole. Texans who are not connected, unable to utilize devices adequately, or unskilled in digital practices will struggle:

- to prepare for and access online job listings;
- to apply for jobs, depriving employers of available talent;
- to participate in online banking, shopping, healthcare services, government programs and services, and civic activities; and
- to interact with friends and family.

The impact of lack of broadband and computers goes beyond access to employment opportunities, and business and civic activities. Children will struggle to complete homework that requires internet access at home and be unable to attend remote/online courses. Researchers from Michigan State University found "that students who do not have access to the Internet from home or are dependent on a cell phone alone for access perform lower on a range of metrics, including digital skills, homework completion, and grade point average."[27] The Texas Broadband Development Plan notes that, "For many Texans, especially people who are elderly, immobile and rural, accessing quality healthcare is an ongoing challenge. Telemedicine is dependent on patients' access to reliable high speed internet access and a foundation of digital literacy."[28]

The U.S. Congress passed the federal legislation in 2021 to address many of these issues. Its aim is to

[26] National Telecommunications and Infrastructure Administration, Notice of Funding Opportunity, https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf.
[27] Quello Center, Michigan State University, "Broadband and Student Performance Gaps," https://quello.msu.edu/broadbandgap/.
[28] Texas Broadband Development Office, Texas Comptroller of Public Accounts, Texas Broadband Plan 2022, page 10, https://comptroller.texas.gov/programs/broadband/about/what/docs/broadband-plan-22.pdf.

ensure that all people and communities have the skills, technology, and capacity needed to reap the full benefits of our digital economy.[29]

What is Digital Literacy?

As federal broadband legislation specifies, the goals of supporting digital access and increasing digital literacy, it is important to explore what literacy means in this context. The American Library Association's definition of digital literacy is "the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills."[30] The skills needed include locating and using information, knowing relevant digital tools for use in communication, commerce, and collaboration, and applying critical thinking.

Although the digital divide often has been viewed as primarily a technological challenge experienced by different members of the population, researchers have sought to break down the divide into two components:

1. First level –disparities in digital access; and
2. Second level – Inequality in the skills needed to use of the information and communication technologies.[31]

Although the technological inequalities highlighted earlier in this section were the focus of most first level studies, the "skill" and "use" elements of the second level represent an equally critical nature of digital literacy.[32] Inequalities in the second level often compound lack of internet access to reduce practical "access" and "use."[33] Indeed, the ability to develop skills necessitates a certain level of tool

[29] National Telecommunications and Infrastructure Administration, Internet For All, Digital Equity Act Programs, Overview, https://www.internetforall.gov/program/digital-equity-act-programs.

[30] American Library Association, "Digital Literacy," https://literacy.ala.org/digital-literacy/.

[31] Hargittai, E. & Hsieh, Y.P. (2013). Digital Inequality. In Oxford Handbook of Internet Studies. Edited by William H. Dutton. Oxford University Press. 129-150. https://labor.hawaii.gov/wdc/files/2021/11/Final-Statewide-Digital-Literacy-Survey-Report-from-Omnitrak-11.15.2021.pdf.

[32] Van Deursen, Alexander J.A.M., Helsper, Ellen, Eynon, Rebecca and van Dijk, Jan A.G.M (2017) The compoundness and sequentiality of digital inequality. International Journal of Communication, 11. pp. 452-473. ISSN 1932–8036.

[33] Wenhong Chen & Xiaoqian Li (2021): Digital inequalities in American disadvantaged urban communities: access, skills, and expectations for digital inclusion programs, Information, Communication & Society, https://doi.org/10.1080/1369118X.2021.1907434.

access.[34] Researchers have validated four key skills for internet "use":[35] basic/operational, information/navigation, social, and creative skills.[36]

Operational skills can be seen as "button knowledge" or the ability to use computer, tablet or phone interfaces, a mouse, and basics of online digital interfaces. Moving beyond operational access, using the internet to find, select and evaluate information on the internet form the basis of navigational skills. Social skills involve communicating online by searching, selecting, evaluating, and acting to exchange knowledge and create mutual understanding. Finally, creative skills blend all the previously defined skills with intellectual contribution to create content for sharing on the internet. This content could be photos, videos, text, music, or mixed content. For example, using the internet for job searching and financial engagement require all skills, including the creative element. Job searches, resume building, cover letter composition and posting, job query response and posting all are required.[37]

> ***"To me, it [digital literacy] means helping hands. And I use it a lot with my literacy classes and with my GED classes that I teach. And we have to have technology. Some of the students have to learn computer skills, and we have to work really hard on that. So technology is a huge helping hand. We need it."***
>
> ***(Sondra Price, The Library at Cedar Creek Lake)***

Digital literacy is also critical for participation in the growing digitization and telemedicine trends emerging from the pandemic. Technical skills, the availability of internet capable devices and sufficient

[34] Ibid.

[35] Van Deursen, Helsper, and Eynon. Development and validation of the Internet Skills Scale (ISS). INFORMATION, COMMUNICATION & SOCIETY, 2016 VOL. 19, NO. 6, 804–823.

[36] Maren Oberländer, Andrea Beinicke, and Tanja Bipp. 2020. "Digital Competencies: A Review of the Literature and Applications in the Workplace." Computers & Education 146 (March): 103752. https://doi.org/10.1016/j.compedu.2019.103752.

[37] Hargittai, E. & Hsieh, Y.P. (2013). Digital Inequality. In Oxford Handbook of Internet Studies. Edited by William H. Dutton. Oxford University Press. 129-150. https://labor.hawaii.gov/wdc/files/2021/11/Final-Statewide-Digital-Literacy-Survey-Report-from-Omnitrak-11.15.2021.pdf; Gökçe Karaoglu, Eszter Hargittai & Minh Hao Nguyen (2021): Inequality in online job searching in the age of social media, Information, Communication & Society, https://doi.org/10.1080/1369118X.2021.1897150.

connectivity are necessary and without any one of them, individuals cannot participate.[38] Unfortunately, those who often are at higher risk for health challenges are people living in poverty, seniors, and new immigrants, the same groups that struggle with digital access and literacy. As patient portals, health tracking tools and remote monitoring devices become more mainstream in healthcare, patients will require sufficient literacy competency, such as hands-on training to benefit from these healthcare innovations improving security and patient care.[39]

Libraries as Providers of Digital Literacy Solutions

With the launch of the federal E-Rate Program in 1996, libraries have been empowered to assist with improved digital access due to the discounted internet connection costs provided through the program.[40] Since then, public libraries have moved beyond creating just access points, becoming important for many communities as hubs for small businesses, job seekers, facilitators for children's programs, and educators of senior citizens who want to learn digital skills for the first time.

Through federal broadband legislation, libraries have an additional opportunity, funding potential, and tools to help develop digital literacy skills and digital access for their communities. Libraries can offer significant value to their communities through:

- Developing and implementing digital literacy activities that benefit disadvantaged populations;
- Facilitating access to broadband to allow educational and employment opportunities to be realized;
- Implementing training programs for digital literacy skill adoption and improving workforce readiness; and
- Making available equipment, software, networks and other technologies to support disadvantaged populations.

Much of this chapter has highlighted the criticality of internet access and digital literacy skills to

[38] Kruse C, Heinemann K. Facilitators and Barriers to the Adoption of Telemedicine During the First Year of COVID-19: Systematic Review. Med Internet Res 2022;24(1): e31752, https://www.jmir.org/2022/1/e31752 DOI: 10.2196/31752.
[39] Cynthia J. Sieck, Amy Sheon, Jessica S. Ancker, Jill Castek, Bill Callahan, and Angela Siefer. 2021. "Digital Inclusion as a Social Determinant of Health." Npj Digital Medicine 4 (1): 52. https://doi.org/10.1038/s41746-021-00413-8.
[40] FCC.gov, "E-Rate - Schools and Libraries USF Program," September 1, 2022 https://www.fcc.gov/general/e-rate-schools-libraries-usf-program.

empower people to be connected and productively engaged in an increasingly "digital world." Many groups face significant challenges in having access to high-speed internet, affordable devices, or the training to take advantage of opportunities that exist in employment, healthcare, education, and commerce. Public libraries are in a unique position to help with improving the situation as they have had in other activities.

Because of public libraries' unique combination of services and historical role in communities, researchers have documented numerous impacts and outcomes:

1. Enhancing healthcare access;[41]
2. Gaining access to fully-formed internet tools – including high-speed broadband and computer access for rural residents;[42]
3. Providing a space for older adults to experiment, learn and master digital literacy skills without fear of judgment;[43]
4. Improving access for underserved communities;[44]
5. Assisting students to overcome the "homework gap" through access to devices and internet connectivity;[45] and
6. Improving digital skills to promote jobseekers finding new work or transition to new careers[46] – especially among older workers.[47]

[41] Cynthia J. Sieck, Amy Sheon, Jessica S. Ancker, Jill Castek, Bill Callahan, and Angela Siefer. 2021. "Digital Inclusion as a Social Determinant of Health." Npj Digital Medicine 4 (1): 52. https://doi.org/10.1038/s41746-021-00413-8.

[42] Sharon Strover, Brian Whitacre, Colin Rhinesmith, and Alexis Schrubbe. 2020. "The Digital Inclusion Role of Rural Libraries: Social Inequalities through Space and Place." Media, Culture & Society 42 (2): 242–59. https://doi.org/10.1177/0163443719853504; Du, Yunfei. 2022. "Library Computing Services in Rural Texas during the COVID-19 Pandemic." Public Library Quarterly, July, 1–18. https://doi.org/10.1080/01616846.2022.2096369.

[43] Hannah Barrie, Tara La Rose, Brian Detlor, Heidi Julien & Alexander Serenko (2021) "Because I'm Old": The Role of Ageism in Older Adults' Experiences of Digital Literacy Training in Public Libraries, Journal of Technology in Human Services, 39:4, 379-404, https://doi.org/10.1080/15228835.2021.1962477.

[44] Lessa Kanani`opua Pelayo-Lozado, "Leveraging Libraries to End the Digital Divide: Public Libraries are key to enhancing access for underserved communities." *StateTech* (Feb. 2, 2023). https://statetechmagazine.com/article/2023/02/leveraging-libraries-end-digital-divide.

[45] Chandra, S., Chang, A., Day, L., Fazlullah, A., Liu, J., McBride, L., Mudalige, T., Weiss, D., (2020*). Closing the K–12 Digital Divide in the Age of Distance Learning*. San Francisco, CA: Common Sense Media. Boston, Massachusetts, Boston Consulting Group. https://www.commonsensemedia.org/kids-action/publications/closing-the-k-12-digital-divide-in-the-age-of-distance-learning.

[46] Ian Hecker, and Pamela Loprest (2019). "Foundational Digital Skills for Career Progress." Urban Institute. https://www.urban.org/research/publication/foundational-digital-skills-career-progress; Bergson-Shilcock, Amanda. 2020. "The New Landscape of Digital Literacy: How workers' uneven digital skills affect economic mobility and business competitiveness, and what policymakers can do about it." National Skills Coalition. https://nationalskillscoalition.org/resource/publications/the-new-landscape-of-digital-literacy/.

[47] Ian Hecker, Shayne Spaulding, and Daniel Kuehn (2021). "Digital Skills and Older Workers." Urban Institute. https://www.urban.org/research/publication/digital-skills-and-older-workers.

The role of libraries as a key local economic development engine also cannot be overlooked. Libraries currently are empowering small businesses with tools and software to engage in web- design, social media campaigns, marketing programs, and service offerings.[48] Those who need digital literacy skills can be trained at local public libraries or by workforce partners. These individuals then are available to complete educational requirements, take on additional responsibilities in employment, gain higher pay, or transition to new employers and industries.

To take advantage of employment, health, educational, and social opportunities, however, many citizens will require better access and more training. Libraries can help citizens develop the skills necessary to thrive in a "digital world."

[48] Poon, L., & Joshua, J. (2022, January 28). Libraries expand resources to support diverse entrepreneurs. Bloomberg.com. Retrieved September 9, 2022, from https://www.bloomberg.com/news/articles/2022-01-28/libraries-expand-resources-to-support-diverse-entrepreneurs.

Chapter III. Findings from Surveys of Texas Public Library Directors and Branch Managers

As described in chapter I, two nearly identical surveys were performed, one of library directors and one of branch managers. For the purpose of this report, it's important to understand the distinction between "main libraries" and "branch" libraries. Large library systems often have one main (or central) library that offers administrative oversight and coordination for branch (or neighborhood) libraries. In areas where there is only one library for a town or county, that library is also considered the main library. We note responses from all main libraries whether from small rural communities or large metroplex areas are handled similarly, although generally, smaller rural main libraries tend to have less capacity in terms of staff and funding than main libraries in large cities.

Samples of 500+ public library systems and 300+ public library branches in Texas were drawn because of a desire by the TSLAC staff to obtain an adequate number of responses, without imposing on all library directors and branch managers. The survey of Texas public library directors was sent to 298 directors, and 171 directors responded for a rate of 57%. The survey of branch managers was sent to 123 individuals, with 61 responding electronically and an additional 19 completing hard-copy responses that were then entered manually in the survey program. The branch manager response rate was about 50%.[49]

Each of the two survey samples had a unique component. For the main libraries, the focus was on drawing a sample and obtaining responses from directors from the different categories of libraries by population size. (Please see Table 1.1. in chapter 1.) For branch libraries, the focus was on drawing a sample and obtaining responses from managers in various metropolitan areas—a geographically representative sample of responses. To explore the possible effect of a community's wealth on the level of its digital literacy services, each sample also included criteria for wealth. Several different measures were utilized to measure the economic environment for the main libraries, principally the annual

[49] Both response rates were computed after eliminating individuals that have opted out of all Survey Monkey correspondence and those with email addresses that were incorrect.

income of residents of the county in which the library was located, and the composite socioeconomic status percentile score for each county from the U.S. Census Bureau. For branches, wealth was operationalized by examining family poverty levels in census tracts in which a branch was located or adjacent to the branch's location.[50]

Ultimately, data were collected from approximately 171 main libraries and 80 branch libraries. A standard statistical test, Chi-square, was performed to determine if the main library responses were representative of the entire universe of public libraries in Texas, based on population sizes served. The responses were representative at the .05 level.[51] The same test was performed to determine if the branch responses were representative of all branch libraries based on the number of branches in major metropolitan areas. That test also indicated the responses were indicative of the entire universe.[52]

TABLE 3.1. LIBRARY DIRECTOR RESPONSES BY SIZE OF POPULATION SERVED

Population Served	
1,000,000 or more	5
300,000-999,999	3
175,000-299,999	7
65,000-174,999	17
15,000-64,999	43
5,000-14,999	49
Under 5,000	41

[50] More details about the responses, the samples and responses for both surveys, and other methodology are provided in a supplemental report to TSLAC and will be available upon request.
[51] The p value .093 indicated the expected and observed distributions were not different.
[52] The p value .687 indicated the expected and observed distributions were not different.

TABLE 3.2. BRANCH LIBRARY RESPONSES BY COUNTY

Harris	19
Dallas	11
Bexar	10
Travis	9
Tarrant	9
Brazoria	7
El Paso	5
Nueces	3
Montgomery	3
Fort Bend	1
Collin	1
Hidalgo	1
Webb	1
Wilson	1

Current Services—Main Libraries and Branch Libraries

Except for minor editorial differences, the surveys of main and branch libraries were identical. In this chapter data are presented in detail about current services and assistance: what is provided and how it is provided. Key similarities and differences are noted between the current services and types of training by Texas public libraries and Texas branch libraries. Later in this chapter, data are presented about how such services and assistance vary among libraries serving different sizes of populations.

Individual survey questions (in italics and underlined) and a summary of responses are shown below.[53]

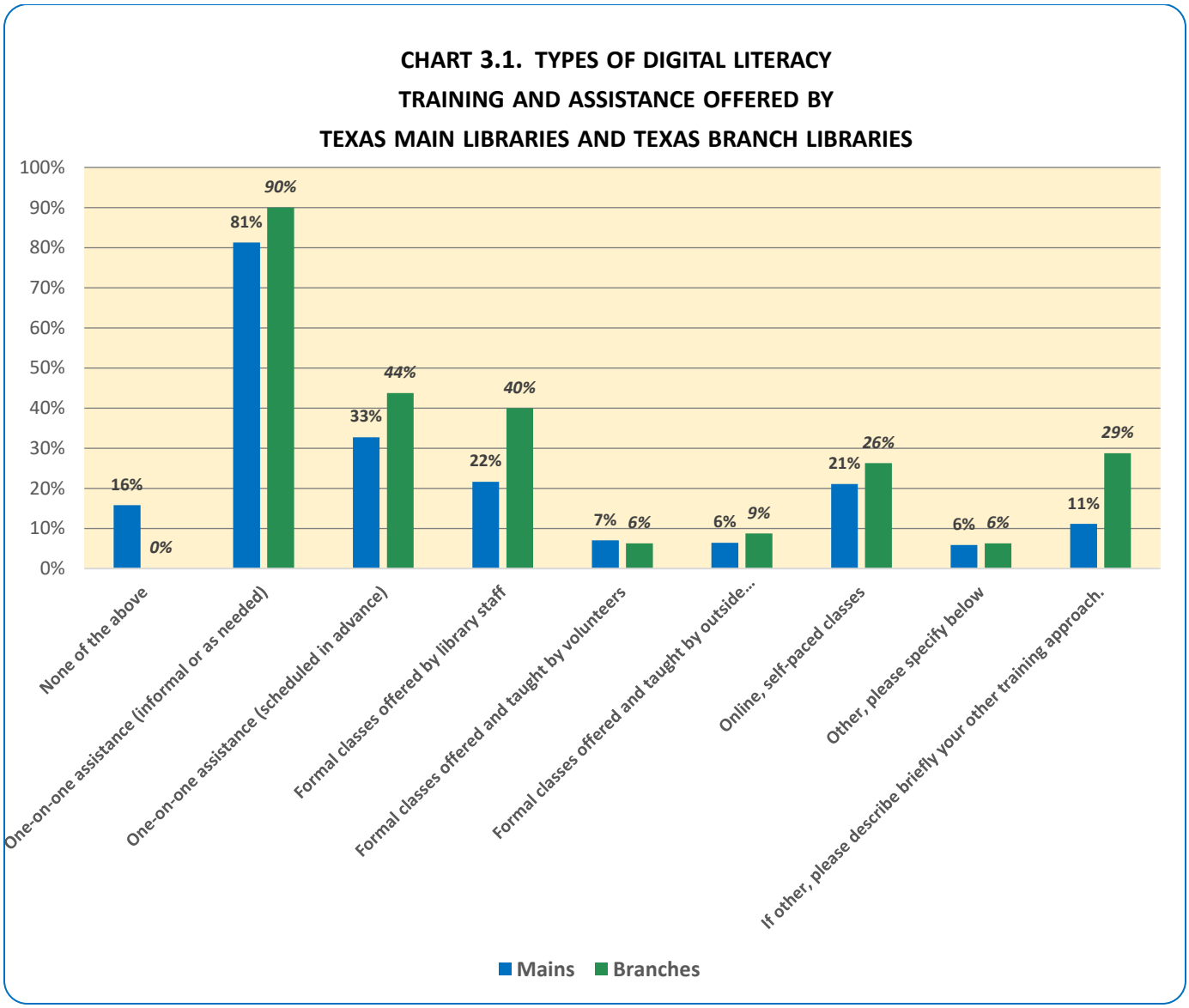
> *What kind of digital literacy training does your library provide, if any? Please check as many as apply.*[54]

[53] The survey instruments and the email letters to the directors and managers are included in Appendix B and Appendix C respectively.

[54] The question on the branch survey instrument was: "What kind of digital literacy training does your branch provide, if any? Please check as many as apply." Unless there is an appreciable difference between the wording on the two surveys, only the question on the directors' survey will be shown.

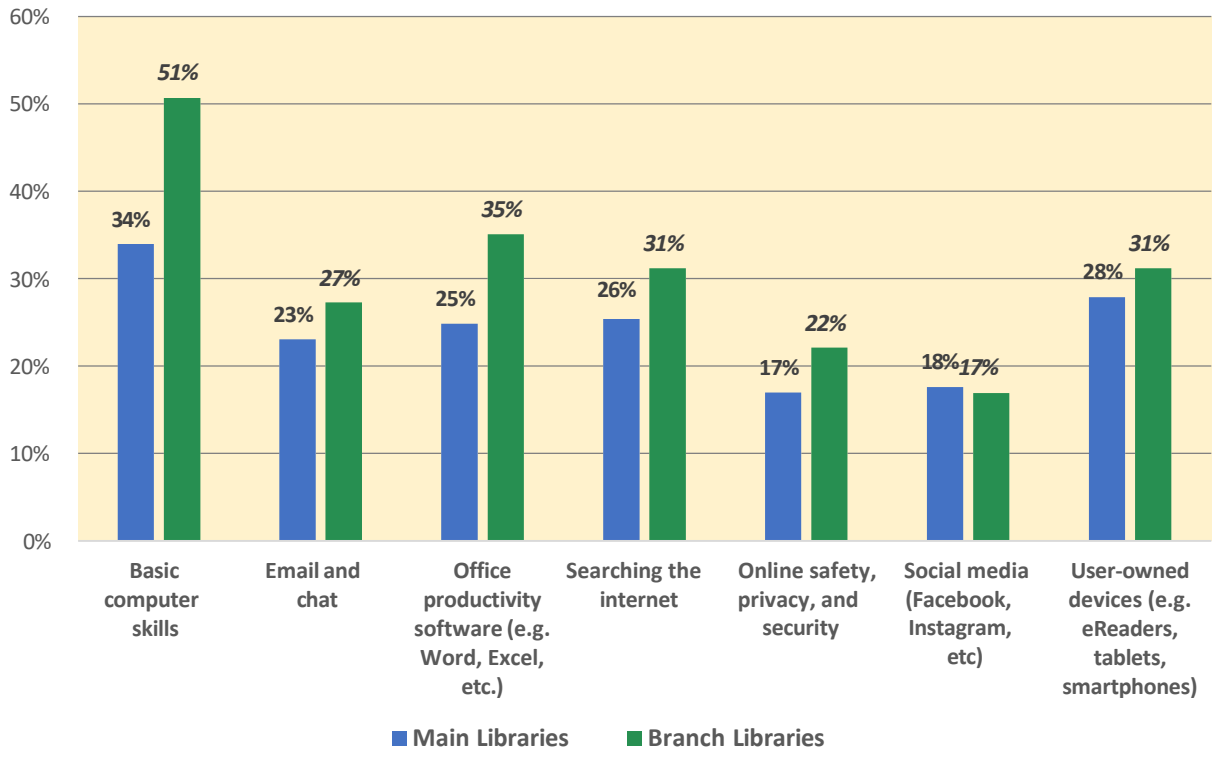
As shown in Chart 3.1. large proportions of the 171 libraries and 80 branch libraries provide one-on-one assistance and training on demand: 90 percent of all branches and 81 percent of main libraries. One-on-one assistance scheduled in advance also is common for both branch and main libraries. Formal classes taught by library branch staffs are common (40%) but less frequent in main libraries (22%). There are nearly as many main libraries offering self-paced or online digital literacy training (21%) as are offering formal classes with library staff.

In addition to those observations there are two findings of note. First, uniformly branch libraries provide more of each type of training and assistance than do main libraries. Second, every branch library indicated it offered some type of digital literacy assistance, while about one-sixth of main libraries currently do not offer assistance of any kind (15.3%).



A second question shown in Chart 3.2. elicited information about the specific subjects and topics being taught in formal classes by main libraries and branch libraries. Branch libraries generally provide slightly more classroom training on each subject except for basic computer skills, in which there is a large difference. More main libraries offer social media classroom training by a slim margin.

CHART 3.2. TYPES OF SUBJECTS TAUGHT IN FORMAL CLASSES BY TEXAS MAIN LIBRARIES AND TEXAS BRANCH LIBRARIES



In Chart 3.3. one-on-one assistance is shown for six different subjects and two different delivery options. Large proportions of main libraries and branch libraries currently assist patrons as needed in basic computer skills, email and chat, office productivity, searching the internet, and with user-owned devices. Smaller proportions assist with social media, online safety, and in languages other than English. In all comparisons, branch libraries are offering more assistance with the difference being most pronounced in non-English training.

CHART 3.3. TYPES OF SUBJECTS AVAILABLE VIA INDIVIDUAL HELP AND ASSISTANCE BY TEXAS MAIN LIBRARIES AND TEXAS BRANCH LIBRARIES

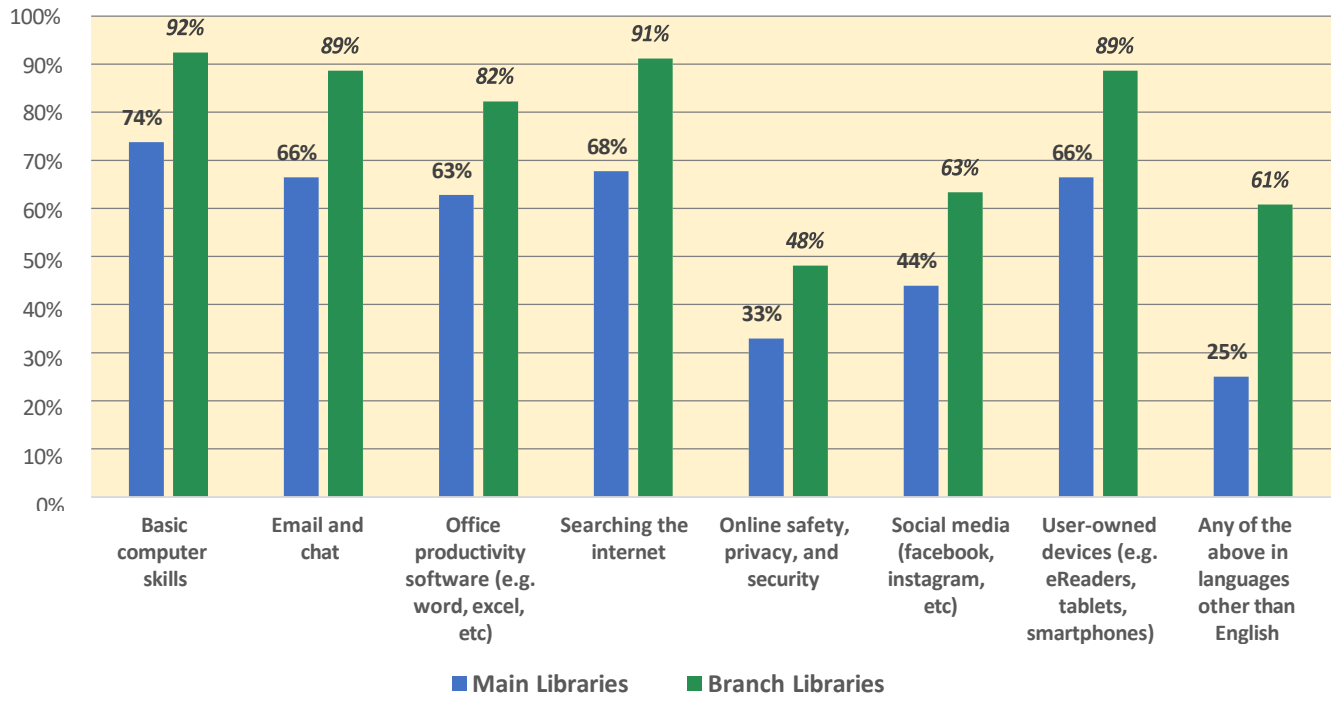
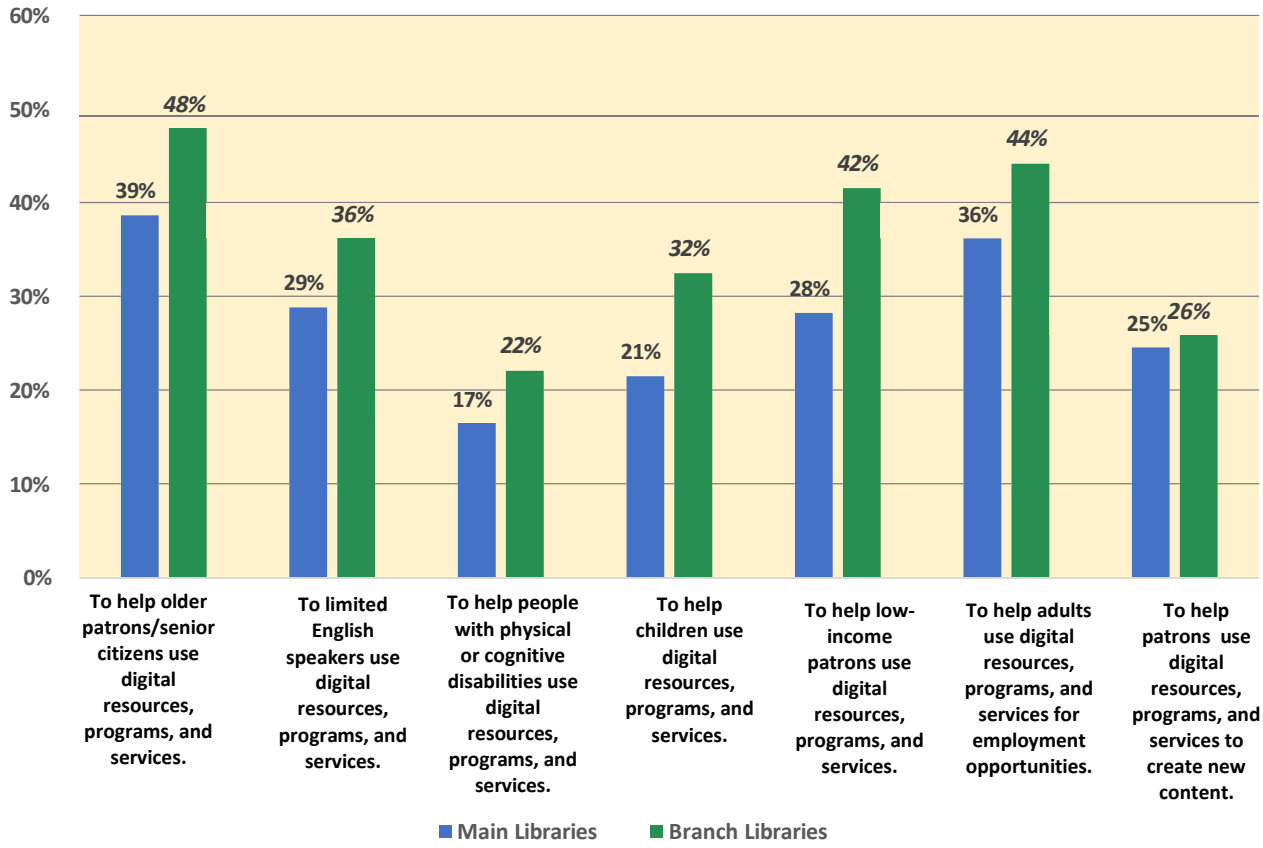


Chart 3.4 documents formal classes aimed at different patrons and their needs.[55] Significant proportions of main and branch libraries are offering classes, with the percentage ranging between 25 and 50 percent. The differences between main libraries and branch libraries are mostly small, with the exception of classes to help low-income patrons and to help children.

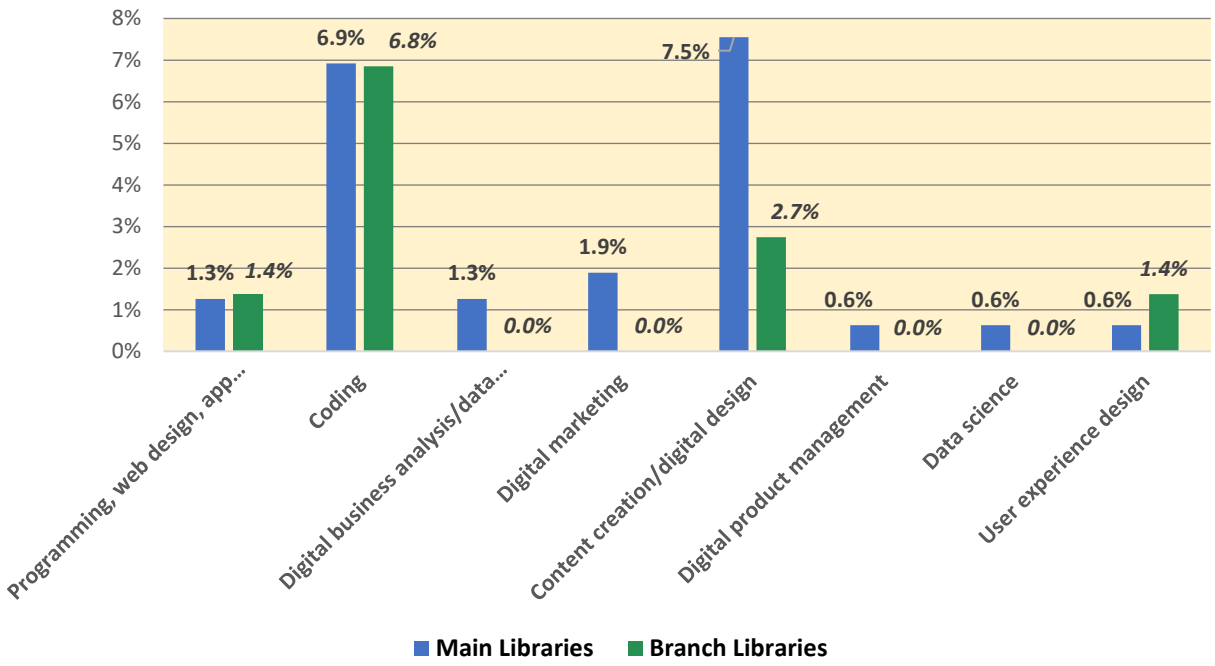
[55] Note that the instruments did not contain a similar question about one-on-one assistance for these patrons.

CHART 3.4. TYPES OF CLASSES OR INSTRUCTION OFFERED BY TEXAS MAIN LIBRARIES AND TEXAS BRANCH LIBRARIES



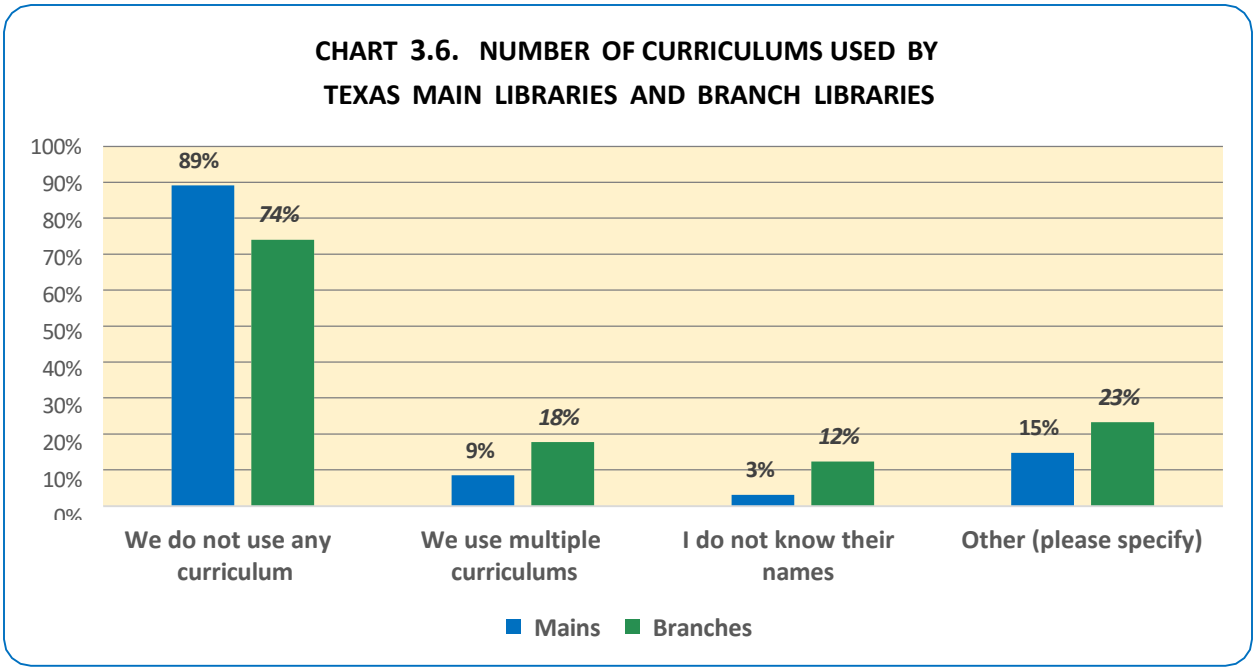
Few public libraries are offering classes or one-on-one assistance on advanced content subjects. As shown in Chart 3.5. about seven percent of libraries offer coding help or classes. Except for a catch-all category of "content creation," fewer than five percent of libraries offer any assistance on other topics. While advanced subjects such as data science/data analytics or user experience design would be unlikely even in the most comprehensive training program, the important distinction is between libraries training patrons to use existing programs (e.g., a word processor) and training patrons to create new programs and new content (e.g., programming to build websites or develop an app). Although seemingly low at the present time, the rate of training in content creation should be viewed as a baseline and is likely to increase over time.

CHART 3.5. TYPES OF ADVANCED CLASSES/INSTRUCTION OR INDIVIDUAL HELP ON SELECT TOPICS



The last comparison in this chapter shows the number of curriculums currently being used. As presented in Chart 3.6., it is clear the large majority of both main libraries and branch libraries do not use any curriculum. Fewer than 20% of branches and 10% of main libraries use multiple curriculums. The "other" percentages are for examples of the curriculums identified by the directors and managers. The curriculums cited most frequently by library directors were (in order): Self-developed by library staff, LinkedInLearning, and GCFLearn.org/Global. Northstar and Learning Express also were mentioned by two librarians. Branch managers cited curriculums in this the following order: Self-developed by library staff, Northstar, GCFLearn.org/Global, Learning Express, and Microsoft. Librarians in both groups mentioned numerous other programs, curriculum, and sites once.[56]

[56] Those responses about curriculums are listed in a compilation of all verbatim responses for open- ended questions on the two surveys. Those compilations are available by downloading from the TSLAC link: https://www.tsl.texas.gov/digitalliteracy.



Note that totals do not add to 100% as librarians were allowed to provide more than one answer and the percentages are rounded.

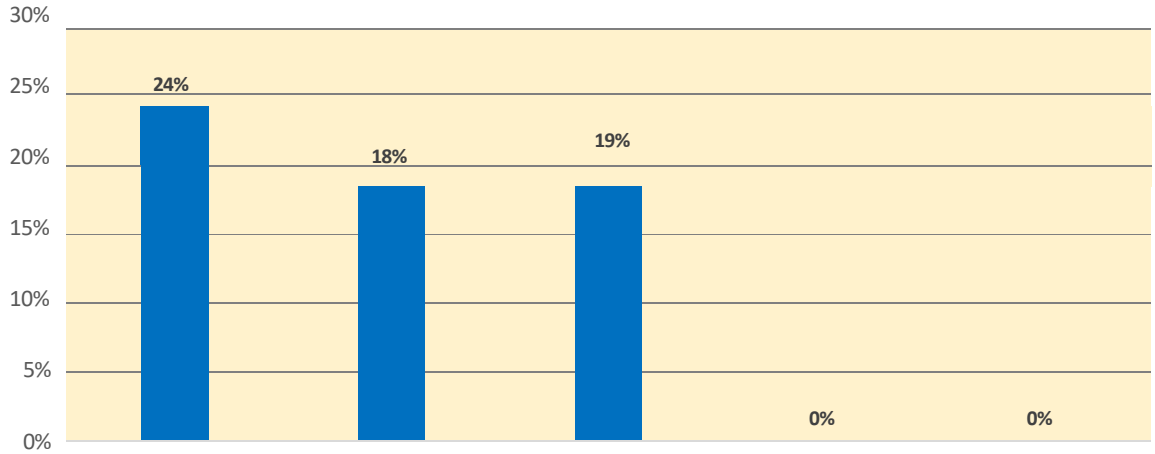
Current Services—Main Libraries by Size of Populations Served

Because public libraries serve such a variety of populations in Texas, it is instructive to look more in depth at digital literacy services and assistance by size. The following charts illustrate that libraries serving fewer numbers of patrons provide fewer services and assistance than Texas libraries serving larger numbers of patrons. The pattern is quite explicit across types of services and the topics and subjects offered, with a few exceptions.

In Chart 3.7, data are presented about those libraries that do not offer any digital literacy services or assistance. Of the 171 libraries responding, 10 libraries serving fewer than 5,000 patrons, 9 libraries serving patrons in the 5,000 to 15,000 category, and 8 libraries between 15,000 and 65,000 patrons do not provide any training. Every librarian in a system serving more than 65,000 patrons said some type of

digital literacy training or assistance is given to patrons.[57] These data show that more than one-fifth of Texas smallest libraries currently do not offer any type of assistance. And more than one-sixth of Texas libraries serving populations between 5,000 and 65,000 do not offer any type of digital literacy service.

CHART 3.7. PROPORTIONS OF TEXAS MAIN LIBRARIES WITHOUT DIGITAL LITERACY ASSISTANCE OF ANY KIND, BY SIZE OF POPULATION SERVED



More than three-quarters of all Texas public libraries in all sizes currently offer one-on-one assistance on demand as shown by Chart 3.8. While there are some differences by size, they are not appreciable. There are, however, clear differences by size in provision of one-on-one assistance when advance scheduling is required. (Chart 3.9.) Fewer smaller libraries offer or require advance scheduling for one-on-one digital literacy assistance than do libraries serving larger populations.

[57] Additional analysis of the 27 libraries not currently providing any assistance appears in chapter VI.

CHART 3.8. PROPORTIONS OF MAIN LIBRARIES OFFERING ONE- ON-ONE DIGITAL LITERACY ASSISTANCE ON DEMAND, BY SIZE OF POPULATIONS SERVED

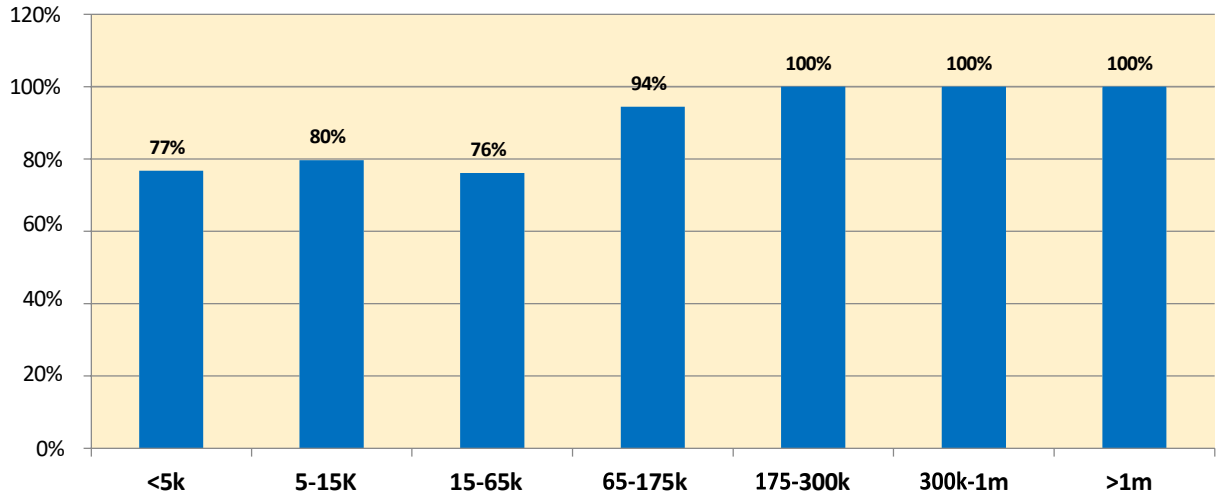


CHART 3.9. PROPORTIONS OF MAIN LIBRARIES OFFERING ONE-ON-ONE DIGITAL LITERACY ASSISTANCE WITH ADVANCE SCHEDULING, BY SIZE OF POPULATIONS SERVED

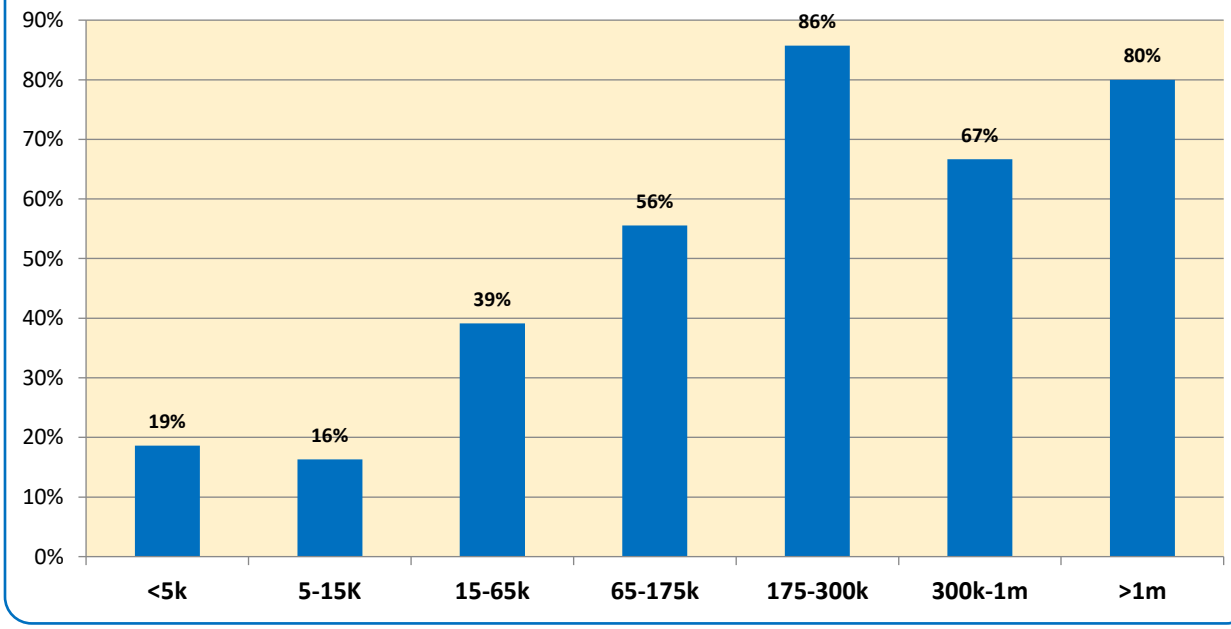
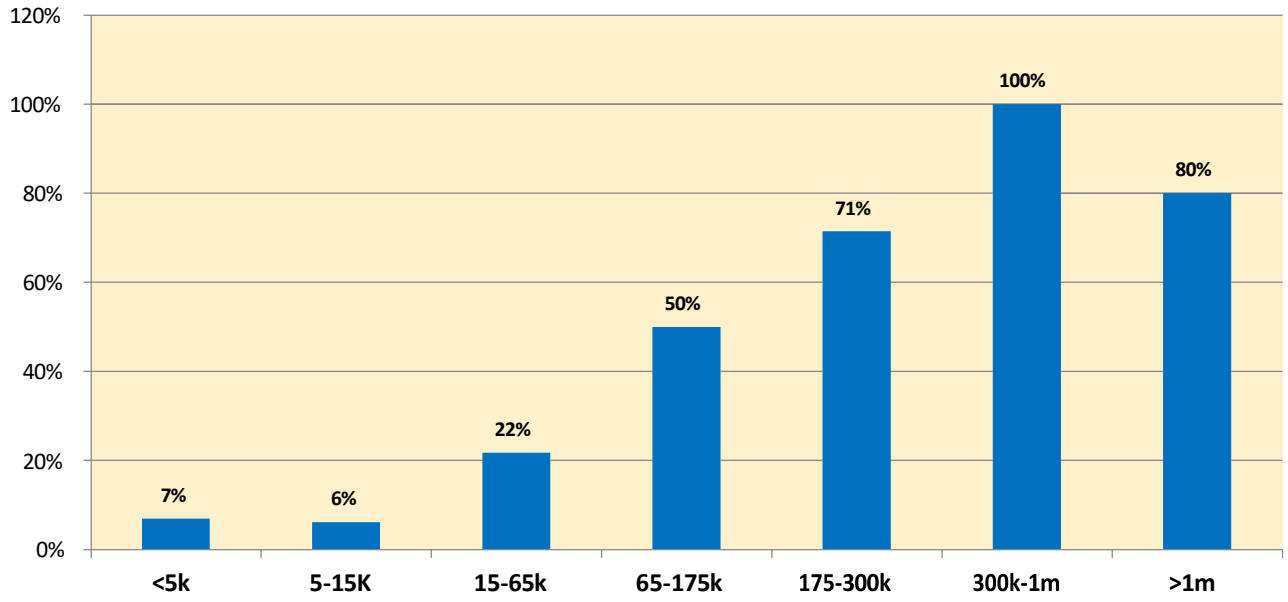


Chart 3.10 arrays the data by library size for digital literacy classes taught by library staffs. Once again there is a strong pattern by population size: more classes are taught by library staffs in larger systems than in smaller libraries.

> ***"One of the challenges, I think, in digital literacy is trying to meet that point of need and motivation to learn the skill. … it's hard to have a basic computer literacy class that people want to come to on a Saturday morning, but when you're in the library, you're trying to check your credit card bill or whatever…. that's when you want to learn the skill. Not a week later when a class is being provided."***
>
> ***(Heather Lowe, Dallas Public Library)***

CHART 3.10 PROPORTIONS OF MAIN LIBRARIES WITH FORMAL CLASSES BY LIBRARY STAFF, BY SIZE OF POPULATIONS SERVED



Charts 3.11 and 3.12 illustrate the patterns when formal classes are taught by volunteers and by outside

organizations, respectively. Volunteer teaching is uneven and perhaps surprising, given the tradition of volunteer support in smaller towns and rural areas.

Chart 3.12 again shows the strong influence of population size. In this instance, the pattern may be due to there being more organizations available to teach digital literacy in larger communities than in smaller population areas.

CHART 3.11. PROPORTIONS OF MAIN LIBRARIES OFFERING FORMAL CLASSES BY VOLUNTEERS, BY SIZE OF POPULATIONS SERVED

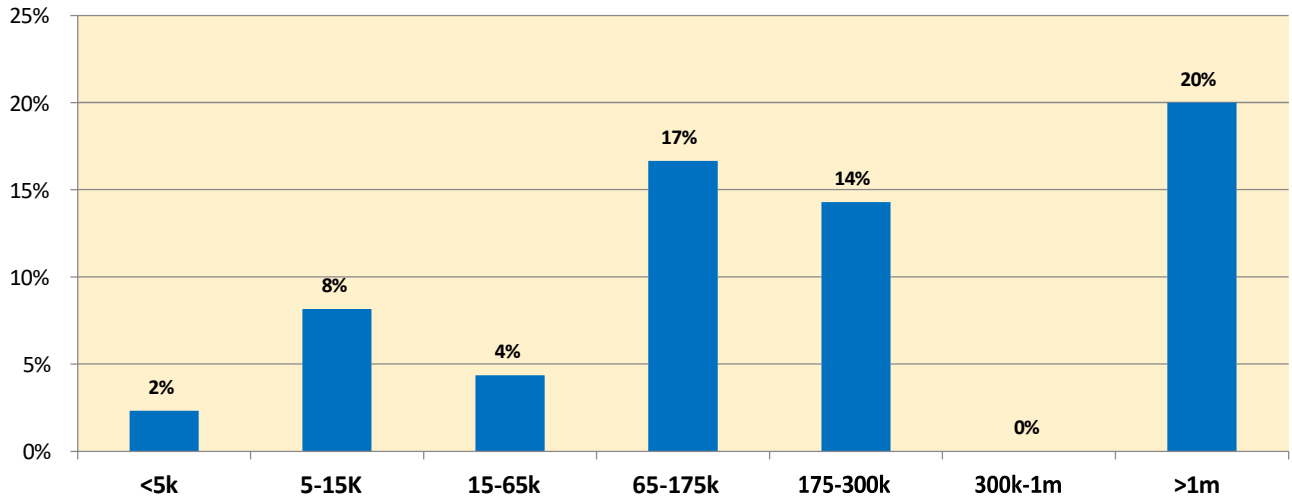
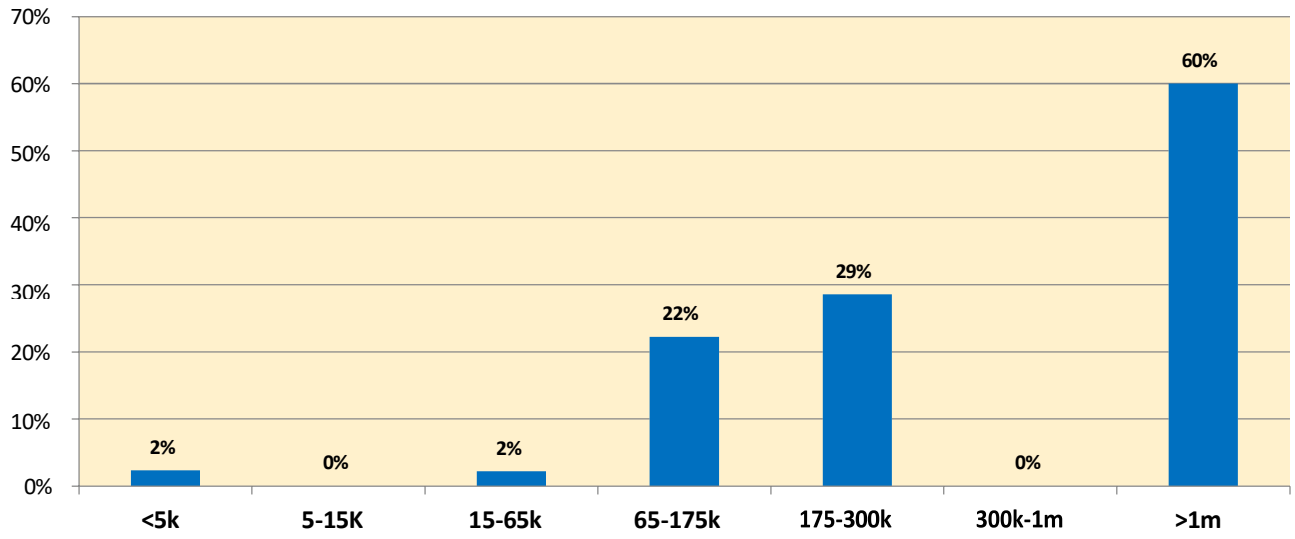
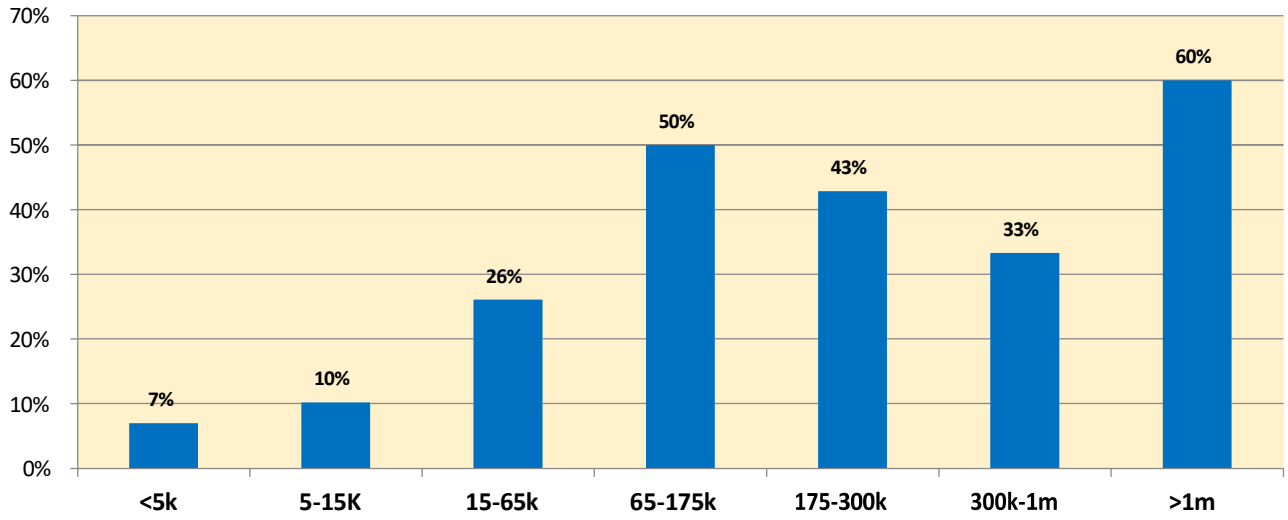


CHART 3.12. PROPORTIONS OF MAIN LIBRARIES OFFERING FORMAL DIGITAL LITERACY CLASSES BY OUTSIDE ORGANIZATIONS, BY SIZE OF POPULATIONS SERVED



A final illustration of digital literacy assistance and training delivery appears in Chart 3.13. Substantial proportions of public libraries offer online, self-paced classes and educational instruction. More than half of the largest systems and half of the medium-sized (65,000 to 175,000) libraries offer self-paced opportunities. Fewer than one in 10 of the libraries serving populations below 15,000 residents do so.

CHART 3.13. PROPORTIONS OF MAIN LIBRARIES WITH ONLINE, SELF-PACED DIGITAL LITERACY CLASSES, BY SIZE OF POPULATIONS SERVED

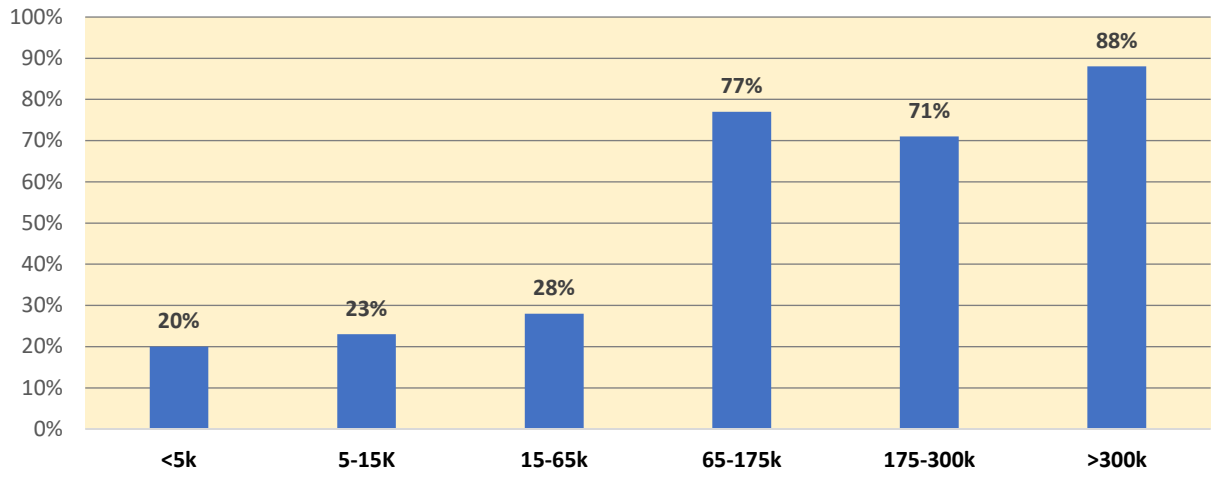


Formal Digital Literacy Classes, By Topics, By Size Of Populations Served

This section focuses on examples of the digital literacy content that are available to patrons in Texas public libraries.

In Chart 3.14 the proportions of libraries offering classes in basic computer skills are shown. There is a clear demarcation between the larger systems and smaller libraries. Also, only about one in five of the smallest libraries are providing classes in basic computer skills.

CHART 3.14. PROPORTIONS OF MAIN LIBRARIES WITH CLASSES IN BASIC COMPUTER SKILLS, BY SIZE OF POPULATIONS SERVED



In Chart 3.15, the proportions are shown for classes in office productivity software such as spreadsheets, commonly used word processing programs, and so forth. Fewer than 10 percent of the smallest libraries and only 15 percent of libraries between 5,000 and 15,000 offer classes.

CHART 3.15. PROPORTIONS OF MAIN LIBRARIES WITH CLASSES OR INSTRUCTION IN OFFICE PRODUCTIVITY SOFTWARE, BY SIZE OF POPULATIONS SERVED

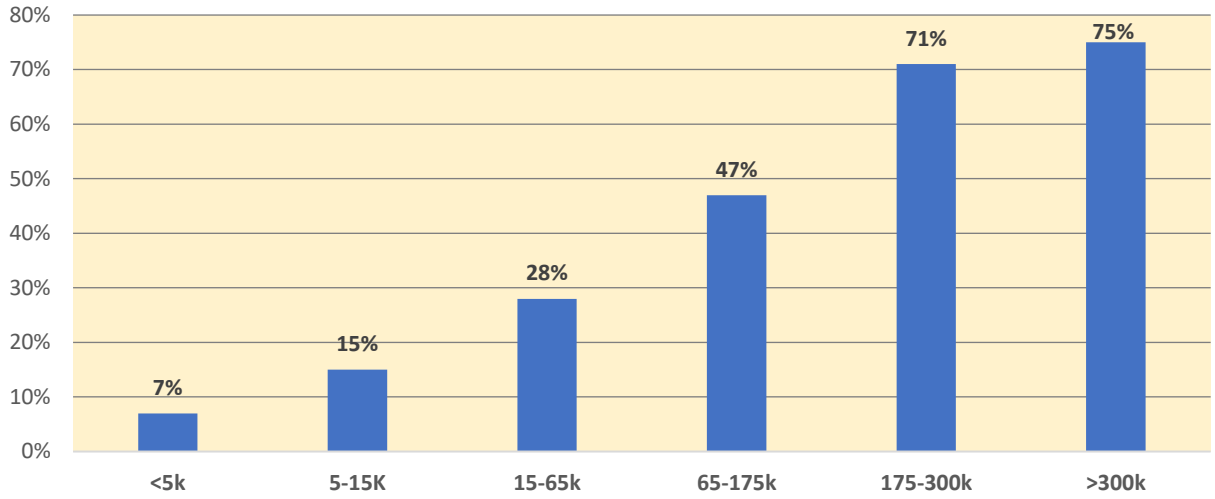
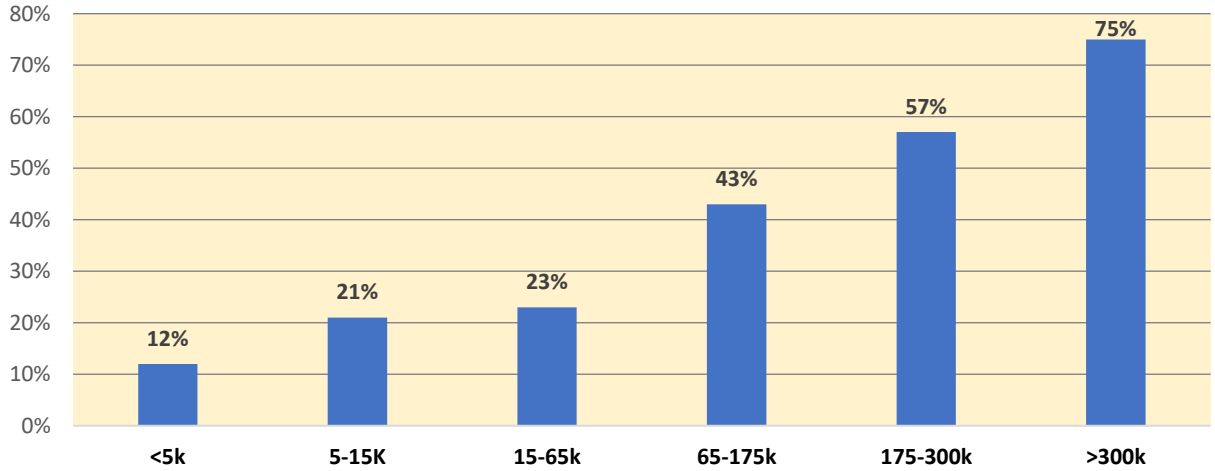


CHART 3.16. PROPORTIONS OF MAIN LIBRARIES WITH CLASSES OR INSTRUCTION ON SEARCHING THE INTERNET, BY SIZE OF POPULATIONS SERVED



Charts 3.16, 3.17, and 3.18 enumerate the percentages of each library size for searching the internet, online safety and security, and social media. The patterns are generally the same in terms of size,

despite differences in the actual percentages.

CHART 3.17. PROPORTIONS OF MAIN LIBRARIES WITH CLASSES OR INSTRUCTION FOR ONLINE SAFETY, PRIVACY, AND SECURITY, BY SIZE OF POPULATIONS SERVED

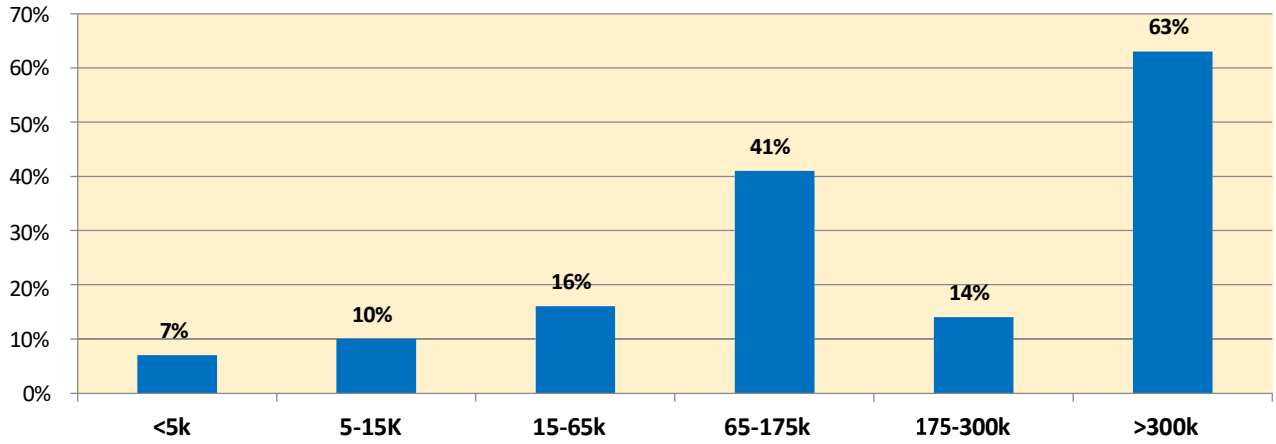
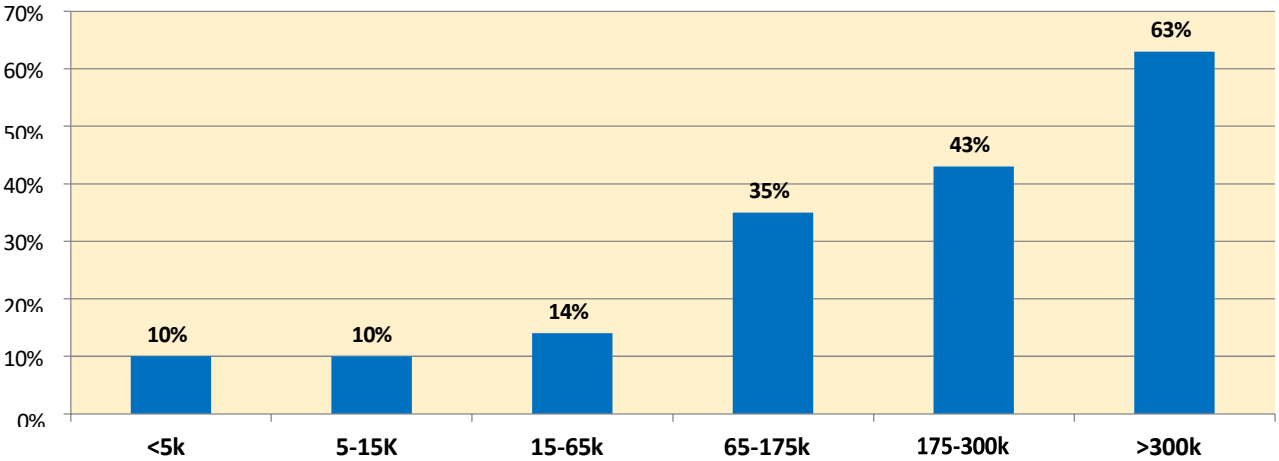


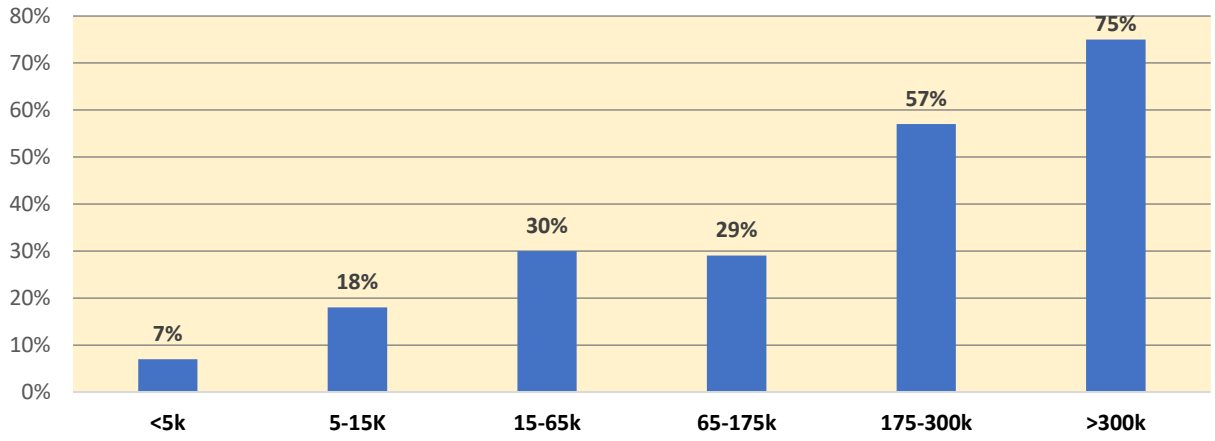
CHART 3.18. PROPORTIONS OF MAIN LIBRARIES WITH CLASSES OR INSTRUCTION ON SOCIAL MEDIA, BY SIZE OF POPULATIONS SERVED



One-On-One Digital Literacy Training and Assistance on Two Topics, By Size of Populations Served

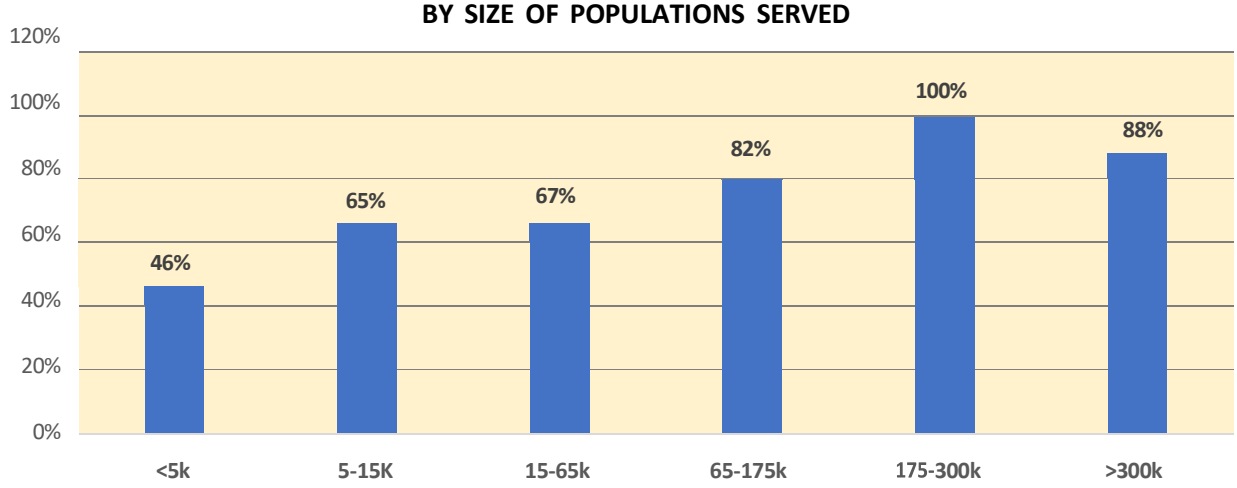
Charts 3.19 and 3.20 portray two examples of proportions of libraries of varying sizes offering one-on-one assistance. Chart 3.19 shows the varying proportions for one-on-on digital literacy technology support in languages other than English. There are two major differences from general one-on-one support as shown in Chart 3.8. First, the percentages are significantly lower for most categories, except for the largest systems. Second, the pattern of size of populations served is very pronounced in Chart 3.19 whereas the pattern was less severe in Chart 3.8.

CHART 3.19. PROPORTIONS OF MAIN LIBRARIES WITH ONE-ON-ONE TECHNOLOGY SUPPORT IN LANGUAGES OTHER THAN ENGLISH, BY SIZE OF POPULATIONS SERVED



As illustrated in Chart 3.20, although larger systems still provide more one-on-one assistance for user-owned devices, the disparity among the categories is lower than in most other charts in this chapter.

CHART 3.20. PROPORTIONS OF MAIN LIBRARIES WITH ONE-ON-ONE TECHNOLOGY SUPPORT FOR USER-OWNED DEVICES, BY SIZE OF POPULATIONS SERVED



As demonstrated already, there are clear differences among public libraries in the amount and types of digital literacy training and assistance offered to their patrons. A key determinant is size of populations served.[58] It was found that size is a more important factor in terms of formal training classes taught by library staff than in one-on-one assistance or classes taught by other organizations. In terms of a population size factor, the differences are most pronounced in the following order along with their slopes:[59]

- Classes taught by library staff (0.163)
- One-on-one advance scheduling (0.118)
- Online, self-paced training (0.079)
- Classes taught by other organizations (0.071)
- One-on-one assistance on demand (0.048)

[58] Data were collected and analyzed regarding the possible impact of a library's economic/wealth environment on the amounts and types of digital literacy training and digital literacy services. This experimental approach for both main libraries and branch libraries requires further methodological refinements before tentative findings become available.
[59] The slopes are obtained by fitting linear trendlines to data in the respective charts. Larger numbers in the slopes indicate a steeper slope and a more pronounced difference between smaller libraries and larger systems.

Besides the population size finding, this chapter has illustrated that branch/neighborhood libraries generally offer more digital literacy services than main libraries on all types of training delivery and on all topics and subjects, except for several advanced topics. Despite the differences in the degree of services, the profiles of most services are similar except in particular topics such as classes for basic computer skills. (Please see Chart 3.2.) In the next chapter, other current services are described for both main libraries and neighborhood libraries.

Chapter IV. Findings from Surveys about Patrons Requesting Assistance, Partnerships, and Effectiveness of Training Approaches

In this chapter, three important characteristics of digital literacy services and training are described. First, librarians identify the patrons who most often seek assistance. Second, the number and types of partnerships between libraries and other organizations are reviewed. Third, librarians state the differing levels of effectiveness in providing digital literacy training. For all three characteristics, information and data are given for main and branch libraries.

Patrons Seeking Assistance (Demographics)

The question on both surveys was:

> *In terms of demographic characteristics, which groups of patrons (if any) most often seek digital literacy assistance? Please describe the groups briefly. If there is no pattern in patrons seeking assistance, please skip to the next question.*[60]

Age is the predominant characteristic of both main and branch library patrons seeking digital assistance. Older adults/seniors are by far the population group cited most frequently by librarians based on their experiences. Further, adults more generally were listed as the third ranking group for both sets of survey respondents.[61] As shown in Table 4.1., the four other groups most frequently cited are the same as well, although in a different order and proportions. More than three-fourths of all patrons requesting digital literacy assistance are included within the top five groups for both sets of libraries. Charts 4.1 and 4.2 portray these data. Librarians' responses were then coded into categories by the project team.

[60] The survey instruments and the email letters to the directors and managers are included in Appendix B and Appendix C, respectively.

[61] Note that librarians provided answers on the basis of their own perceptions about the age of patrons, their income levels, place of residence and so forth, rather than data collected directly from patrons.

TABLE 4.1. DEMOGRAPHIC CHARACTERISTICS OF PATRONS SEEKING DIGITAL LITERACY ASSISTANCE

Main Libraries

Group/Demographic Characteristic	Percentage of Groups Identified
Older Adults/Seniors	52%
Lower-Income People	12%
Adults	9%
Second Language Learners	7%
Job-Related Requests	4%
No Pattern	3%
Hispanics	3%
Lower Education/Literacy Attainment	3%
People Without A Computer	2%
Other/Unique Characteristics	7%

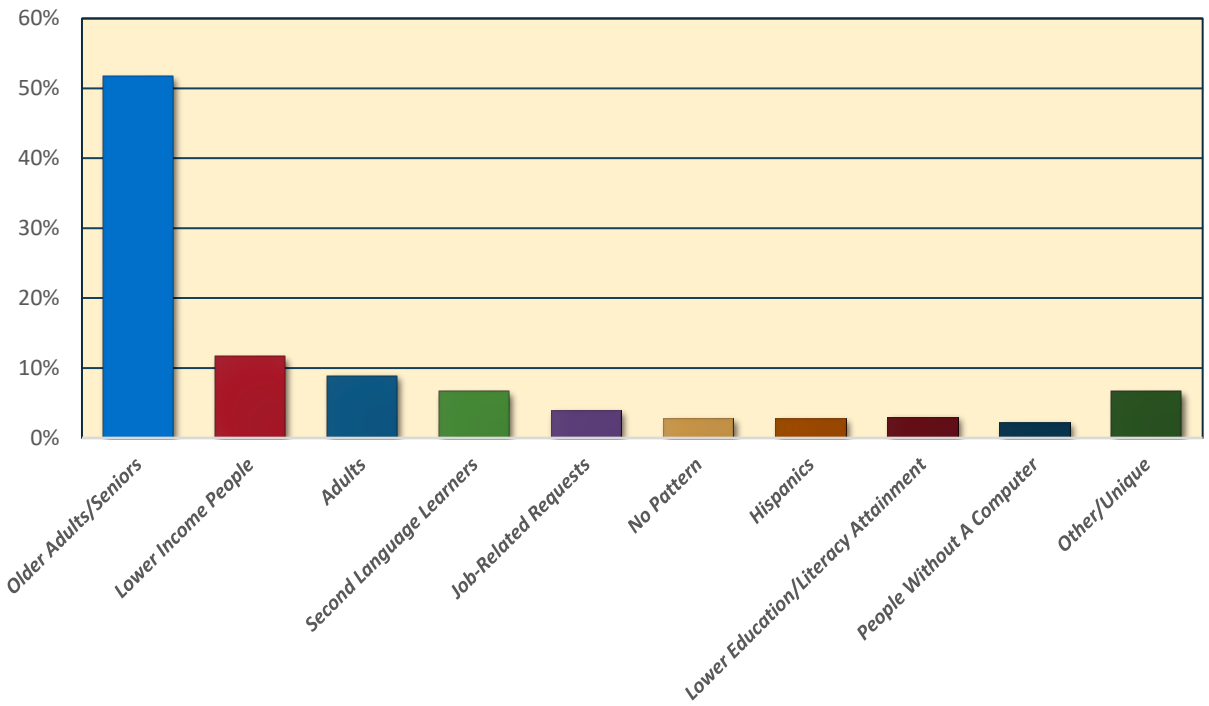
Branch Libraries

Group/Demographic Characteristic	Percentage of Groups Identified
Older Adults/Seniors	44%
Job-Related Requests	10%
Adults	9%
Second Language Learners	8%
Lower-Income People	6%
People Who Are Homeless	6%
People Without A Computer	5%
Hispanics	3%
Lower Education/Literacy Attainment	3%
Lower Computer Skills	3%
African Americans	2%
No Pattern	1%

"We have a lot of people that have to, as an example, apply for all jobs online. And we have people that have never sat down in front of a computer in their lives. And now in order to work, they have to do something that they're very uncomfortable with and they have no knowledge of, and we have to sit down and be able to help them do that."

(Amie Schultz, Tom Burnett Memorial Library)

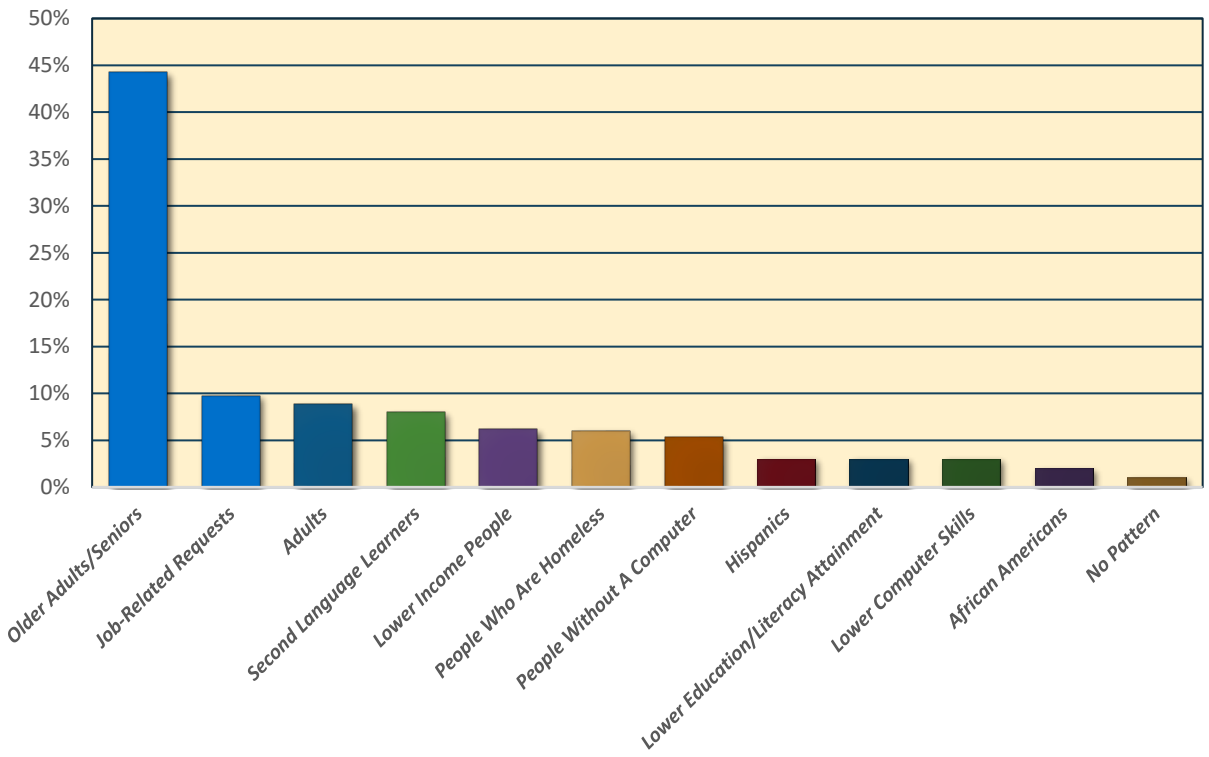
CHART 4.1. DEMOGRAPHICS OF INDIVIDUALS SEEKING DIGITAL LITERACY TRAINING AND ASSISTANCE FROM MAIN LIBRARIES



Library directors responding to their survey said that lower-income persons were their second-assistance seeking group while the branch library respondents ranked them in the top five. The job-related group was second most cited by branch library respondents while main library respondents placed this group fifth. Second language learners, that is, persons with English as a Second Language (ESL) needs, were placed fourth by both main and branch librarians of the groups wanting digital services and training. It is important to note that many Hispanics and African Americans fall within the above-mentioned groups although the survey responses do not reflect their higher presence.

The above characteristics were based on a total of 117 main librarian respondents and 66 branch librarian respondents. Librarians were able to mention multiple groups and demographic characteristics. Most librarians identified one or two groups, and percentages in the Table 4.1 and Chart 4.2 were based on a total of 186 entries and 113 entries from library directors and branch managers, respectively.

CHART 4.2. DEMOGRAPHICS OF INDIVIDUALS SEEKING DIGITAL LITERACY TRAINING AND ASSISTANCE FROM BRANCH LIBRARIES



Partnerships Between Libraries and Other Organizations

The question on both surveys was:

> *Does your library have any programs or strategic partnerships with local groups, organizations, educational institutions, or governments specifically focused on digital literacy services or training? These might be related to workforce and employment for instance. If your library does have one or more partnerships, please describe them briefly. If your library does not have any partnerships, please go to the next question.*

Main Library Digital Literacy Partnerships

Computer training partnerships as well as English as a Second Language (ESL) and General Educational Development (GED) classes are numerous. More than half of partnerships with state agencies are with

the Texas Workforce Solutions boards of the Texas Workforce Commission (TWC). Local partnerships are more varied, involving individuals and groups with the main libraries playing both leading and supportive roles. Most partnerships cited have been established to serve the lower-income and underserved patrons and communities.

Thirty-five survey respondents indicated they had programs or strategic partnerships focused on digital literacy services or training. Two respondents, however, provided qualified "no" responses stating that they had a partnership with the Texas Workforce Commission prior to the Covid shutdown, while another said that it had worked with the Start-Up Kid's Club and Texas Workforce Commission in the past.

Of the 32 libraries with current programs, two noted their partnerships were informal. Sixteen libraries named only one partner, twelve libraries said they had two partners, and five libraries had three or more partners. Fourteen libraries did not provide any detailed information on their partnerships, besides naming their partnering entity.

Five respondents said they teach computer and technology-oriented classes and rely on local community groups to promote them. Four respondents partnering with the Texas Workforce Solutions cited such activities as job seeking seminars, career readiness and education, updating computers, TWC service promotion and teaching basic computer skills to employees of area businesses free of charge.

> ***"My dream would be more contact between public libraries and those other pathways, so community colleges, four-year colleges, trade schools, just a stronger ecosystem there…We can get a better grasp of what we need to be giving people because, you can ask people what they need, but they're only going to tell you things they know about."***
>
> ***(Jana Hill, Fort Worth Public Library)***

Other examples of partnerships were varied. One library director said that their library had received a Digital Navigators grant that would allow the library to establish partnerships with local businesses to do outreach computer classes. A different director said they occasionally hosted coding programs led by

local organizations that teach coding and computer science on a full-time basis. A third director stated her library partnered with a Spanish instructor to offer English classes and some computer help, while another director said they work with a local school district that offers ESL and GED classes in workforce and employment.

Branch Library Digital Literacy Partnerships

Partnerships for computer training were the most frequently cited by branch managers. As with main library partnerships, Texas Workforce Solutions was mentioned as a key state entity partner. Other collaborations are occurring with hometown universities, junior colleges, and community centers. Some partnerships are initiated and occur between the branch library and a local group, while other partnerships rely on their main library to arrange those connections. Nearly all partnerships target lower-income and individuals using social services.

Seventeen branch managers indicated they had strategic partnerships and activities focused on digital literacy services or training. Three of those, however, were qualified "no" responses. One manager said the branch had partnered with Texas Workforce Solutions in the past, another stated that they had just recently contacted a neighborhood community center to possibly offer computer services, while a third said the branch had not had a training partnership since the pandemic.

Four of the 14 branches with current collaborations indicated that they partner with their respective main library. For instance, one branch manager wrote that "the El Paso Public Library Literacy Center schedules programs at different branch locations and that UTEP students, 4-H Technology Changers also provide computer training." Another branch manager noted that "partnerships are coordinated through the Adult Services Department, which in turn reaches out to branches including ours to host classes or programs."

Several respondents only provided the names of their partners including (1) Workforce, (2) Goodwill, San Antonio Museum of Science and Technology (SAMSAT), San Antonio Food Bank and (3) Workforce Solutions Greater Dallas.

Other branch managers offered more details about their partners and the services and training they offer including:

- *Literacy Volunteers of Laredo and Laredo College provide computer classes that cover computer basics, basic email skills, office productivity software.*

- *We have a partnership with two community centers to provide off-site computer/technology classes to seniors. We have a partnership with a health department to assist ex-felons in creating resumes and applying for jobs, to help them re-enter society.*

- *Our partnership with Workforce Solutions of Greater Dallas is more related to using their resources. We moved away from classes as they were a logistical nightmare, and our patrons enthusiastically prefer the one-on-one approach.*

- *We have a partnership with the YMCA to lend them laptops for their home school programs.*

- *We will be using NorthStar curriculum for our classes. Our card holders also have access to databases like ancestry.com, Job Now, Word Cat, and LinkedIn Learning, among others.*

- *We have partnered with the Texas A&M University in Kingsville (TAMUK) Engineering Department, and they have received grants to partner with us. Instructors have planned classes for computer classes and technology training in the past. We have also partnered with TAMUK because they are offering a new aerospace engineering program and they want to offer low-income students in our low economic area to promote their new program in our libraries.*

Comparison of Main and Branch Library Partnerships

Main and branch library partnership survey responses show more similarities than differences. In terms of the number of partnerships, the numbers are remarkably similar. For the main libraries, the percentage having current or pre-pandemic partnerships is 21.2%. For the branch libraries, the percentage is 21.2% also. For current partnerships, the frequency is 19.4% for main libraries and 17.5% for branch libraries.[62]

There are numerous other similarities:

- Computer training is the preferred service offering although delivery options vary.
- The Texas Workforce Commission is the primary state entity partner.

[62] For main libraries, 165 directors answered that question. Therefore 35/165=21.2% and for current partnerships, the calculation is 32/165=19.4%. For branch libraries the respective calculations are: 17/80=21.2% and 14/80=17.5%.

- Some partnerships are informal.
- Grants have spurred partnerships.
- Some libraries have both individual and institutional partners.
- The pandemic affected creating or sustaining partnerships.
- Service and training are programmed for lower-income and underserved communities.

The primary difference between main and branch library partnerships is apparent in the number of partners. About half of the main libraries with partnerships have at least two partners, while branch libraries normally have only one partner.[63]

Effective and Ineffective Approaches in Teaching Digital Literacy Skills

The question on both surveys was:

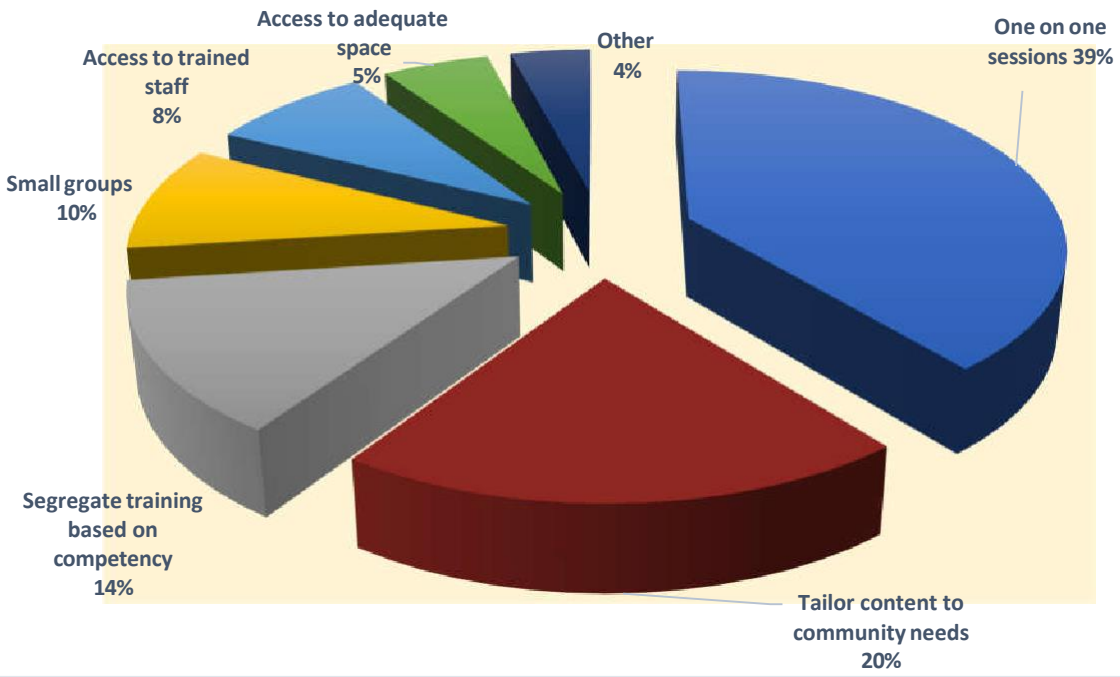
> *From your experience what works and what does not in providing digital literacy training and teaching digital literacy skills?*

Main Libraries

Directors responding to the library survey believe one-on-one sessions are the best teaching method for enhancing the digital literacy skills of their patrons. Thirty-nine percent (39%) of the respondents said that individual sessions worked best, followed by tailoring the content to meet community needs (20%), and segregating the training based on a patron's digital competency (14%). Other favorable practices included small group settings (10%), access to trained staff (8%), and access to adequate space (5%).

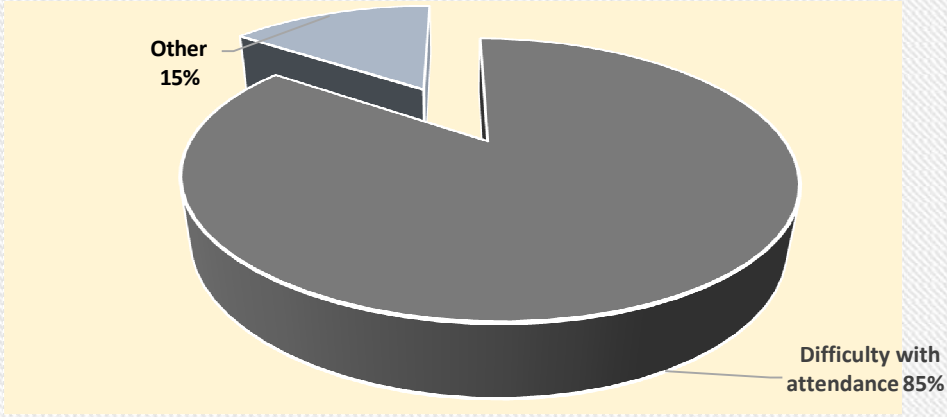
[63] All verbatim responses for partnerships from library directors and branch managers are available to be downloaded from this TSLAC link: https://www.tsl.texas.gov/digitalliteracy.

CHART 4.3. MAIN LIBRARIES--WHAT WORKS IN DIGITAL LITERACY TRAINING AND ASSISTANCE



Lack of attendance at classes was the predominant reason given for what has proven ineffective. Eighty-five percent (85%) of the library directors who responded said that it was difficult achieving adequate attendance at training classes. Other barriers mentioned were childcare access, lack of transportation and too many options.

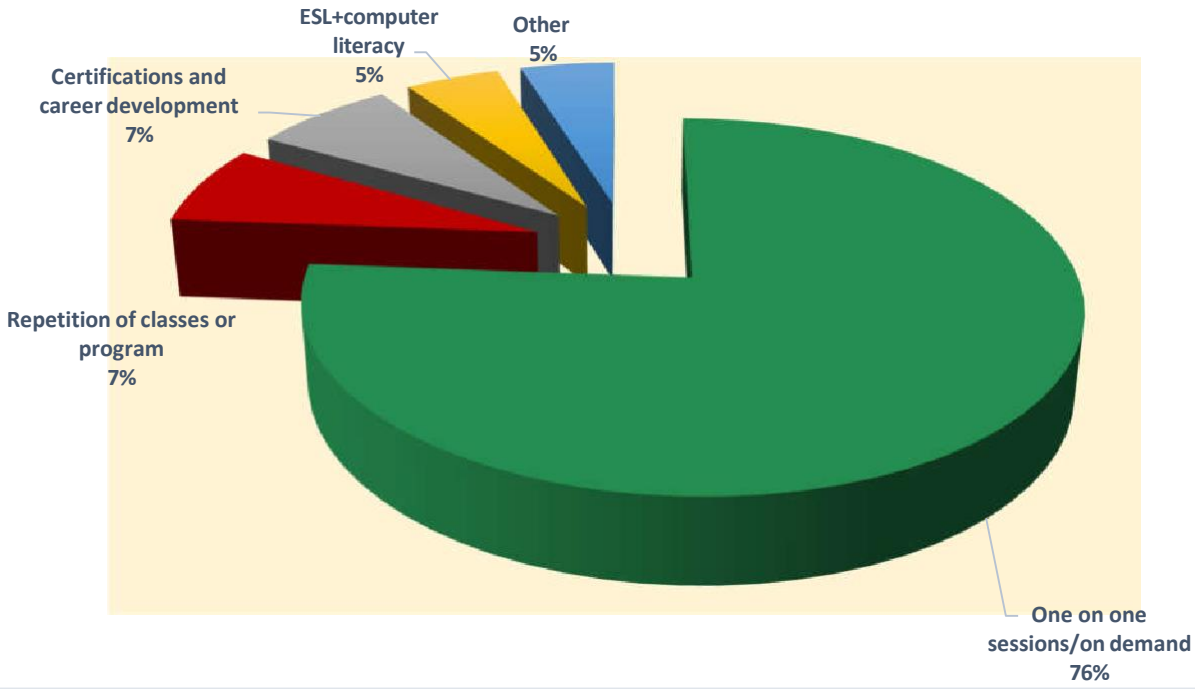
CHART 4.4. MAIN LIBRARIES--WHAT DOES NOT WORK IN DIGITAL LITERACY TRAINING AND ASSISTANCE



Branch Libraries

One-on-one sessions, especially those provided on demand, were noted by branch library survey respondents as the most preferred digital literacy and skills training approach. Seventy- six (76%) of the respondents said that these individualized sessions on demand worked well for their patrons. Other favorable approaches cited included the practice of repeating classes or programs (7%), training that leads to some type of certification and career development (7%), and combining English as a Second Language (ESL) and computer literacy classes (5%).

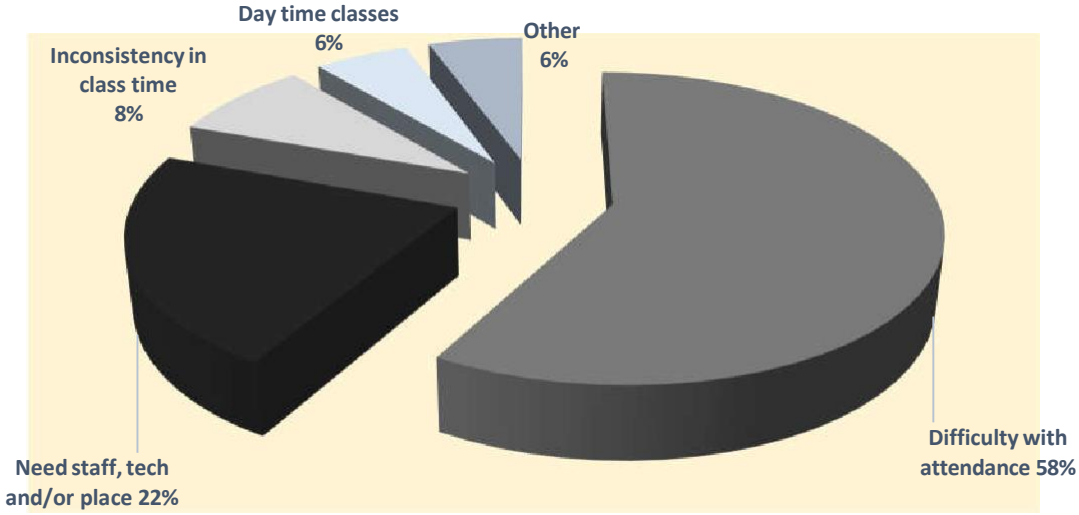
CHART 4.5. BRANCH LIBRARIES--WHAT WORKS IN DIGITAL LITERACY TRAINING AND ASSISTANCE



What does not work for branch managers is scheduling classes because attendance often is subpar. Please see Chart 4.6. More than half of the branch managers responding said that it was difficult to entice patrons to attend their digital literacy training classes and programs. About a quarter (22%) of the respondents said that their training offerings were affected by staff shortages, technical know-how, or a lack of space. Some cited inconsistency in class times (8%), and daytime classes (6%). Other difficulties cited were lack of information about the training and video-based learning.[64]

[64] All verbatim responses from library directors and branch managers are available to be downloaded from this TSLAC link: https://www.tsl.texas.gov/digitalliteracy.

CHART 4.6. BRANCH LIBRARIES--WHAT DOES NOT WORK IN DIGITAL LITERACY TRAINING AND ASSISTANCE



Chapter V. Unmet Digital Literacy Needs, Priorities for Addressing Needs, and Strategies of Library Directors and Branch Managers

This chapter describes issues related to expanding digital literacy assistance and training in communities and neighborhoods. Library directors and branch managers were asked to answer such questions as:

- Is there a need for more digital literacy service offerings or are other organizations providing the necessary and sufficient services?
- If there are needs, which are the most critical ones?
- If more services are desired, what are the major barriers and constraints to providing these services? Is it lack of personnel, computer equipment, training materials, financial resources, patron demand, or other reasons?
- What types of programming options would be of most benefit if additional resources were available?

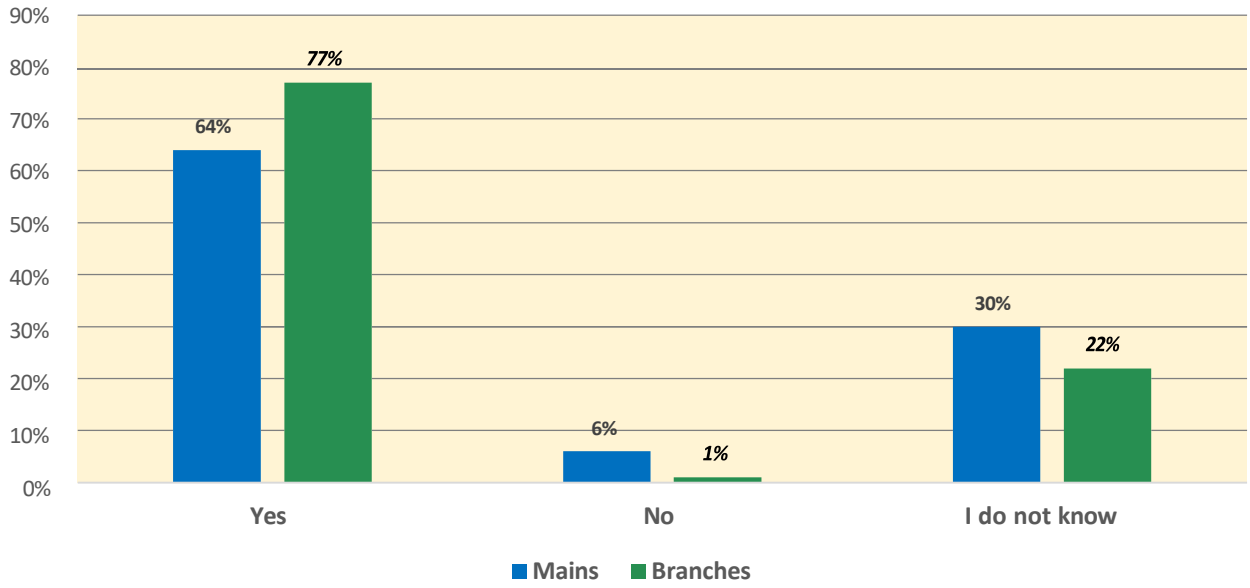
In a final section, information is presented about directors' digital literacy plans and strategies.

Digital Literacy Needs in Communities and Neighborhoods

Determining if there are unmet digital literacy needs is one key component of this research. These needs, if any, were assessed by the library directors and branch managers. No data were gathered directly from library patrons. The large majority of librarians believe there are unmet needs, few believe there are not unmet needs, and many other librarians say they do not know if there are unmet needs. There are also differences in the assessments of needs by library directors and branch managers.

As shown in Chart 5.1 below, approximately two-thirds or more of both groups of librarians believe there are major unmet needs. Only six percent of library directors and fewer than two percent of branch managers believe there are not unmet needs. Many directors and managers, however, say they do not know: about 30 percent of directors and 20 percent of managers, respectively.

CHART 5.1. UNMET DIGITAL LITERACY NEEDS AS ASSESSED BY LIBRARY DIRECTORS AND BRANCH MANAGERS



N=165 Main Libraries N= 78 Branch Libraries

Are there unmet digital literacy needs in your community? (Library Directors)
Are there unmet digital literacy needs in the neighborhood(s) your branch serves? (Branch Managers)

Views of librarians about unmet needs are closely tied to the populations they serve. Table 5.1 shows that more than half of the librarians in smaller communities say they do not know if their community has unmet needs. As populations served increase, a higher proportion of librarians believe there are unmet needs and a smaller proportion say they do not know.

TABLE 5.1. UNMET DIGITAL LITERACY NEEDS OF COMMUNITIES BY SIZE OF POPULATIONS SERVED

	under 5,000	5,000-14,999	15,000-64,999	65,000-174,999	>175,000
Yes	34%	65%	74%	82%	87%
No	7%	4%	7%	0%	0%
I do not know	59%	31%	19%	18%	13%

N=165 Main Libraries

The surveys sought information and specific details about the current needs and priorities for addressing those needs. In the initial question, librarians were allowed to identify as many needs as they perceive currently exist in their communities or their neighborhoods, The questions were:

> *What are the key digital literacy needs in your community? Please check as many as apply.* (Library Directors)
>
> *What are the key digital literacy needs in your neighborhood and nearby community? Please check as many as apply.* (Branch Managers)

Chart 5.2 shows the responses from library directors. Three needs were identified by at least half of the library directors responding:

- More Trainers
- More Classes
- Low Computer Skills Within the Community.

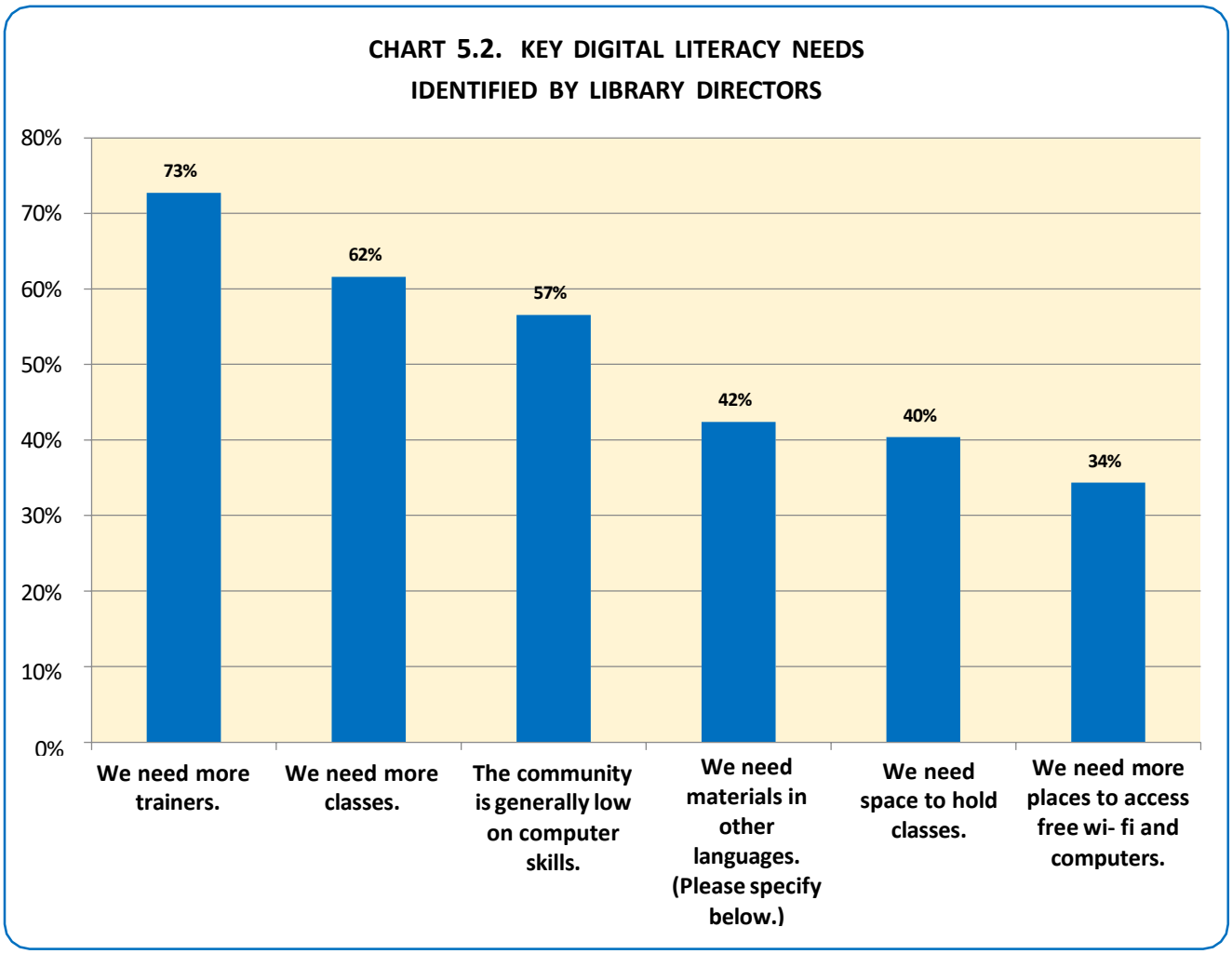
Three other needs were identified by at least one third of the respondents:

- Materials in Other Languages
- More Space to Conduct Training
- More Spaces to Access Free Wi-Fi and Computers.

Thirty-five directors responded to an "other" option as well. About one third provided specifics on the languages of materials needed. Besides Spanish, languages mentioned were Chinese, French, Hindi, Burmese, Somali, and Russian. Other respondents cited examples of staff training needs, class attendance issues, and community access problems. Seven respondents listed multiple needs or gave general statements about their communities.[65]

> ***"Our community in particular would find it beneficial if the training/materials were available in languages other than just English and Spanish."***
>
> ***(Amanda Barrera, Amarillo Public Library)***

[65] Those comments can be accessed via this TSLAC link: https://www.tsl.texas.gov/digitalliteracy.

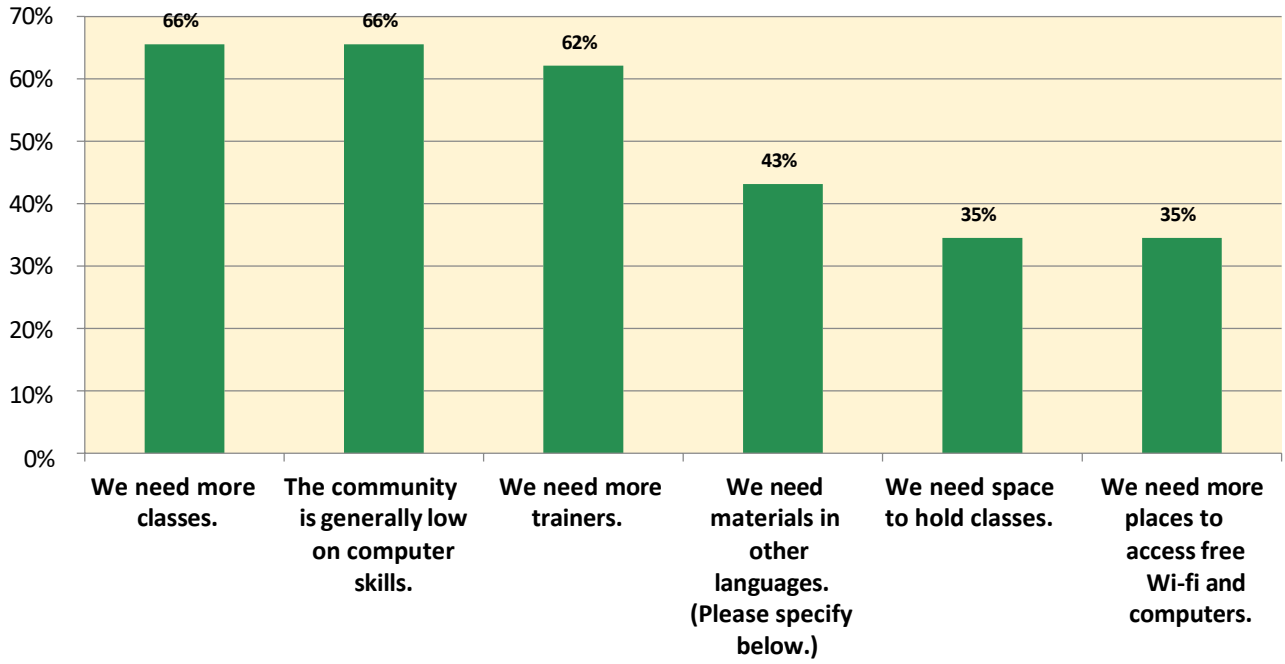


N=99

More than half of the responding branch managers also selected the same three needs as library directors, although the rankings were different: more classes, low computer skills within the community, and more trainers. (Please see Chart 5.3.) Further, as with library directors, more than a third of branch managers also identified three other needs: materials in other languages, more space to conduct training, and more spaces to access free wi-fi and computers. Eighteen branch managers responded to an "other" option as well. Nearly all provided specifics on the languages of materials needed or the

subjects of classes needed.[66]

CHART 5.3. KEY DIGITAL LITERACY NEEDS IDENTIFIED BY BRANCH MANAGERS

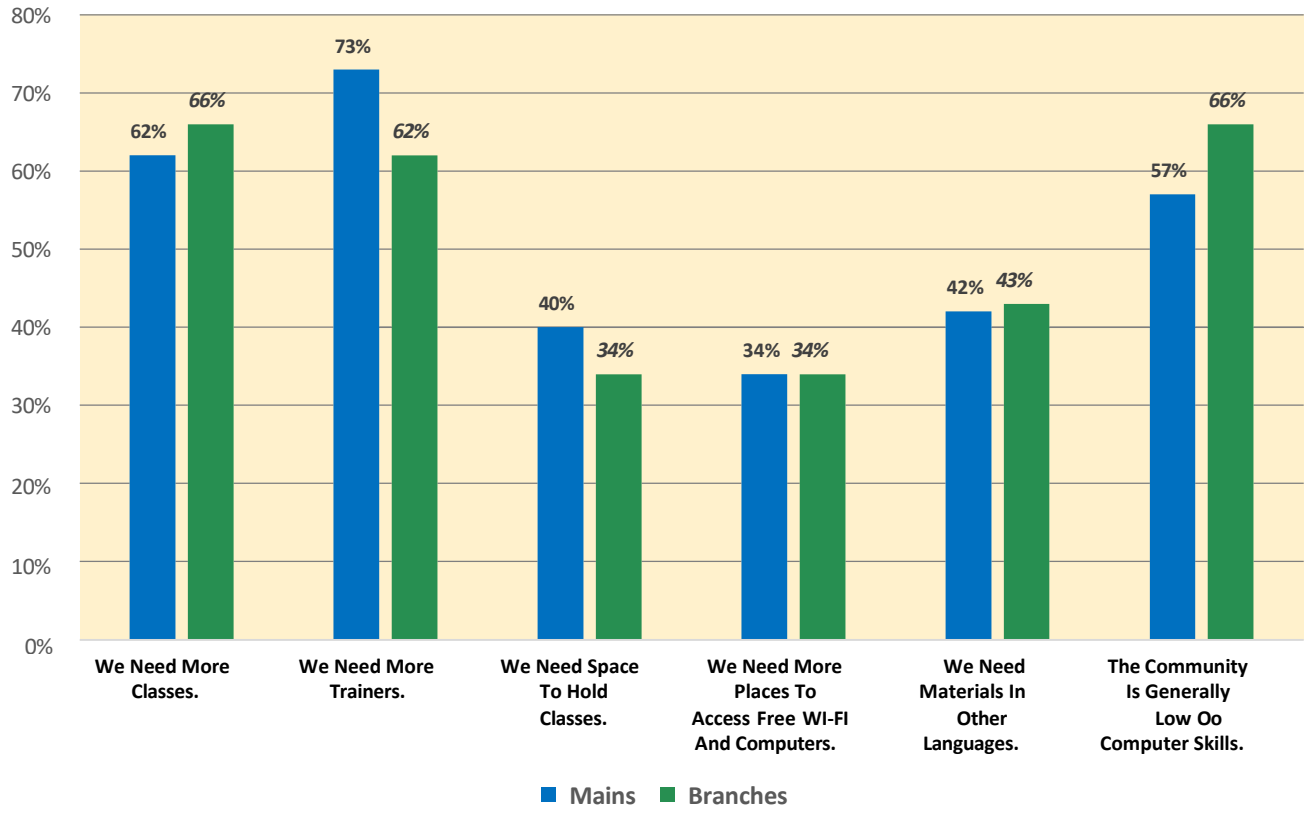


N=58

Chart 5.4 illustrates the similarity of the responses about needs among directors and branch managers. In both groups, large numbers of librarians identify needs for more trainers and classes, and believe their communities and neighborhoods are low on computer skills. Fewer librarians in both groups identify needing other language materials, more space for classes, and locations to access free wi-fi and computers.

[66] All verbatim comments can be accessed via this TSLAC link: https://www.tsl.texas.gov/digitalliteracy.

CHART 5.4. COMPARISON OF DIGITAL LITERACY NEEDS IDENTIFIED BY LIBRARY DIRECTORS AND BRANCH MANAGERS



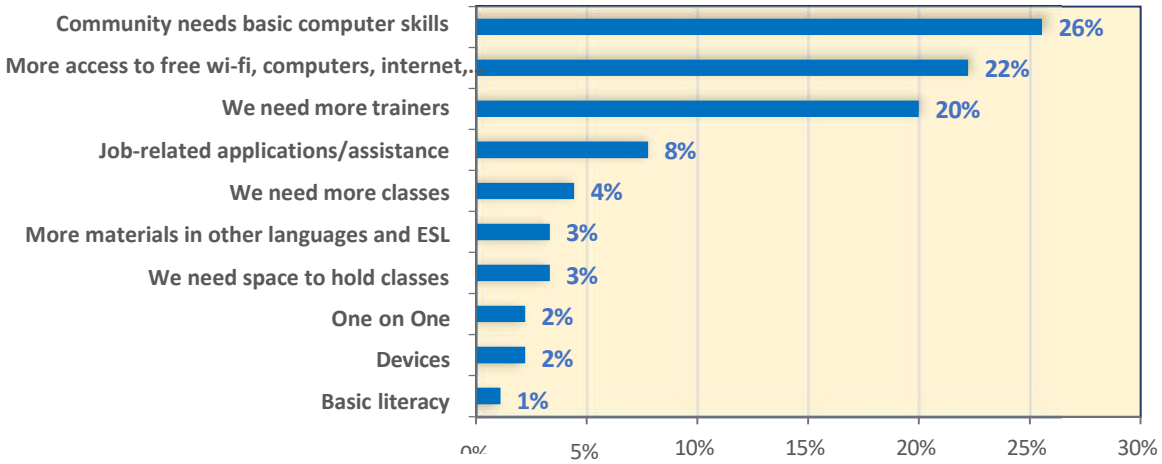
To probe further about needs, a subsequent question specifically asked about which needs were the highest priority for librarians. Librarians were asked to rank order their needs by importance: the most important, second most important, and third most important.

> *In terms of your community's needs, which are the most important services or skills needing attention? Please specify below the most important, the second most important, and the third most important of the choices you checked in the previous question.*

Most librarians provided choices for all three, although a few librarians specified only one or two top priorities. Because a library director could name three priorities, two tabulations were constructed after

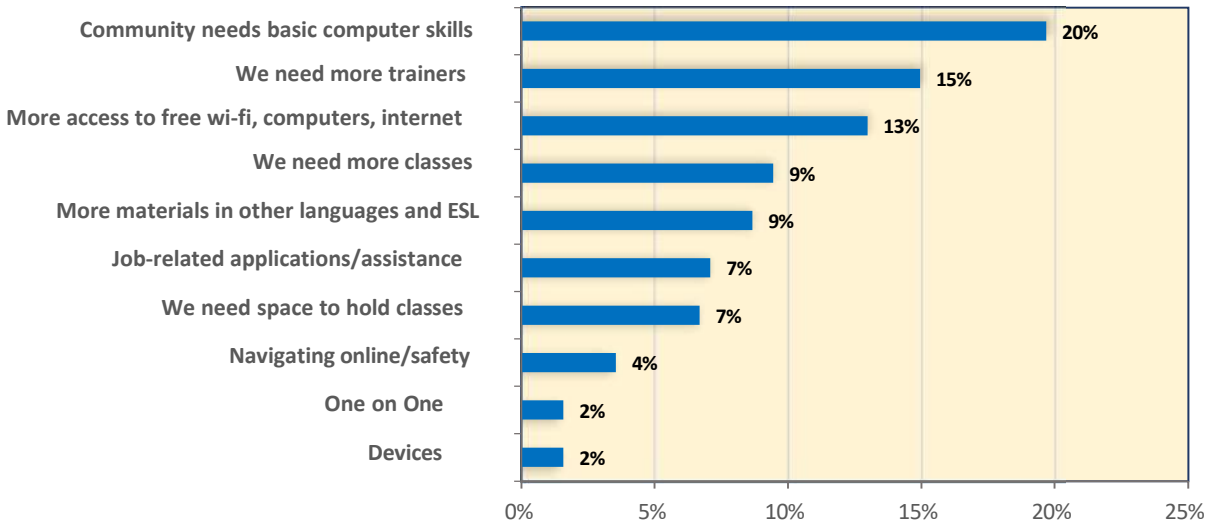
coding of the responses. One tabulation aggregated the total number of times a need was mentioned as either a first, second, or third priority. Another tabulation was made of the number of times a need was mentioned only as a first priority. These tabulations for library directors are shown below in Charts 5.5 and 5.6.

CHART 5.5. HIGHEST SINGLE PRIORITY NEED OF LIBRARY DIRECTORS



N=90

CHART 5.6. TOP THREE PRIORITY NEEDS OF LIBRARY DIRECTORS



N=254

The highest priority for library directors is basic computer training that would help to overcome the low computer skill levels of patrons in their communities. That priority is chosen first in the tabulation of most important needs and also in the top three important needs. The next two highest priority needs are (1) more access to free wi-fi, computers, internet, and broadband and (2) more trainers. These two needs are ranked in the top three of both tabulations by library directors. Below those top three needs were: (a) more classes; (b) materials in other languages and ESL; and (c) job-related applications/assistance.

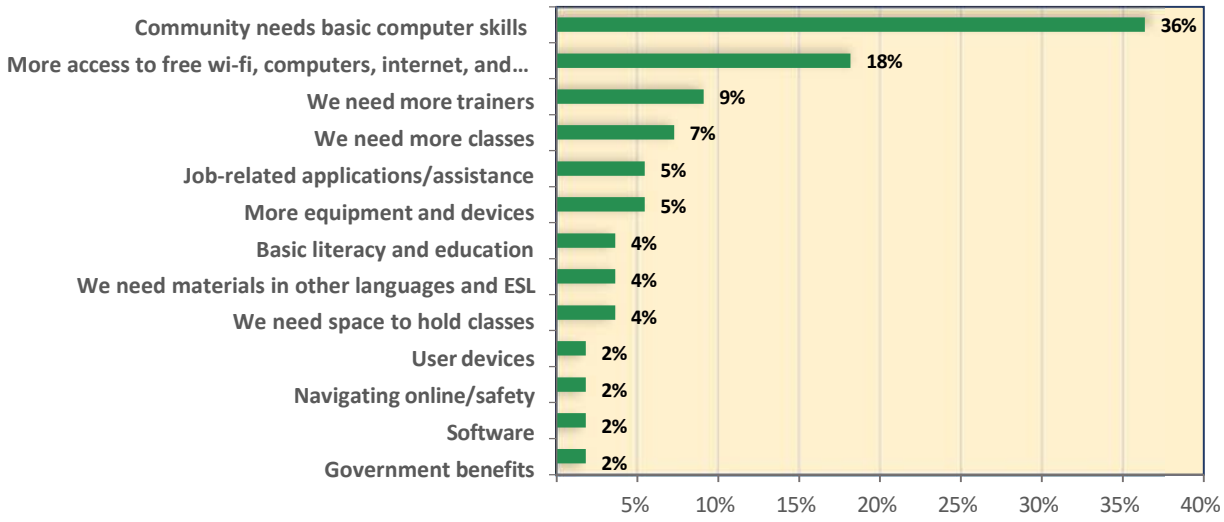
As is apparent from comparing Charts 5.2, 5.5, and 5.6, the most pressing needs are dependent in part on the questions the library directors are asked. The need for basic computer skills training and assistance rises in priority as does more access to free wi-fi, computers, internet, and broadband when the librarians are given the opportunity to answer without having to choose among pre-selected options. The need for more trainers still is a priority. Those three needs are far above all others as shown in Chart 5.5 and are also the top three in Chart 5.6, although the separation from the other priorities is

less distinct. Because librarians stated their own priorities as shown in Chart 5.5 and Chart 5.6, those should be considered the better summary than the priorities shown in Chart 5.2.

> ***"Small rural libraries have basically a budget of zero, so grants, donations and volunteers, whether they be related or not, are critical for the ultimate success of these libraries. As I'm sure you know, small rural libraries are adapting to changes by becoming community centers and tech hubs during these trying times."***
>
> ***(Savannah Monroe, Maud Public Library)***

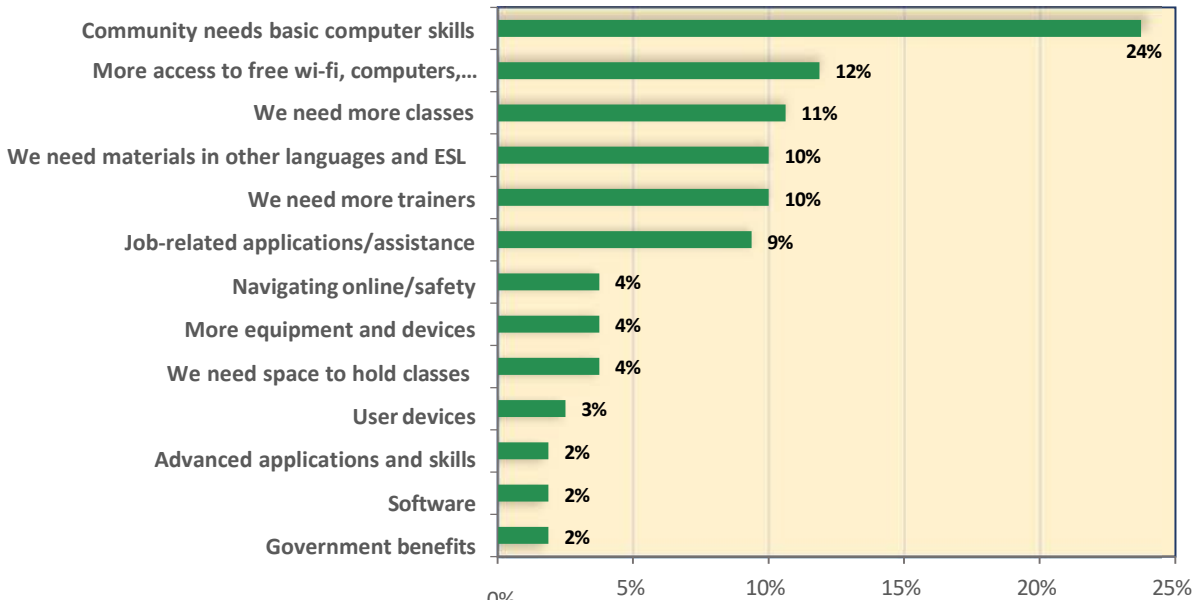
Priority rankings by branch managers are similar as shown in Charts 5.7 and 5.8. The top need once again is basic computer skills training and assistance to help overcome a perceived need of patrons served by neighborhood libraries. That is considered the single most important need by one third of all branch managers, which is twice as many as the second identified need of more access to free wi-fi, computers, internet, and broadband. More access to free wi-fi, computers, internet, and broadband also is the second identified need of the highest three priorities. More trainers and more classes also are ranked highly as needs. Job-related assistance and materials in other languages are chosen frequently as priorities as well. As with the priorities for library directors, Charts 5.7 and 5.8 contain the best summary of the priorities of managers drawn from the open-ended question.

CHART 5.7. HIGHEST SINGLE PRIORITY NEED OF BRANCH MANAGERS



N=55

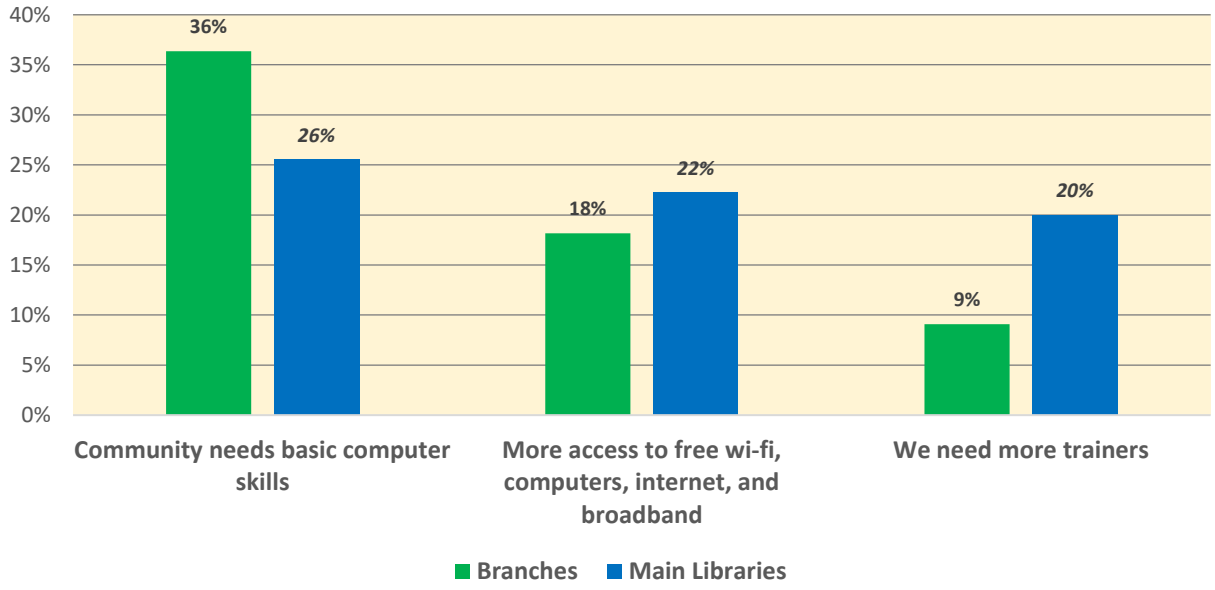
CHART 5.8. TOP THREE PRIORITY NEEDS OF BRANCH MANAGERS



N=160

A final chart in this section, Chart 5.9, shows the three top priority needs for library directors and branch managers and the proportions of each group that have selected those priorities. While there are small differences between the two groups, the major finding is that the top needs are evident, and they are the same for both groups. For the most part, both groups also believe there are significant needs for more classes, more language materials and ESL, and job-related assistance.

CHART 5.9. RANKING OF SINGLE MOST IMPORTANT NEED BY LIBRARY DIRECTORS AND BRANCH MANAGERS



Priorities with Additional Resources

In the prior section library directors and managers identified their most important needs. In this section, library directors and managers were asked for their priorities if additional resources became available.

> *If funding is limiting what digital literacy services your library can provide, what would be your priorities if additional resources were available? Please rate how beneficial each option would be. If funding is sufficient at the present time, please skip to the next question.*

Directors could choose from the following options:

- Technology and equipment to conduct training
- Compensation for staff/consultants to conduct training
- Purchases of software for everyday use
- Purchases of training curriculums
- Funding for training of current library staff
- Other priorities (please describe briefly)

For each option directors could select:

- Not Beneficial
- Somewhat Beneficial
- Moderately Beneficial
- Quite Beneficial
- Extremely Beneficial

More than 130 directors responded, and 19 also submitted other priorities if additional funding became available.[67] Directors selected three options as being more beneficial than the others:

1. Compensation for staff/consultants to conduct training
2. Funding for training of current library staff
3. Technology and equipment to conduct training

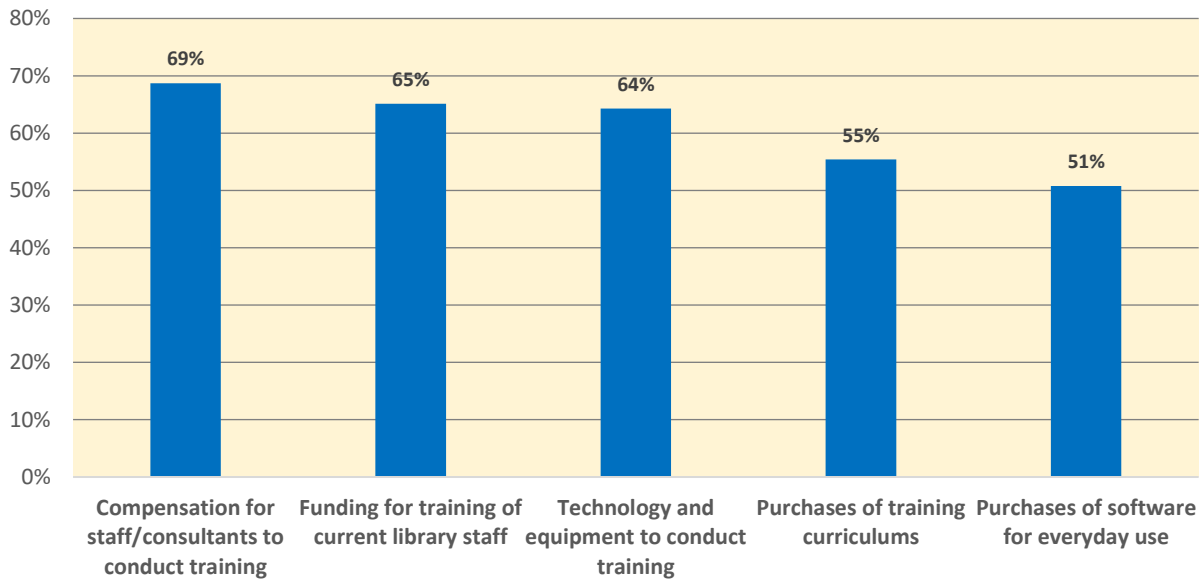
Smaller percentages of directors selected the two other options:

4. Purchases of training curriculums
5. Purchases of software for everyday use

Chart 5.10 shows the percentages for each option after combining the number of librarians choosing "Extremely Beneficial" and "Quite Beneficial."

[67] Those other priorities are shown verbatim in the responses available from the TSLAC link: https://www.tsl.texas.gov/digitalliteracy . Four respondents mentioned space, four mentioned more library staff/volunteers, three said more trainers, two said hotspots, and the others were unique.

CHART 5.10. LIBRARY DIRECTOR PRIORITIES WITH ADDITIONAL RESOURCES



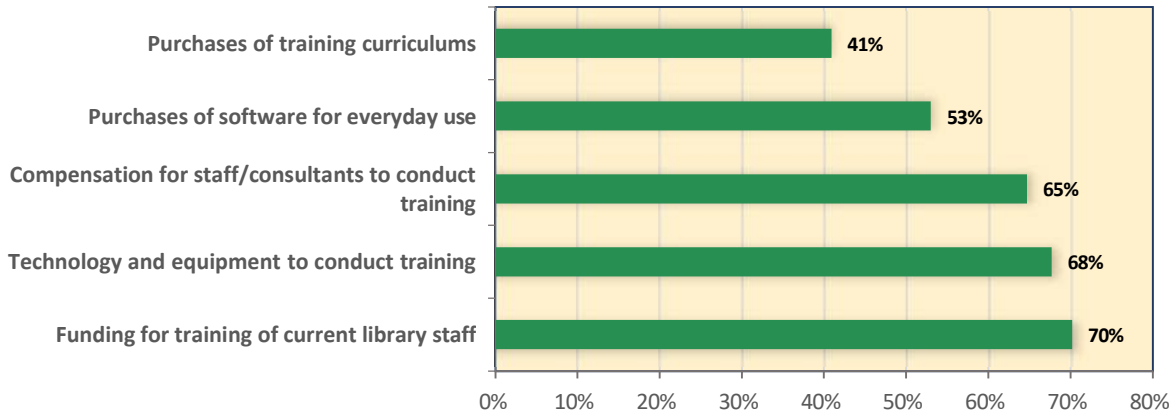
N=Approximately 130 as some directors did not respond to each option. Percentages are the combined "Extremely Beneficial" and "Quite Beneficial."

Branch managers' priorities are shown in Chart 5.11.[68] Managers selected three options as being more beneficial than the two others:

1. Funding for training of current library staff
2. Technology and equipment to conduct training
3. Compensation for staff/consultants to conduct training
4. Purchases of software for everyday use
5. Purchases of training curriculums

[68] Seven branch managers also provided other priorities, and those are shown in the verbatim section of this report. Two respondents mentioned more library staff/volunteers, one said space, another said equipment, and the others were unique.

CHART 5.11. BRANCH MANAGER PRIORITIES WITH ADDITIONAL RESOURCES



N=Approximately 68 as some managers did not respond to every option.
Percentages are the combined "Extremely Beneficial" and "Quite Beneficial."

While the top three priorities for managers and directors are similar there are slight differences between the two groups of respondents, as shown in Chart 5.12. Both groups would choose to spend additional resources initially on:

- Compensation for staff/consultants to conduct training
- Funding for training of current library staff
- Technology and equipment to conduct training

There is a slight preference by library directors for assistance in having more trainers and a preference by branch managers in having more technology and equipment. It should be noted, however, that many branch managers believe spending new resources on technology and equipment would be very beneficial. As shown in Table 5.2, half of the branch managers ranked technology and equipment as "extremely beneficial," by far the highest among the five options. Few branch managers ranked technology and equipment as "quite beneficial," which led to a combined ranking below that of funding for training of current staff.

TABLE 5.2. BRANCH MANAGER RATINGS OF BENEFICIAL OPTIONS WITH ADDITIONAL RESOURCES

	Extremely Beneficial	Quite Beneficial	Moderately Beneficial	Somewhat Beneficial	Not Beneficial
Technology and equipment to conduct training	50%	18%	19%	9%	4%
Compensation for staff/consultants to conduct training	32%	32%	16%	10%	9%
Purchases of software for everyday use	24%	29%	23%	17%	8%
Purchases of training curriculums	15%	26%	33%	17%	9%
Funding for training of current library staff	31%	39%	16%	9%	4%

N=Approximately 68 as some managers did not respond to all options.

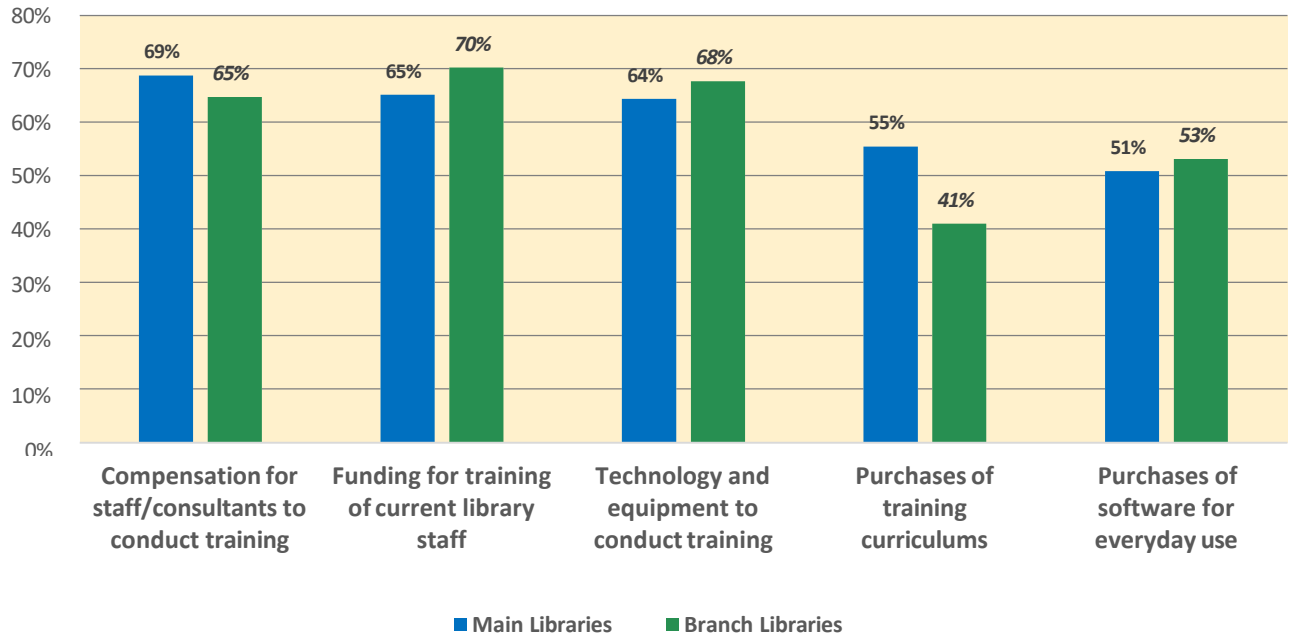
Both groups place less priority on software and training curriculums. There is one caveat to be noted. As shown in Table 5.3, library directors ranked purchases of software for everyday use as the third highest priority for "extremely beneficial." However, few library directors ranked purchases of software for everyday use as "quite beneficial," which led to a combined ranking below that of other options.

TABLE 5.3. LIBRARY DIRECTOR RATINGS OF BENEFICIAL OPTIONS WITH ADDITIONAL RESOURCES

	Extremely Beneficial	Quite Beneficial	Moderately Beneficial	Somewhat Beneficial	Not Beneficial
Technology and equipment to conduct training	28%	37%	13%	13%	10%
Compensation for staff/consultants to conduct training	41%	27%	12%	11%	8%
Purchases of software for everyday use	31%	20%	22%	16%	11%
Purchases of training curriculums	26%	29%	21%	15%	9%
Funding for training of current library staff	37%	29%	21%	7%	7%

N=Approximately 130 as some directors did not respond to each option.

CHART 5.12. PRIORITIES OF LIBRARY DIRECTORS AND BRANCH MANAGERS IF MORE RESOURCES WERE AVAILABLE



Percentages are the combined percentages for "Extremely Beneficial" and "Quite Beneficial."

In summary, if library directors and branch managers had additional resources, they would concentrate them on personnel and equipment, not software and curriculums.

Plans and Strategies For More Digital Literacy Services

Both library directors and branch managers were asked about plans and strategies for future digital literacy services.

> *Do you have any type of plan or strategy to provide more digital literacy services in the future? If you do, please describe it below briefly. If you do not, please skip to the next question.*

Main Library Digital Literacy Strategies

Sixty respondents, or slightly more than one-third of all main libraries responding to the survey indicated they had a plan or strategy to provide more digital literacy services or training in the future. A total of 85 plans or strategies were listed as a single librarian could identify more than one strategy.

Twenty-one strategies and plans were "running classes for adults" while another 12 were "one-on-one assistance." Eleven plans emphasize "community and community access partnerships." Eight strategies and plans are currently being revised, and six libraries will be starting or enhancing training for older adults. Smaller numbers of plans and strategies are related to creating a volunteer base, physical facilities, ESL, hiring or accessing a specialist, children's programs, and working with branches. Fourteen directors said their plans and strategies would be restricted due to funding or staff limitations.

Branch Library Digital Literacy Strategies

Forty-two, or approximately half of all branch respondents indicated they had a plan or strategy to provide more digital literacy services or training in the future. A total of 61 plans or strategies were listed as a single librarian could identify more than one strategy.

Twenty-five strategies and plans were "running classes for adults" while another 15 were "one-on-one assistance." Five strategies and plans are currently being revised, and three libraries will be starting or enhancing training for older adults/senior citizens. Two plans each were cited for "community and community access partnerships," hiring or accessing a specialist, and device access. Four managers indicated their plans and strategies would be restricted due to funding or staff limitations.

Main and branch library strategies and plans show more similarities than differences. Please see the Table 5.4 for the percentages of the largest categories.

TABLE 5.4. STRATEGIES AND PLANS FOR MAIN LIBRARIES AND BRANCH LIBRARIES

	Main Libraries	Branch Libraries
Running classes for adults	25%	41%
Funding and staff limitations prevent growth	16%	7%
One-on-one training	14%	25%
More community and computer access partnerships	13%	3%
Revising plans	9%	8%
Older adult training	7%	5%
Physical space access or renovations	4%	2%
Build volunteer base	2%	0%
Hiring/access to a specialist to lead program	2%	3%
Non-English language offerings	2%	2%
Regional not just main office programs	2%	0%
Children programs	2%	2%
Device access	0%	3%

Note: Percentages were calculated on the total number of plans and strategies as the denominator, not the numbers of directors and managers.

As is apparent, main libraries have a more varied set of strategies than branch libraries, in which two thirds of all strategies will be classes for adults and one-on-one assistance.

> ***"We are always stronger when we pool resources and skills. Creating a library of tools in variety of languages presentations, workshops etc... allows for anyone to pick up the training and deliver it."***
>
> ***(Libby Holtmann, Plano Public Library System)***

Main libraries, by far, said they were going to build more community partnerships than branches. More main libraries are also planning for physical space and volunteers in their future activities. Branch libraries, in contrast, are going to place much more emphasis on one- on-one assistance and more

attention to device access. The groups were similar on "revising plans" and roughly equal percentages said "senior training" would be a focus. That was also the case for children's programs, hiring or accessing a specialist, and ESL.[69] Twice as many main library plans will be limited by funding and staff limitations than for branches.[70]

[69] All verbatim responses about strategies and plans are available for review by downloading from the following TSLAC link: https://www.tsl.texas.gov/digitalliteracy.

[70] The percentage of library directors who cited personnel or funding restrictions as constraining their future digital literacy services was 23%, while for branch managers it was 10%.

Chapter VI. Additional Perspectives on Findings from Surveys of Texas Public Library Directors and Branch Managers

In this chapter key similarities and differences between Texas libraries and national averages are identified. Also, this chapter compares data from the 2022 surveys with another Texas survey (Adult Literacy Partnership Survey) and a database of Texas libraries (EDGE). These analyses compare data for all libraries in Texas and for some disaggregated types of libraries, when comparable questions and data are available. Several of the major questions are:

- How do Texas libraries compare on various digital literacy services with libraries nationally?
- Are there particular types of Texas libraries that have more or fewer types of services than libraries nationally, for instance those in suburban communities and small towns elsewhere in the United States?
- Are there topics or subject areas, such as teaching basic computer skills or online safety, in which Texas libraries surpass training levels elsewhere?

In a later chapter section, information is presented about those libraries in the 2022 survey that do not currently offer any digital literacy services or assistance. And in the final section data are presented about the resources being allocated to digital literacy currently by Texas public libraries.

Comparison with 2020 Public Library Technology Survey Summary Report

The first comparisons are with the Public Library Association's *2020 Public Library Technology Survey Summary Report*.[71] One section of that report collected data on digital literacy and training throughout the United States. Some direct comparisons are possible with the 2022 Texas survey of central (main) libraries.

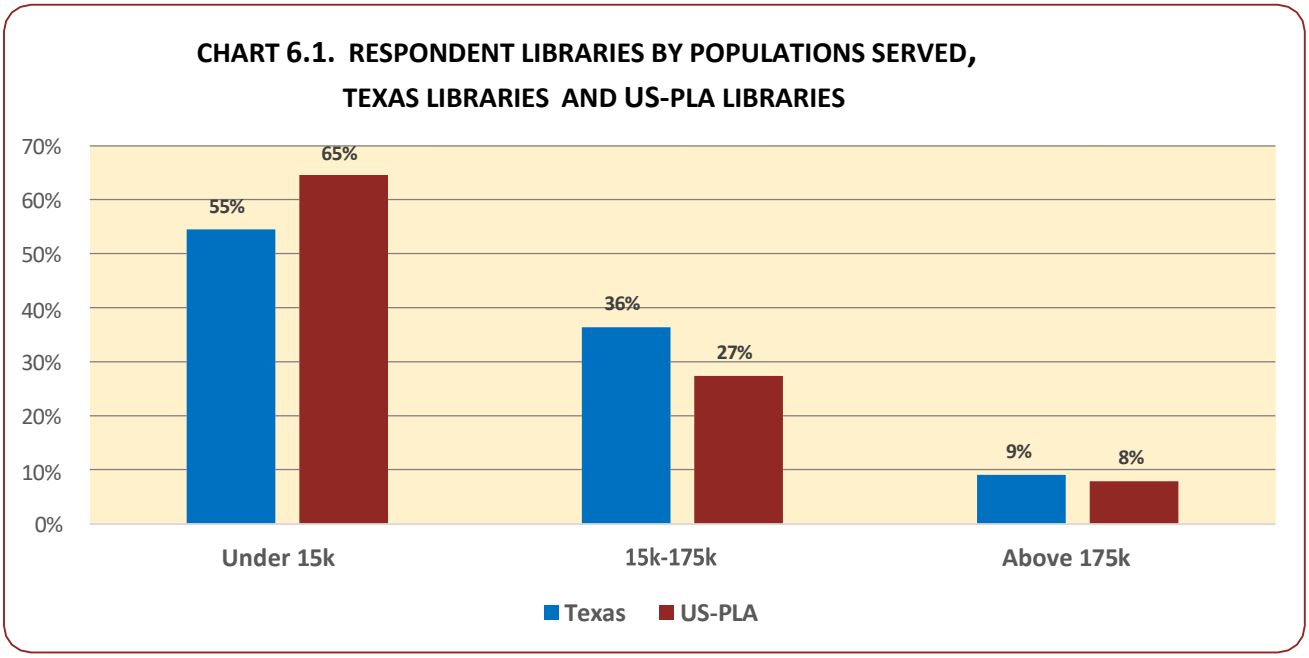
At the outset it must be noted that the Public Library Association (PLA) respondents and the 2022 Texas respondents are similar, although not identical in the types of areas represented. The closest comparison

[71] Available at: https://www.ala.org/pla/sites/ala.org.pla/files/content/data/PLA-2020-Technology-Survey-Summary-Report.pdf

that could be made is shown in Table 6.1.

TABLE 6.1. RESPONDENT LIBRARIES TO PLA SURVEY AND 2022 TEXAS DIRECTORS SURVEY

Town & Rural-US-PLA	Under 15,000-Texas	Suburb-US-PLA	15,000-174,999-Texas	City- US-PLA	More than 175,000-Texas
64.6%	54.5%	27.4%	36.4%	7.9%	9.1%



More PLA respondents are in the Town/Rural category and fewer are in the Suburb and City categories compared to the Texas survey. This is an important distinction and suggests that the percentages for Overall-US PLA in the upcoming tables and charts are slightly lower than they would be if the two surveys had identical types of respondents.[72]

[72] Uniformly in the PLA survey results, training percentages are highest among city respondents, with suburb training percentages being higher than those from Town/Rural respondents. In effect, the PLA results are biased downward by having more town/rural libraries than in the Texas sample. Even when a comparison might show a very similar result, the percentage for Overall-US is slightly lower than it would be if the respondents were more alike.

As shown in Table 6.2. comparisons were developed for 9 topics/subjects as arrayed in the first column and for three training and assistance options: informal point-of-use (on demand), scheduled formal programs/classes, and for any type of training, which can include self-directed and self-paced online courses, scheduled one-on-one assistance as well as formal classes and informal point-of-use training. The data are highlighted by colors for both the Overall-US-PLA and Texas percentages from the 2022 Texas survey.

TABLE 6.2. SUMMARY COMPARISONS BY TOPIC AND TRAINING METHOD, PLA SURVEY AND 2022 TEXAS DIRECTORS SURVEY

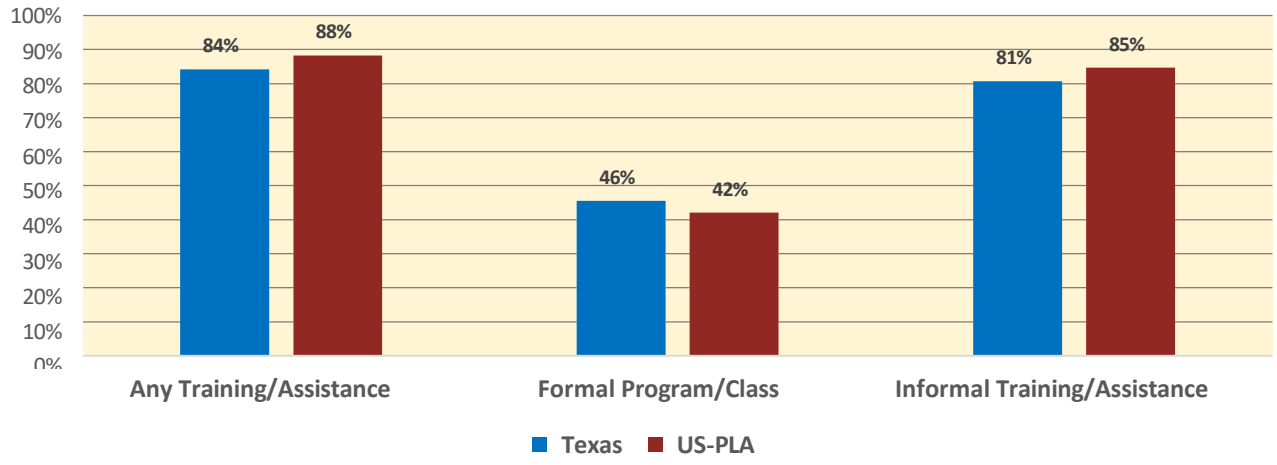
	Informal Point-of-use training		Formal program/class		Any training/program	
Topic	Overall- US-PLA	Overall-Texas	Overall-US-PLA	Overall-Texas	Overall-US-PLA	Overall-Texas
General Computer Skills	75.2%	72.7%	21.4%	33.9%	82.3%	77.2%
General Software	66.5%	61.8%	23.5%	24.8%	76.2%	67.1%
Internet Search	74.9%	66.7%	20.6%	26.1%	82.6%	71.5%
Safe Online Practices	47.6%	32.7%	17.8%	17.0%	58.1%	37.3%
Social Media	41.5%	43.0%	15.3%	17.6%	49.7%	48.1%
Assistive Technology			3.6%	16.4%		
Website Development	6.4%	1.2%				
Digital Content Creation	6.4%	7.3%				
Coding/Computer Programming	11.3%	6.7%				
Any of the Above	84.7%	80.7%	42.0%	45.5%	88.3%	84.2%

Note: cells that are hidden had no direct comparisons on the two surveys.

Fewer Texas libraries are providing digital literacy training than libraries elsewhere in the United States. As shown in the summary row, "Any of the Above" and the column for "Any Training/Program," the percentage is 84.2% for Texas and 88.3% for all libraries in the United States. A similar result occurs with

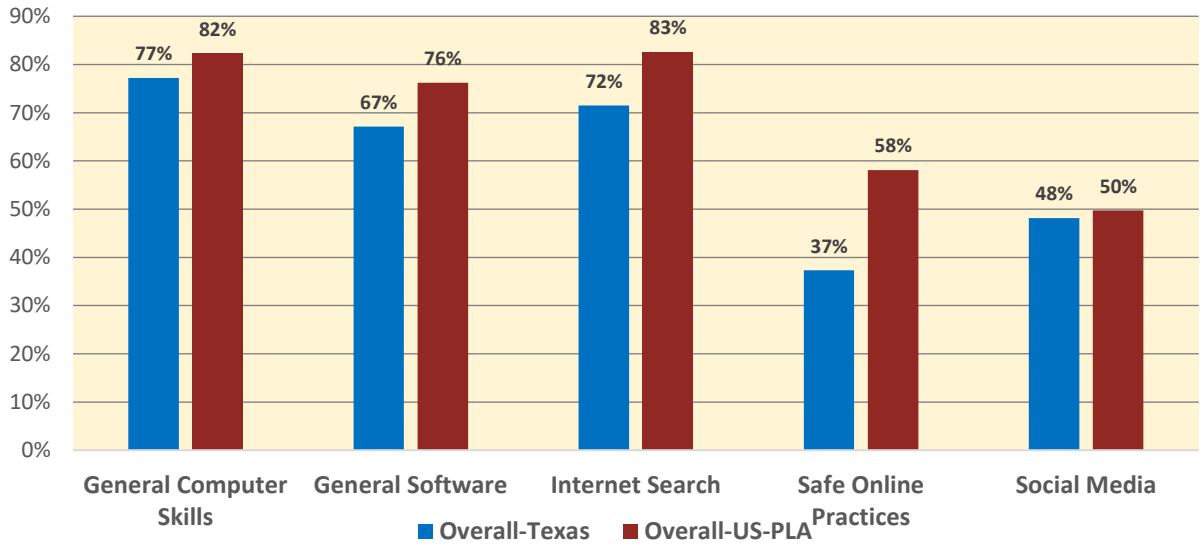
informal point-of-use training: a larger proportion of libraries outside Texas, 84.7%, provide this type of assistance than do Texas libraries, 80.7%. (Please see Table 6.2. or Chart 6.2.)

CHART 6.2. DIGITAL LITERACY TRAINING BY TEXAS LIBRARIES AND US-PLA LIBRARIES, BY TYPE OF ASSISTANCE, ALL SIZES



The differences by topic/subject and by type of training are shown in the subsequent three charts (6.3, 6.4, and 6.5). Chart 6.3. shows US-PLA libraries uniformly provide more training overall on each of the five topics/subjects. The differences are not substantial on four topics except for safe online practices.

CHART 6.3. PROPORTIONS OF TEXAS LIBRARIES AND US-PLA LIBRARIES PROVIDING TRAINING OF ANY TYPE ON SELECT TOPICS



In contrast, as shown in Chart 6.4, more Texas libraries almost always provide higher levels of assistance on these topics in formal classes. Larger proportions occur for five of the six specific topics, with only a small difference on Safe Online Practices (17.8% United States and 17.0% Texas).[73]

[73] The higher levels of formal classes in Texas compared to the PLA responses do not seem due to the timing of the two surveys. While the PLA survey occurred in 2020, librarians were instructed to answer as follows: "If programs/training were offered before Covid-19 and is again available or planned to be available in the future, please include as available when answering this question."

CHART 6.4. PROPORTIONS OF TEXAS LIBRARIES AND US-PLA LIBRARIES PROVIDING FORMAL TRAINING PROGRAMS ON SELECT TOPICS

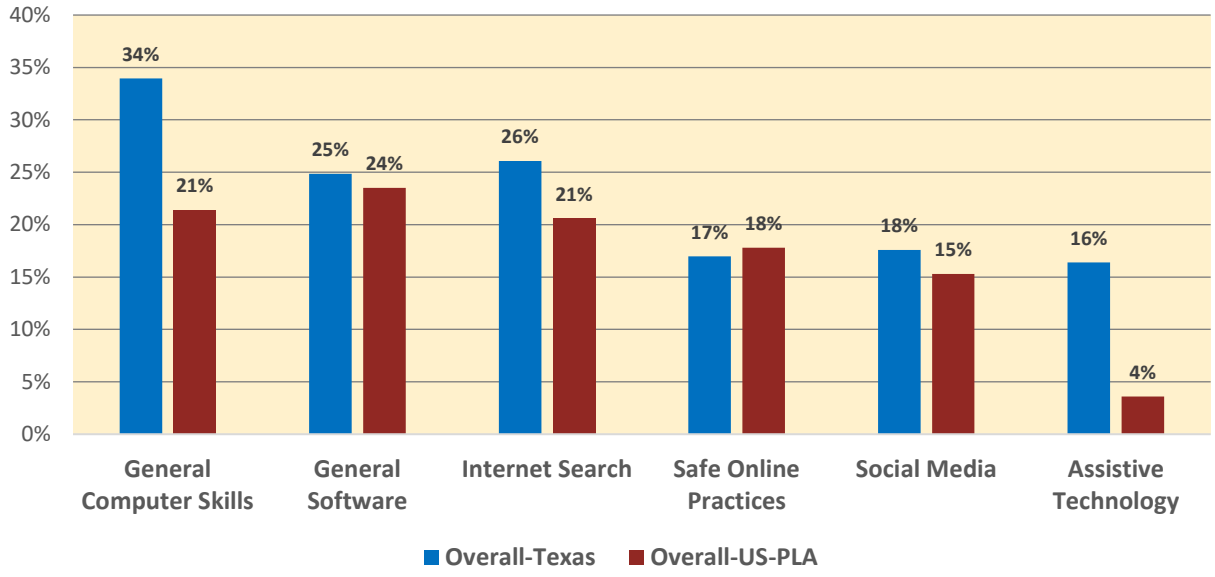
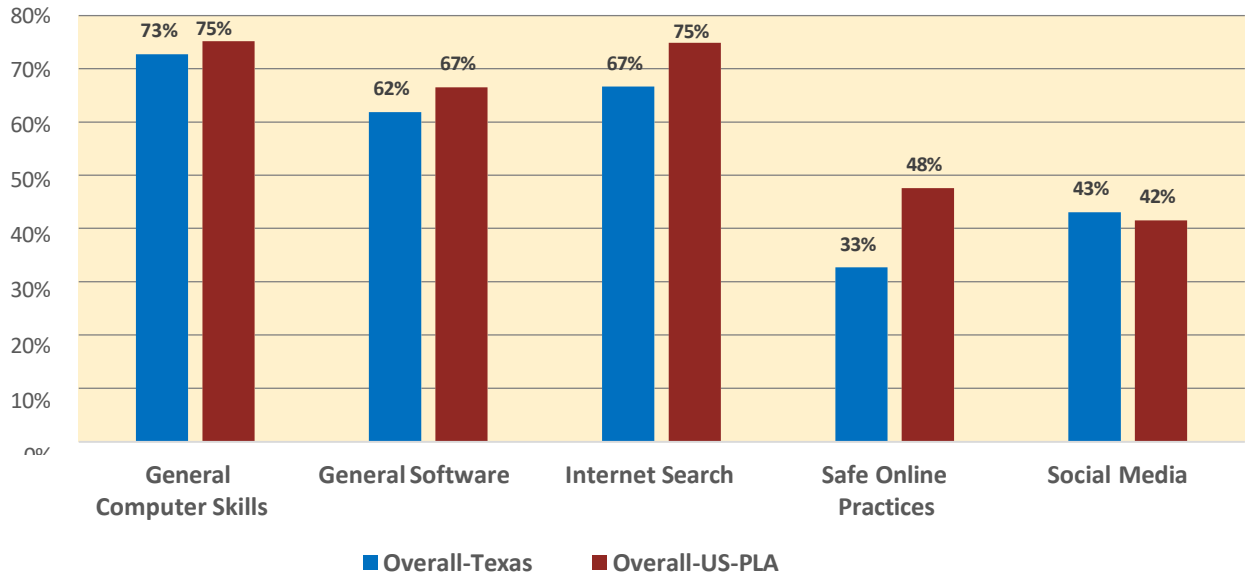


Chart 6.5 shows the proportions on these topics/subjects for point-of-use, on demand assistance. Texas libraries surpass those in other states only marginally in social media point- of-use assistance. Texas is lower on three topics and considerably lower than U.S. libraries in point-of-use, on demand assistance for safe online practices.[74]

[74] As shown in Table 6.2. Texas libraries also slightly exceed US-PLA libraries in point-of-use digital content creation. Texas libraries are far behind, however, in point-of-use assistance for website development and coding.

CHART 6.5. PROPORTIONS OF ALL TEXAS LIBRARIES AND US-PLA LIBRARIES PROVIDING INFORMAL POINT-OF-USE TRAINING ON SELECT TOPICS



To probe further into differences between U.S. libraries and Texas libraries in these two samples, libraries were disaggregated or broken down by relative size of libraries (populations served) and then compared on types of digital literacy training provided.

Table 6.3. compares libraries serving smaller populations. The pattern is generally the same as in the earlier table with Texas libraries providing higher levels of training in formal classes than libraries outside the state, lower levels of one-on-one, point-of-use training, and lower levels of any type of training. And formal classes in safe online practices again are lower in Texas than elsewhere. These data are shown in Charts 6.6, 6.7, and 6.8 as well as Table 6.3.

TABLE 6.3. SMALL LIBRARY COMPARISONS BY TOPIC AND TRAINING METHOD, PLA SURVEY AND 2022 TEXAS DIRECTORS SURVEY

	Informal Point-of-use training		Formal program/class		Any training/program	
Topic	Town & Rural-US-PLA	Under 15,000-Texas	Town & Rural-US- PLA	Under 15,000-Texas	Town & Rural-US- PLA	Under 15,000-Texas
General Computer Skills	74.4%	67.4%	15.3%	21.3%	79.5%	67.4%
General Software	61.5%	50.6%	15.4%	11.2%	71.1%	52.8%
Internet Search	74.0%	60.7%	14.2%	16.9%	79.1%	60.7%
Safe Online Practices	47.1%	22.5%	13.6%	9.0%	55.4%	24.7%
Social Media	39.3%	34.1%	9.8%	10.1%	44.6%	34.8%
Any of the Above	82.2%	71.1%	32.1%	36.6%	85.0%	73.3%

CHART 6.6. SMALL LIBRARIES IN TEXAS AND US-PLA, TRAINING OF ANY TYPE IN SELECT SUBJECTS AND TOPICS

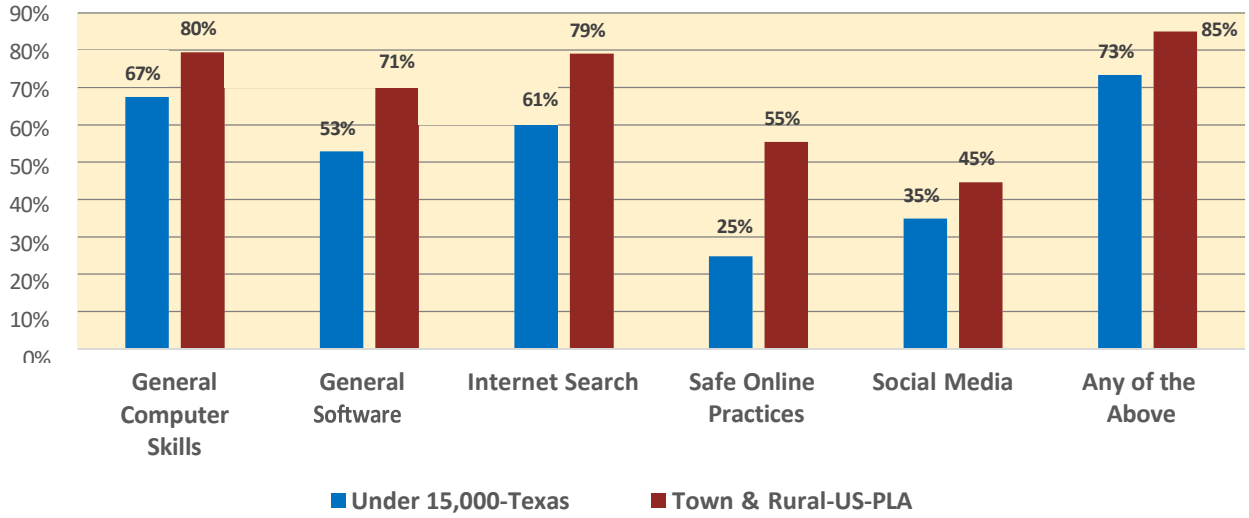


CHART 6.7. SMALL LIBRARIES IN TEXAS AND US-PLA, FORMAL TRAINING CLASSES IN SELECT SUBJECTS AND TOPICS

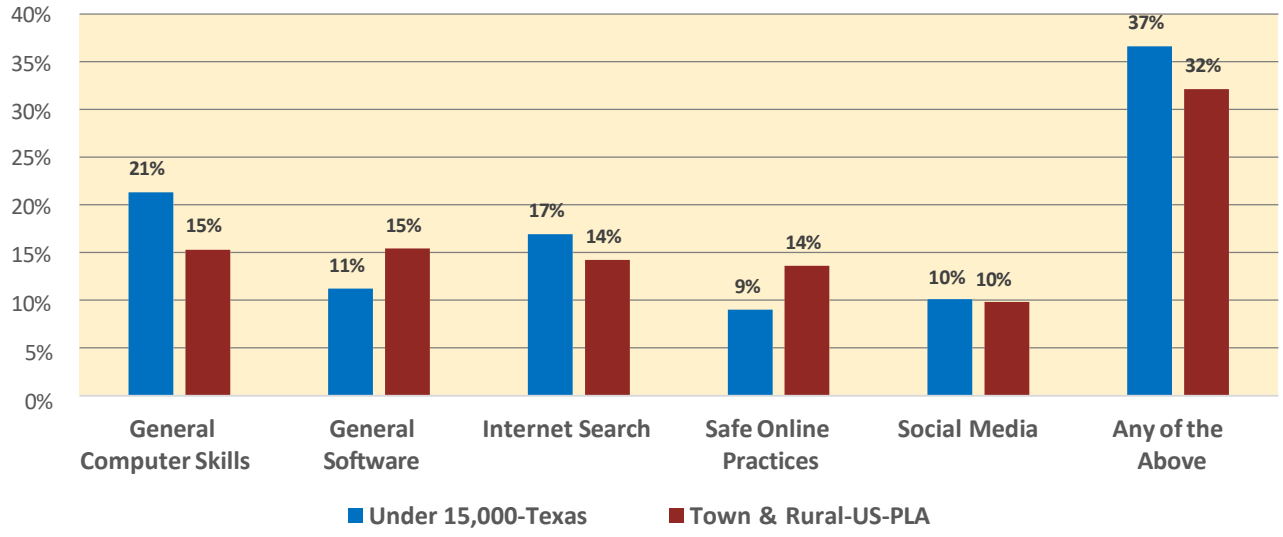
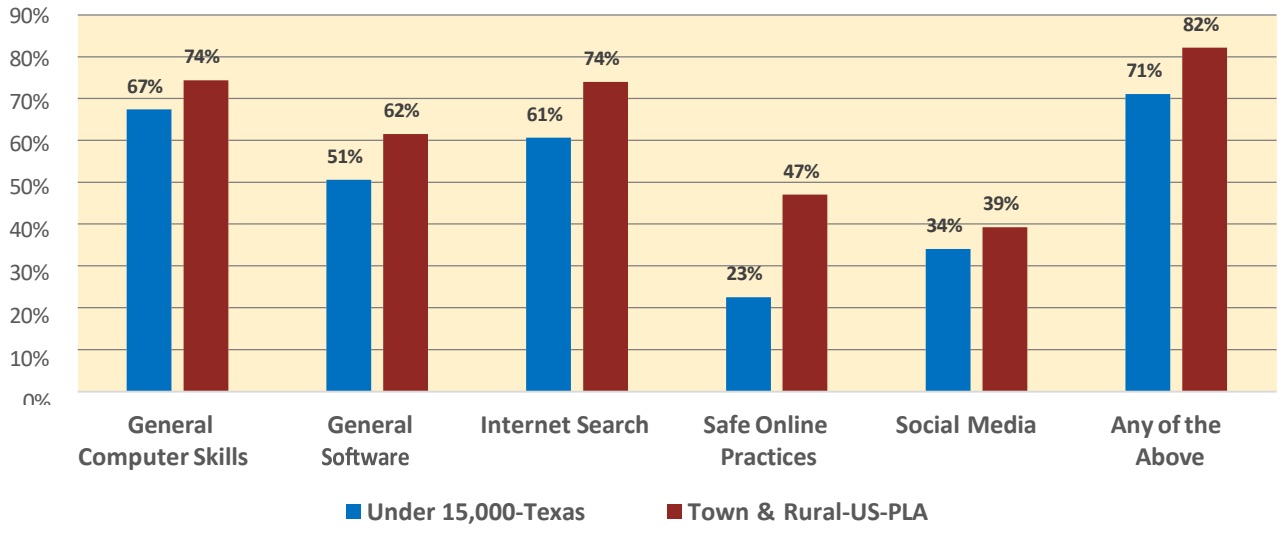


CHART 6.8. SMALL LIBRARIES IN TEXAS AND US-PLA, INFORMAL TRAINING AND ASSISTANCE IN SELECT SUBJECTS AND TOPICS



For medium-sized libraries, the pattern is less distinct, as shown in Table 6.4. and Charts 6.9, 6.10, and 6.11. Overall Texas medium-sized libraries still provide less training on the five topics and "Any of the Above." However, they provide slightly more point-of-use assistance on general software and social media than U.S. libraries and slightly less formal training on internet search, social media, and safe online practices than their U.S. counterparts.

TABLE 6.4. MEDIUM-SIZED LIBRARY COMPARISONS BY TOPIC AND TRAINING METHOD, PLA SURVEY AND 2022 TEXAS DIRECTORS SURVEY

	Informal Point-of-use training		Formal program/class		Any training/program	
Topic	Suburb- US-PLA	15,000-174,999-Texas	Suburb-US-PLA	15,000-174,999-Texas	Suburb-US-PLA	15,000-174,999-Texas
General Computer Skills	77.2%	76.7%	32.1%	41.7%	87.8%	76.7%
General Software	69.3%	71.7%	39.7%	33.3%	86.3%	71.7%
Internet Search	76.0%	71.7%	33.5%	30.0%	89.7%	73.3%
Safe Online Practices	48.7%	43.3%	25.0%	23.3%	62.9%	45.0%
Social Media	46.0%	50.0%	26.2%	20.0%	59.7%	50.0%
Any of the Above	89.3%	80.0%	60.9%	50.0%	94.8%	86.7%

CHART 6.9. MEDIUM-SIZED LIBRARIES IN TEXAS AND US-PLA, TRAINING OF ANY TYPE IN SELECT SUBJECTS AND TOPICS

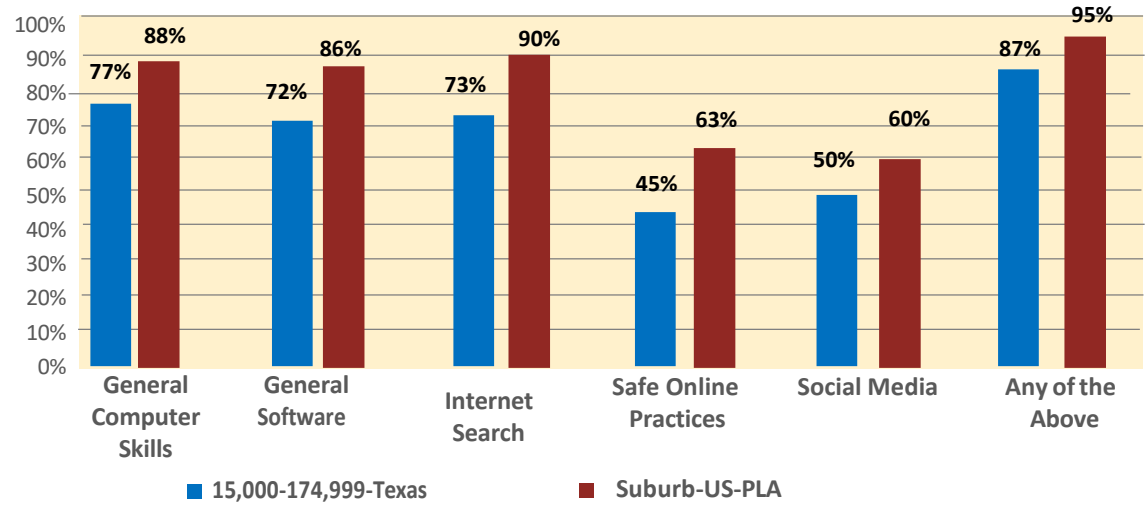


CHART 6.10. MEDIUM-SIZED LIBRARIES IN TEXAS AND US-PLA, FORMAL CLASS TRAINING IN SELECT SUBJECTS AND TOPICS

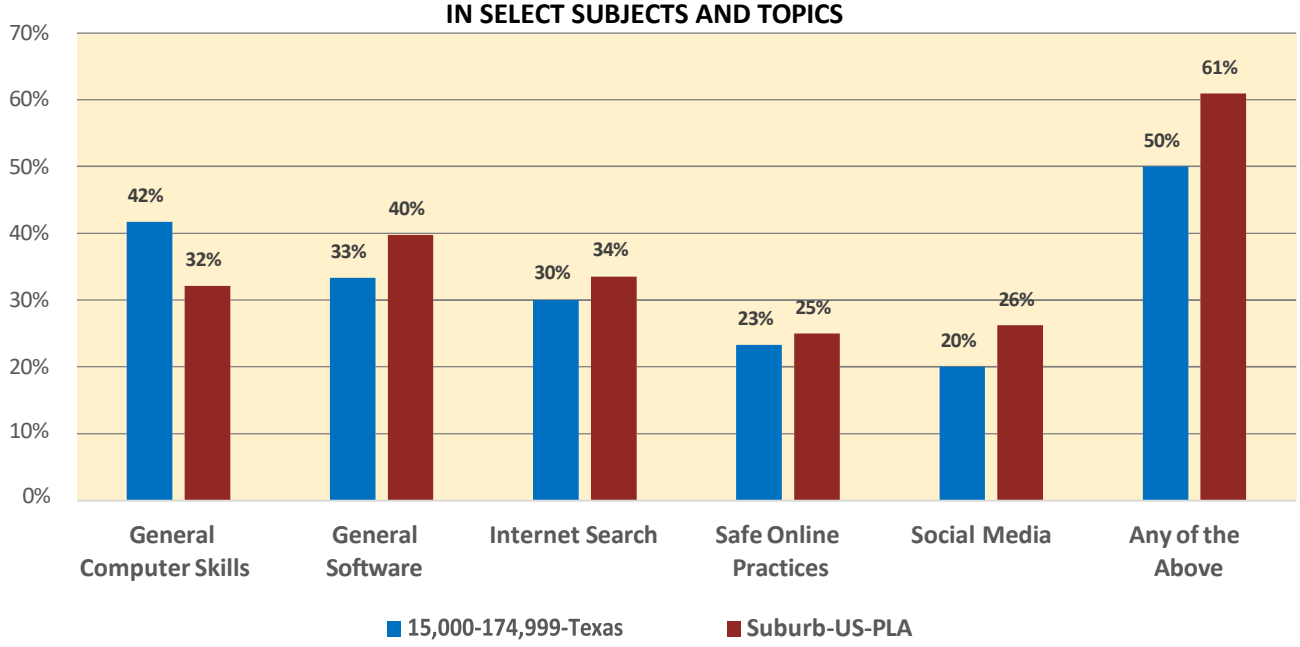
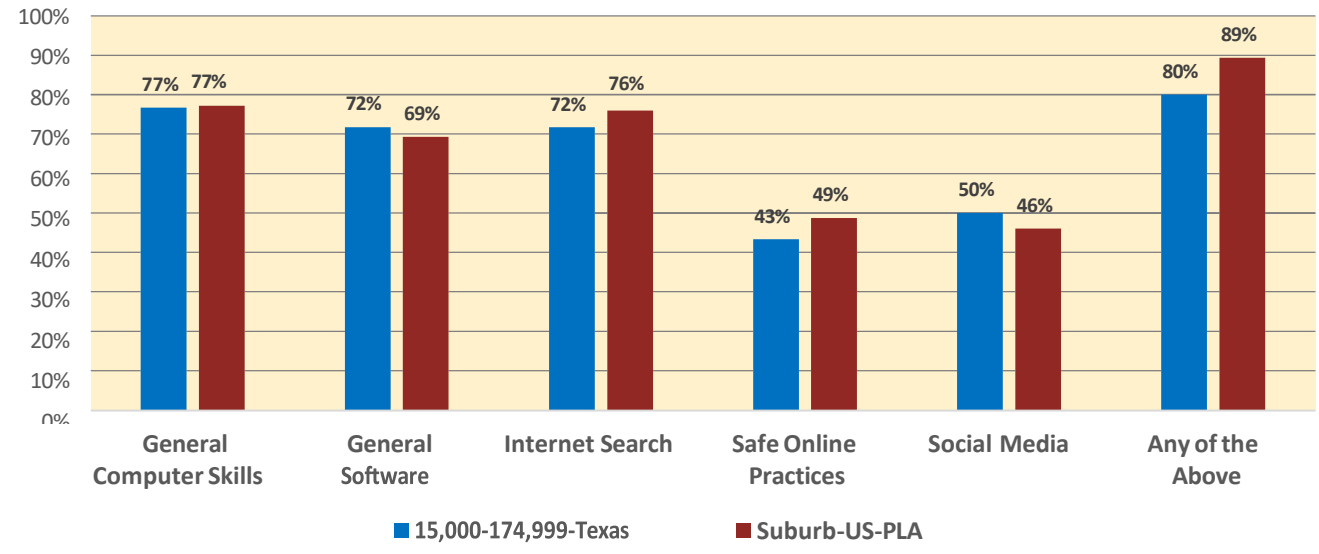


CHART 6.11. MEDIUM-SIZED LIBRARIES IN TEXAS AND US-PLA, INFORMAL TRAINING AND ASSISTANCE IN SELECT SUBJECTS AND TOPICS



Comparisons for large libraries show a different pattern. As shown in Table 6.5. and graphically in Charts 6.12, 6.13, and 6.14, large Texas libraries surpass the training levels of U.S. city libraries on these topics in nearly all comparisons. Substantial differences occur in the formal classes and a higher proportion of large Texas libraries uniformly provide more point- of-use assistance on these topics than do city libraries in the United States. And on several comparisons for "any training program," large Texas libraries have higher rates, a trend not found for any comparisons among the small or medium-sized libraries.

TABLE 6.5. LARGE LIBRARY COMPARISONS BY TOPIC AND TRAINING METHOD, PLA SURVEY AND 2022 TEXAS DIRECTORS SURVEY

	Informal Point-of-use training		Formal program/class		Any training/program	
Topic	City-US-PLA	More than 175,000-Texas	City- US-PLA	More than 175,000-Texas	City- US-PLA	More than 175,000-Texas
General Computer Skills	76.7%	93.3%	49.2%	80.0%	91.8%	100.0%
General Software	71.0%	93.3%	51.1%	73.3%	93.0%	100.0%
Internet Search	81.0%	86.7%	41.4%	66.7%	93.8%	93.3%
Safe Online Practices	49.6%	53.3%	38.3%	40.0%	69.2%	66.7%
Social Media	49.1%	73.3%	34.9%	53.3%	68.3%	86.7%
Any of the Above	94.9%	100.0%	80.6%	86.7%	99.2%	100.0%

CHART 6.12. LARGE LIBRARIES IN TEXAS AND US-PLA, ANY TYPE OF TRAINING IN SELECT SUBJECTS AND TOPICS

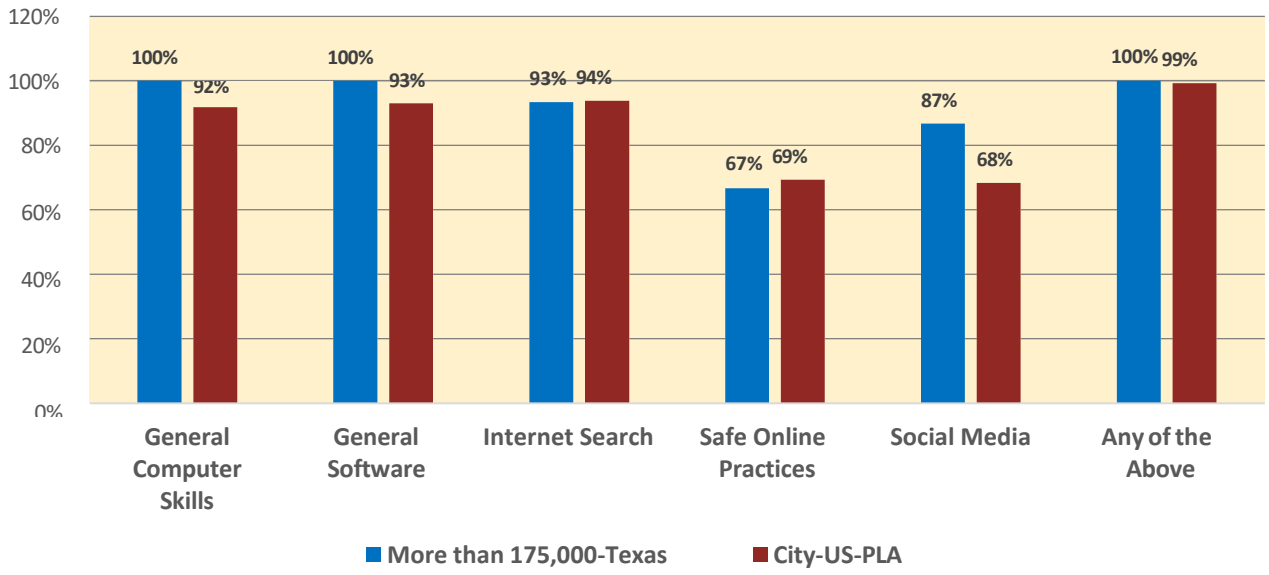


CHART 6.13. LARGE LIBRARIES IN TEXAS AND US-PLA, FORMAL PROGRAM CLASSES IN SELECT SUBJECTS AND TOPICS

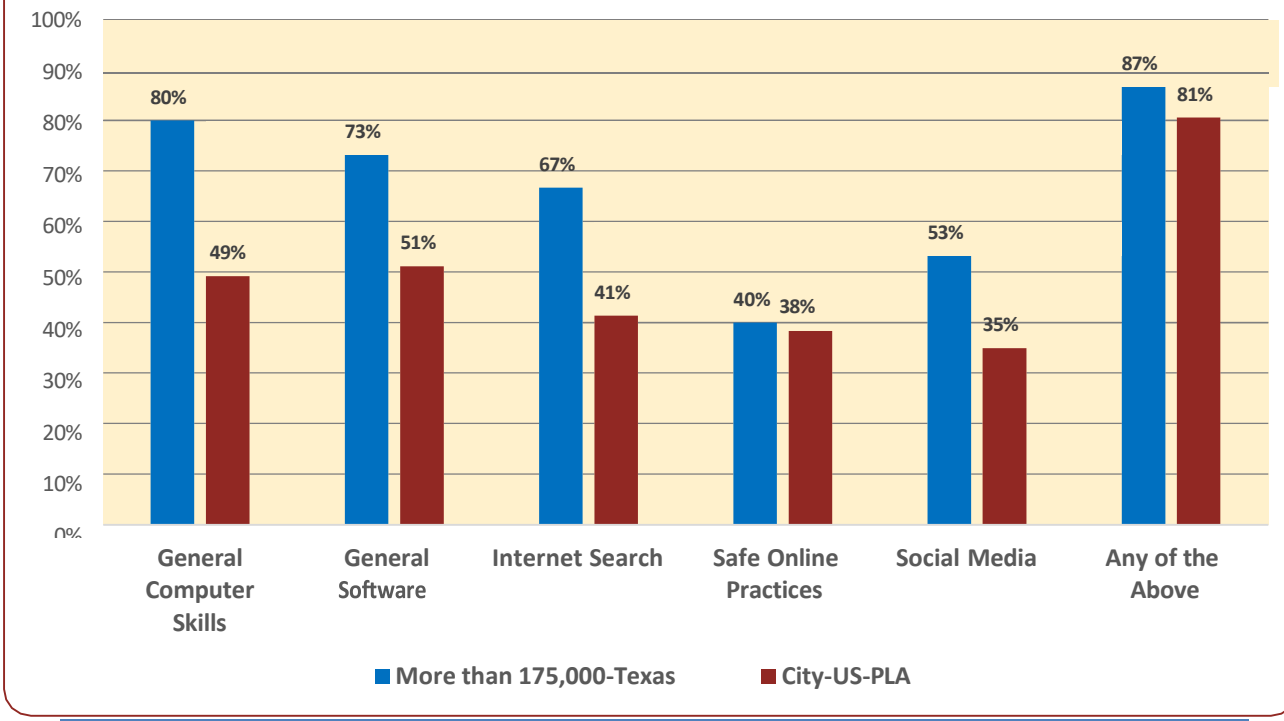
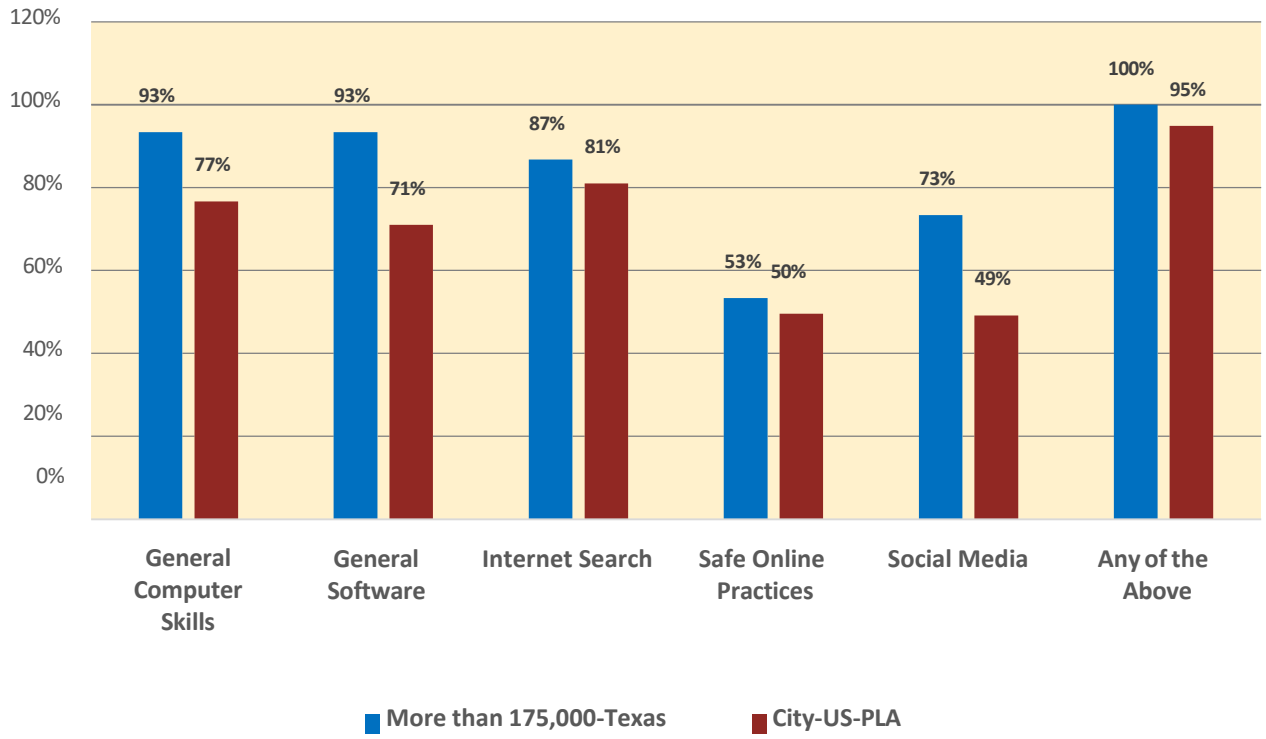


CHART 6.14. LARGE LIBRARIES IN TEXAS AND US-PLA, INFORMAL TRAINING AND ASSISTANCE IN SELECT SUBJECTS AND TOPICS



Finally, although there was no direct comparison possible, the PLA survey and 2022 Texas survey both collected information about the challenges facing libraries in providing digital literacy assistance or training. Most PLA responses fell into five main categories: personnel (50%), finances (23%), infrastructure (13%), community characteristics (19.4%), and Covid-19 (10%).[75] The 2022 Texas survey focused on more specific options and allowed respondents to choose more than one answer (Table 6.6)..

[75] Librarians were permitted to choose more than one challenge which led to a sum of more than 100%.

TABLE 6.6. KEY DIGITAL LITERACY NEEDS, 2022 TEXAS DIRECTORS SURVEY

What are the key digital literacy needs in your community? Please check as many as apply.	
Answer Choices	Main Libraries
We need more classes.	62%
We need more trainers.	73%
We need space to hold classes.	40%
We need more places to access free wi-fi and computers.	34%
We need materials in other languages.	42%
The community is generally low on computer skills.	57%
Other, please specify below	7%

Note: More than one response was allowed; consequently, the total does not sum to 100%.

Comparison with Adult Literacy Partnership Survey

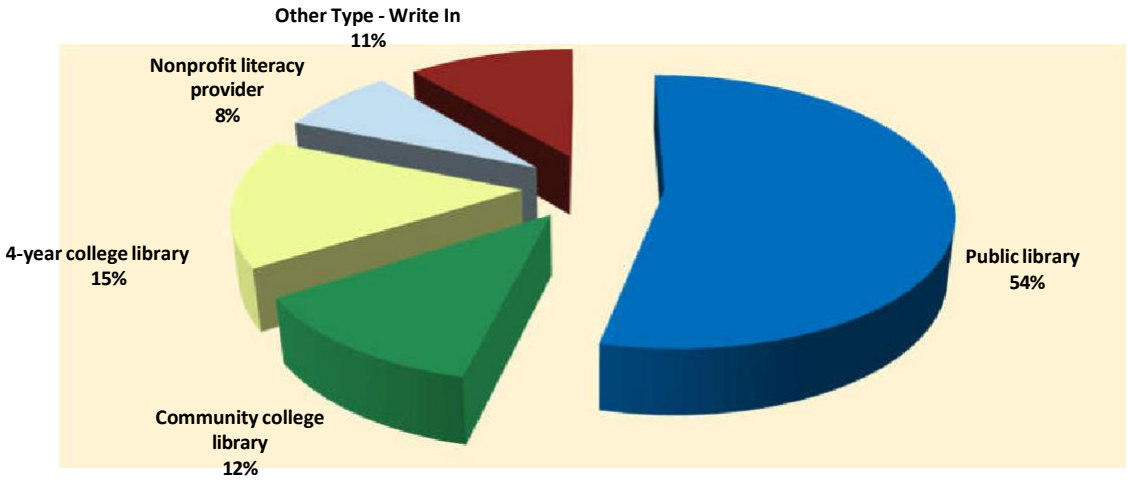
Because only half of the responses from the Adult Literacy Partnership Survey were from public libraries in the State of Texas, strict comparisons with the 2022 Texas Directors Survey are inappropriate.[76] Nevertheless, some gross comparisons may be informative because a number of questions in the 2022 Library Directors Survey were drawn directly from the Adult Literacy Partnership Survey (ALPS). The types of organizations responding in the ALPS are shown in Table 6.7 and graphically in Chart 6.15.

TABLE 6.7. RESPONDENTS TO ALPS SURVEY, BY ORGANIZATION

Type of Organization	Percent	Count
Public library	54%	194
Community college library	12%	44
4-year college library	15%	55
Nonprofit literacy provider	8%	28
Other Type - Write In	11%	40
Total		361

[76] Without access to the original data set, there is no way to filter responses from only the public libraries in the Partnership Survey.

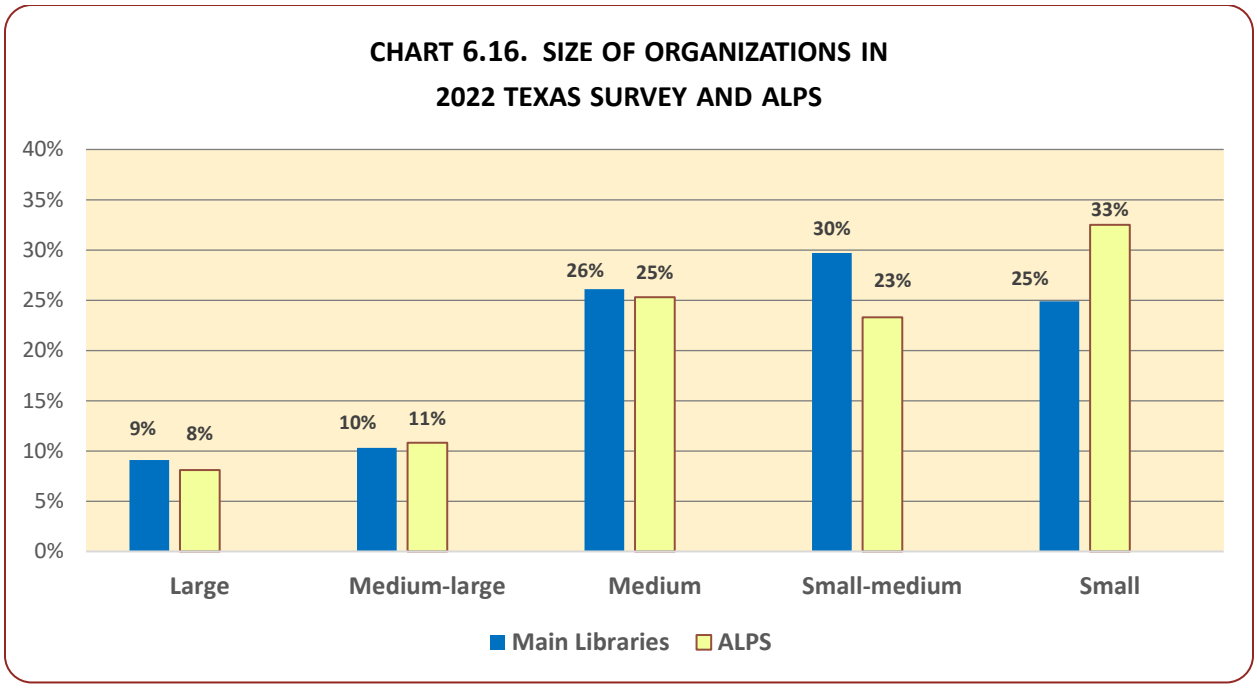
CHART 6.15. TYPES OF ORGANIZATIONS IN ALPS



In Table 6.8 and Chart 6.16, the two surveys appear quite similar, although the ALPS data includes both digital provider organizations and the other types of libraries.

TABLE 6.8. RESPONDENTS TO ALPS SURVEY AND 2022 TEXAS LIBRARY DIRECTORS SURVEY, BY SIZE

ALPS -- Size of Organization (All Types)	***ALPS Respondents***	***Main Libraries***	***Main Libraries***
Large	8%	9%	Over 175,000
Medium-large	11%	10%	65,000-175,000
Medium	25%	26%	15,000-65,000
Small-medium	23%	30%	5,000 to 15,000
Small	33%	25%	Fewer than 5,000



In Table 6.9 and Chart 6.17, the types of training offered are profiled for ALPS, Texas Main Libraries (Directors Survey), and Branch Managers Survey. As is apparent, the ALPS data are more similar to those from branch managers than from directors.

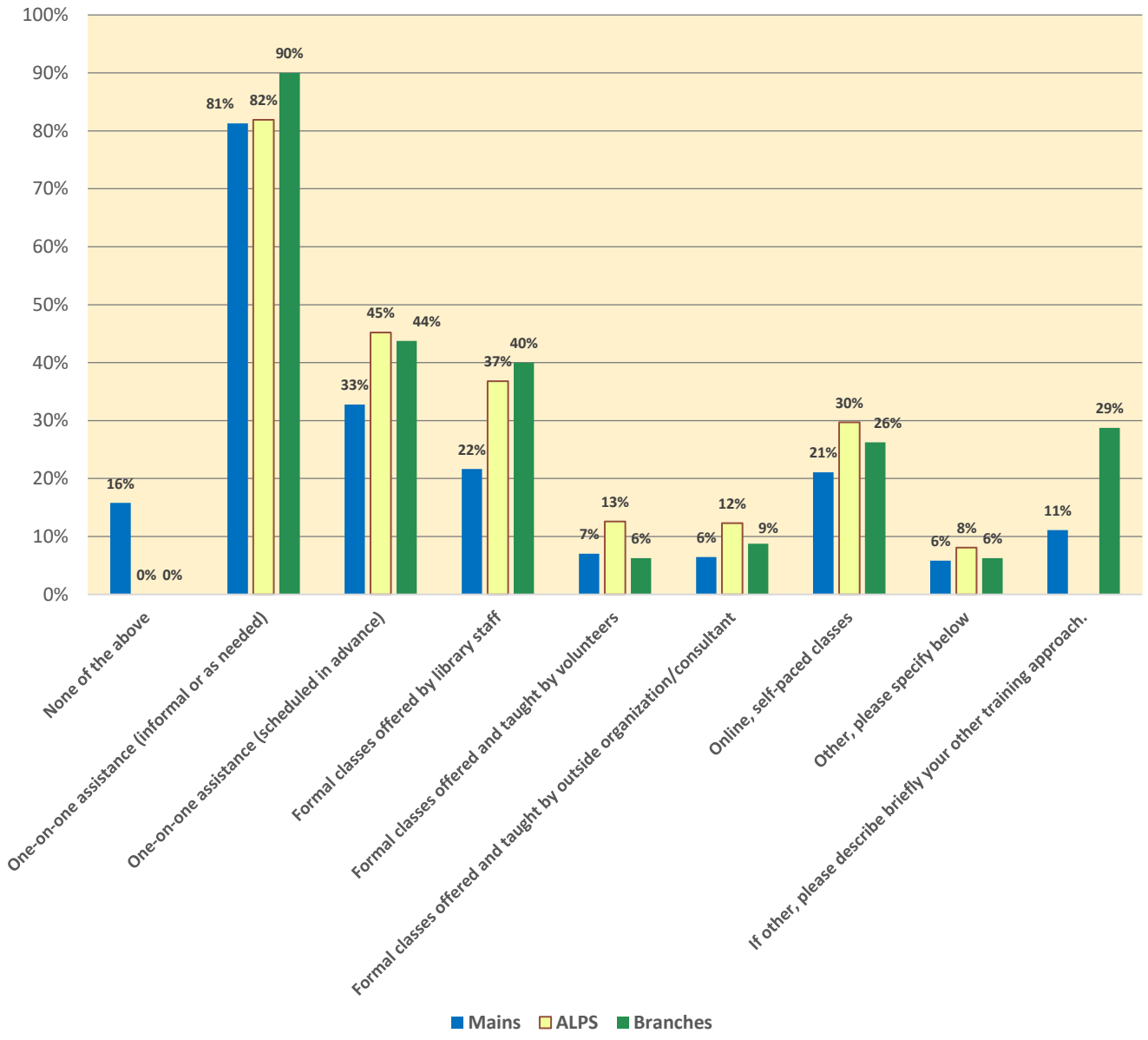
TABLE 6.9. TRAINING METHODS, ALPS SURVEY, 2022 TEXAS LIBRARY DIRECTORS SURVEY, AND 2022 TEXAS BRANCH MANAGERS SURVEY

What kind of digital literacy training does your library provide, if any? Please check as many as apply.	TX 2022 Directors	TX 2022 Managers	
Answer Choices	***Mains***	***Branches***	***ALPS***
None of the above	16%	0%	N/A
One-on-one assistance (informal or as needed)	81%	90%	82%
One-on-one assistance (scheduled in advance)	33%	44%	45%
Formal classes offered by library staff	22%	40%	37%
Formal classes offered and taught by volunteers	7%	6%	13%
Formal classes offered and taught by outside organization/consultant	6%	9%	12%
Online, self-paced classes	21%	26%	30%
Other, please specify below	6%	6%	8%

Note: Respondents could answer for training in more than one row; consequently, totals exceed 100% in each

column. N/A=Not asked

CHART 6.17. TYPES OF DIGITAL LITERACY TRAINING OFFERED BY TEXAS MAIN LIBRARIES, TEXAS BRANCH LIBRARIES, AND ALPS RESPONDENTS



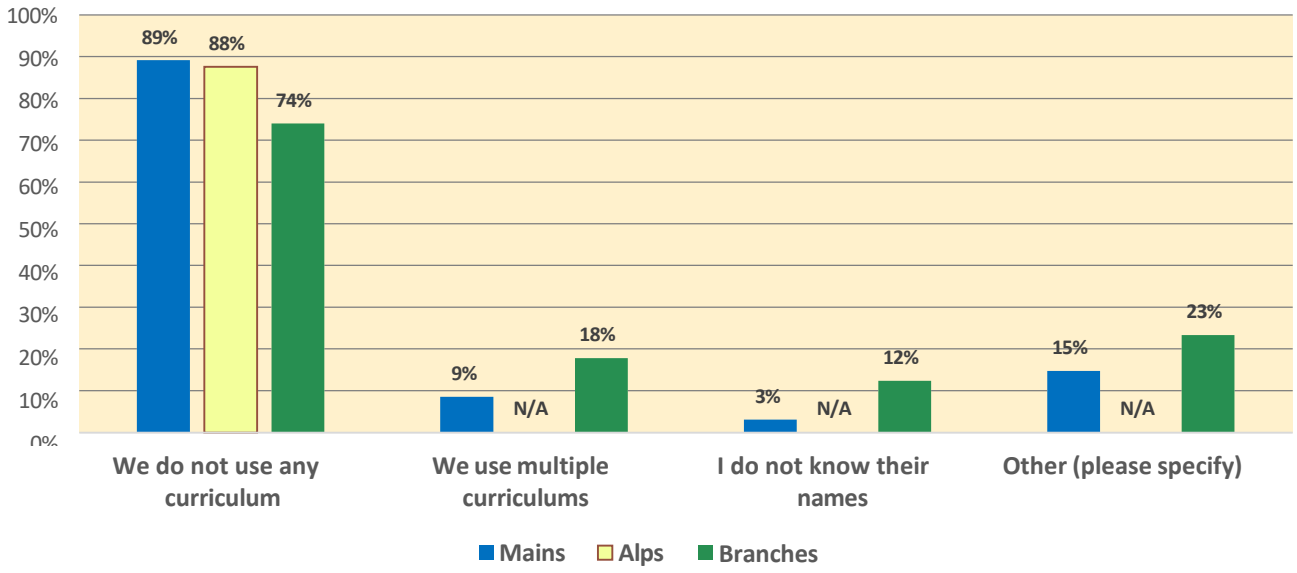
Data about the use of curriculums are shown below in Table 6.10 and Chart 6.18, and in this instance, ALPS respondents and directors are nearly identical in the one option on all three surveys.

TABLE 6.10. TRAINING CURRICULUMS, ALPS SURVEY, 2022 TEXAS LIBRARY DIRECTORS SURVEY, AND 2022 TEXAS BRANCH MANAGERS SURVEY

Which training curriculums are you or your trainers using for your library's classes and individual help.	TX 2022 Directors	TX 2022 Managers	
Answer Choices	***Mains***	***Branches***	***ALPS***
We do not use any curriculum	89%	74%	88%
We use multiple curriculums	9%	N/A	18%
I do not know their names	3%	N/A	12%
Other (please specify)	15%	N/A	23%

N/A=Not Asked or Not Applicable

CHART 6.18. NUMBER OF CURRICULUMS USED BY TEXAS MAIN LIBRARIES, BRANCH LIBRARIES, AND ALPS RESPONDENTS



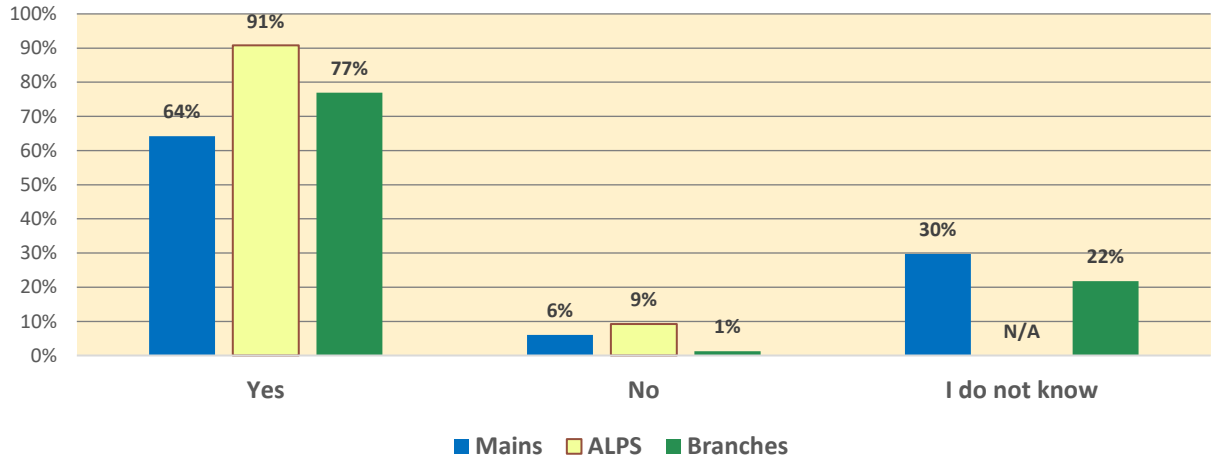
A significant difference appears in perceptions of digital literacy needs among ALPS respondents and both directors and managers. As shown in Table 6.11 and Chart 6.19, over 90 percent of respondents in the ALPS survey believe there are unmet needs. The proportions for directors and managers are lower, particularly for directors.

TABLE 6.11. UNMET DIGITAL LITERACY NEEDS, ALPS SURVEY, 2022 TEXAS LIBRARY DIRECTORS SURVEY, AND 2022 TEXAS BRANCH MANAGERS SURVEY

Are there unmet digital literacy needs in your community?	TX 2022 Directors	TX 2022 Managers	
Answer Choices	***Mains***	***Branches***	***ALPS***
Yes	64%	77%	91%
No	6%	1%	9%
I do not know	30%	22%	N/A

N/A=Not asked

CHART 6.19. UNMET DIGITAL LITERACY NEEDS IN YOUR COMMUNITY AS ASSESSED BY TEXAS LIBRARY DIRECTORS, TEXAS BRANCH MANAGERS, ALPS RESPONDENTS



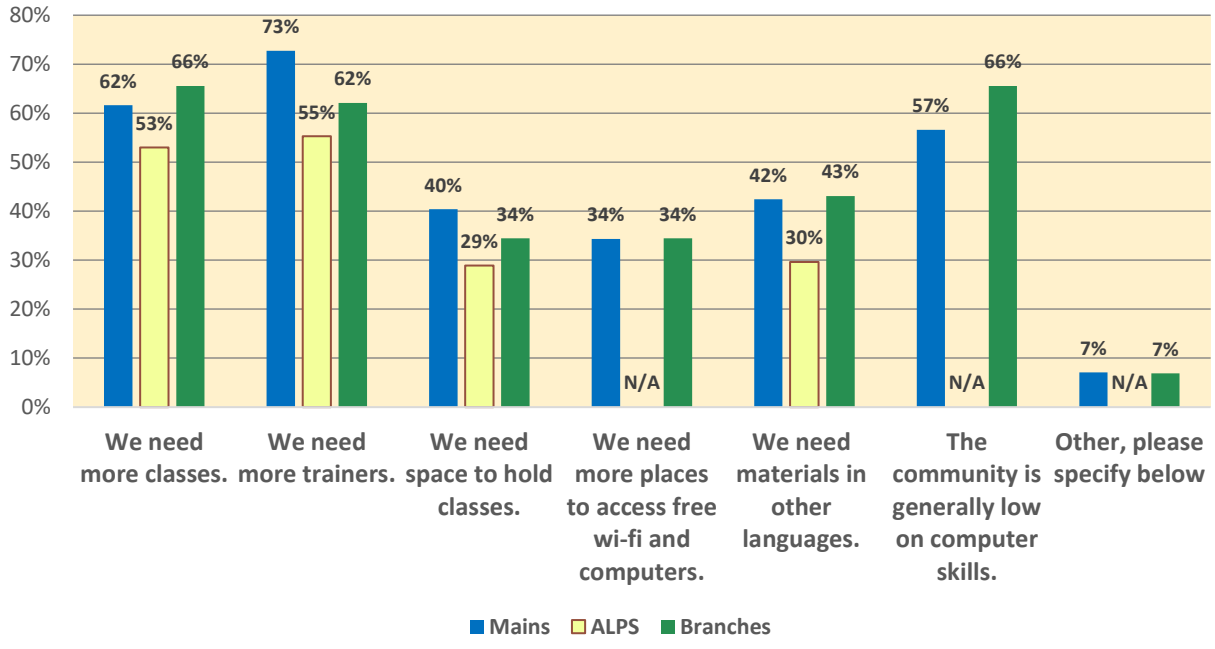
As shown in Table 6.12 and Chart 6.20, despite indicating their communities had greater needs, ALPS respondents had lower proportions choosing specific needs than either directors or managers.

TABLE 6.12. KEY DIGITAL LITERACY NEEDS, ALPS SURVEY, 2022 TEXAS LIBRARY DIRECTORS SURVEY, AND 2022 TEXAS BRANCH MANAGERS SURVEY

What are the key digital literacy needs in your community? Please check as many as apply.	TX 2022 Directors	TX 2022 Managers	
Answer Choices	***Mains***	***Branches***	***ALPS***
We need more classes.	62%	66%	53%
We need more trainers.	73%	62%	55%
We need space to hold classes.	40%	34%	29%
We need more places to access free wi-fi and computers.	34%	34%	N/A
We need materials in other languages.	42%	43%	30%
The community is generally low on computer skills.	57%	66%	N/A
Other, please specify below	7%	7%	N/A

Note: More than one response was allowed; hence column totals do not equal 100%.

CHART 6.20. KEY DIGITAL LITERACY NEEDS IN YOUR COMMUNITY, TEXAS MAIN LIBRARIES, TEXAS BRANCH LIBRARIES, AND ALPS RESPONDENTS



Another rough comparison is the sheer number of partnerships between other organizations and all types of libraries. There is remarkable similarity as is shown in Table 6.13.

TABLE 6.13. DIGITAL LITERACY PARTNERSHIPS, ALPS SURVEY, 2022 TEXAS LIBRARY DIRECTORS SURVEY, AND 2022 TEXAS BRANCH MANAGERS SURVEY

Does your library have any programs or strategic partnerships with local groups, organizations, educational institutions, or governments specifically focused on digital literacy services or training? These might be related to workforce and employment for instance. If your library does have one or more partnerships, please describe them briefly.	TX 2022 Directors	TX 2022 Managers	
	Mains	***Branches***	***ALPS***
Yes	21%	21%	25%

Note: The percentages for Mains and Branches are for current and pre-pandemic partnerships.

Comparison with EDGE Data

EDGE is a management tool often used by public libraries for self-assessment. Initiated originally by the Urban Council of Libraries, it is now supported via subscriptions by individual libraries and state library agencies as well as other sponsors.[77] At the core of EDGE's tools are 10 benchmarks against which a library can measure its current performance. Over time, a library can assess its progress toward reaching or surpassing one or more of the benchmarks.

EDGE's benchmarks one through five measure how libraries use services, programs, technologies and staff expertise to serve the community and library users, with a focus on digital access efforts and user reactions. Benchmark one is particularly appropriate as it provides information on digital skills:

1.1 Classes or instruction on digital skills
1.2 Individual help for digital services
1.3 Access to digital tools
1.4 Awareness of digital tools
1.5 Content creation

Aggregated data for Texas libraries participating in EDGE were provided by TSLAC. These data allow for

[77] For more information about EDGE, please see: https://www.urbanlibraries.org/initiatives/library-leadership/edge-360

another set of comparisons with the data obtained from the 2022 Texas Library Directors Survey. In Table 6.14 it is evident the respondent groups are fairly similar. The 2022 Directors Survey has a higher proportion of small libraries and large libraries, with a lower percentage of medium-sized libraries.

TABLE 6.14. RESPONDENTS IN EDGE GROUP AND 2022 TEXAS DIRECTORS SURVEY, BY SIZE OF POPULATIONS SERVED

All Sizes	TX-2022	<5k	5-15K	15-65k		65-175k	175-300k	>300k
171**	Number	41	49	43		17	7	8
100%	TX-2022	25%	30%	26%		10%	4%	5%

All Sizes	*EDGE*	*PG1*	*PG2*	*PG3*	*PG4**	*PG5*	*PG6*	*PG7*
158	*Number*	*34*	*44*	*43*	*11*	*19*	*4*	*5*
100%	*Percent*	*22%*	*26%*	*34%*		*12%*	*3%*	*2%*

* These are libraries serving populations between 15,000 and 65,000 that have one or more branches. The PG3 percentage of 34% includes both the PG3 number of 43 and the PG4 number of 11. In the 2022 Texas Directors Survey, all libraries in that size category were combined into the 15-65k category.
** Note: That is the number that answered the first question. Many subsequent questions were answered by fewer librarians.

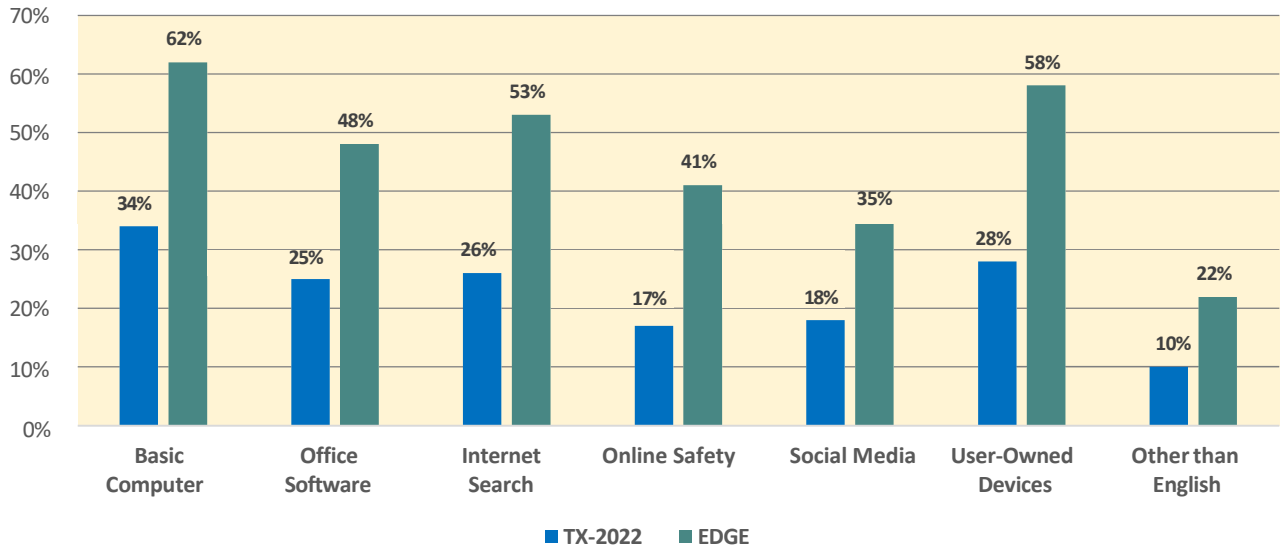
Data were compared for 9 different items. On every single comparison, for all sizes of libraries, EDGE training was more prevalent. Seven of those items are shown in Table 6.15 and accompanying Chart 6.21.

TABLE 6.15. COMPARISON OF CLASS TOPICS, TEXAS 2022 SURVEY WITH EDGE DATA

All Sizes of Libraries	*Basic Computer*	*Office Software*	*Internet Search*	*Online Safety*	*Social Media*	*User-Owned Devices*	*Other than English*
EDGE	62%	48%	53%	41%	35%	58%	22%
TX-2022	34%	25%	26%	17%	18%	28%	10%

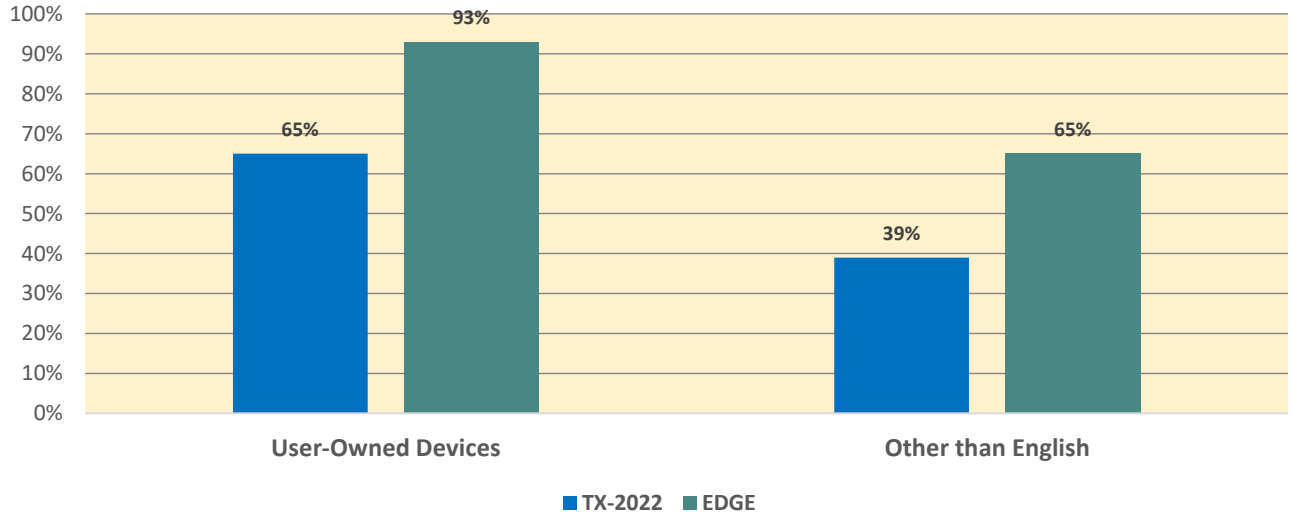
As is apparent, about twice as many EDGE libraries offer specific class topics than do Texas main libraries. For online safety, the difference is even greater.

CHART 6.21. CLASS TOPICS OFFERED, MAIN LIBRARIES AND EDGE LIBRARIES, ALL SIZES



The differences are less pronounced for two types of one-on-one assistance as shown in Chart 6.22.

CHART 6.22. ONE-ON-ONE ASSISTANCE, MAIN LIBRARIES AND EDGE LIBRARIES ALL SIZES



As shown below in the series of Charts 6.23 through 6.31, there are major differences between the EDGE libraries and the 2022 Directors Survey in those libraries with very small populations served: under 5,000 and between 5,000 and 15,000. Even with the larger libraries, the EDGE results exhibit higher percentages except for three topics: internet searching, online safety, and social media.

CHART 6.23. CLASSES IN BASIC COMPUTER SKILLS, MAIN LIBRARIES AND EDGE LIBRARIES, BY SIZE OF POPULATIONS SERVED

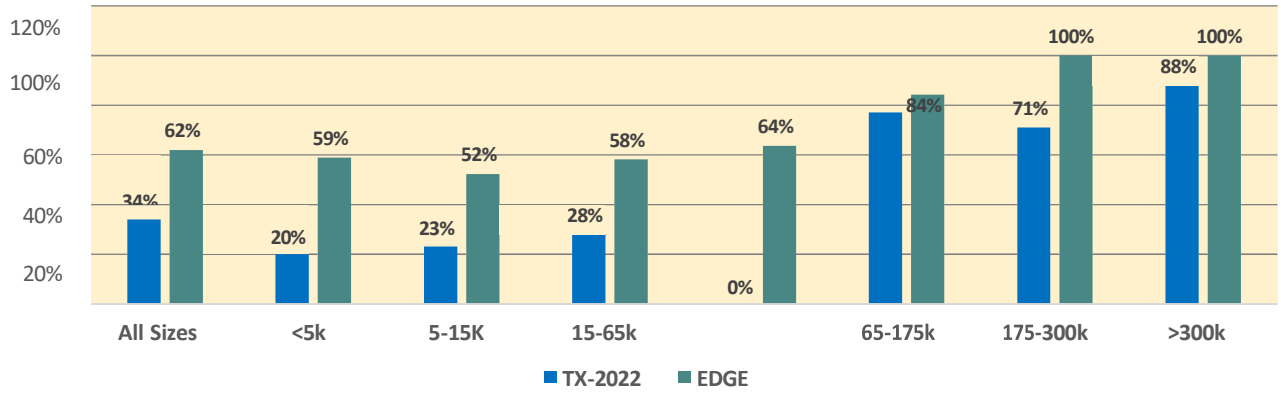


CHART 6.24. CLASSES IN OFFICE PRODUCTIVITY SOFTWARE, MAIN LIBRARIES AND EDE LIBRARIES, BY SIZE OF POPULATIONS SERVED

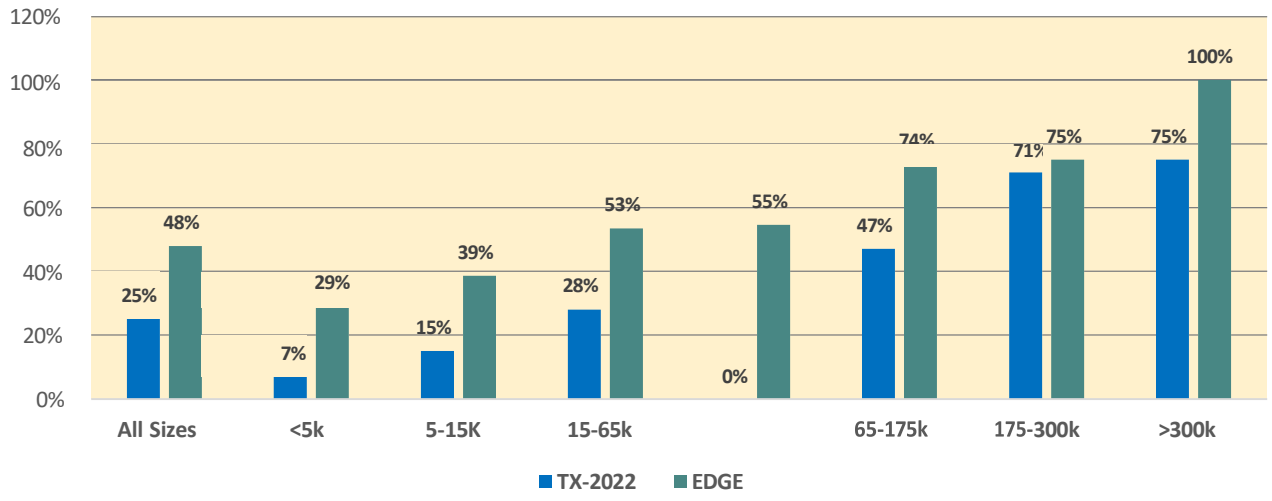


CHART 6.25. CLASSES IN USING THE INTERNET, MAIN LIBRARIES AND EDGE LIBRARIES, BY SIZE OF POPULATIONS SERVED

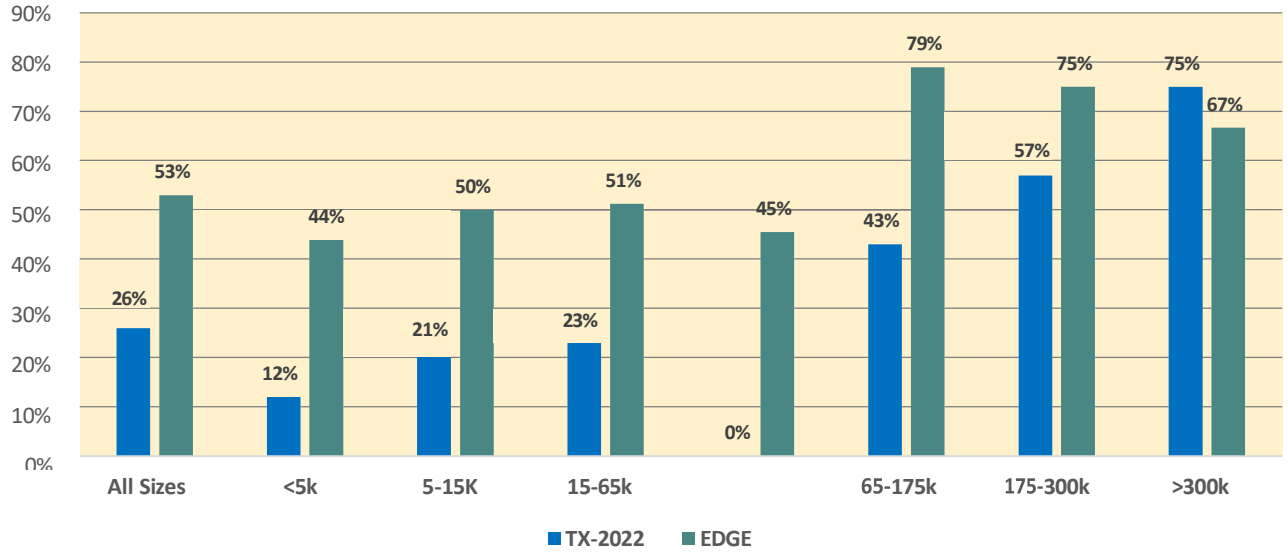


CHART 6.26. CLASSES FOR ONLINE SAFETY, PRIVACY, AND SECURITY BY MAIN LIBRARIES AND EDGE LIBRARIES, BY SIZE OF POPULATIONS SERVED

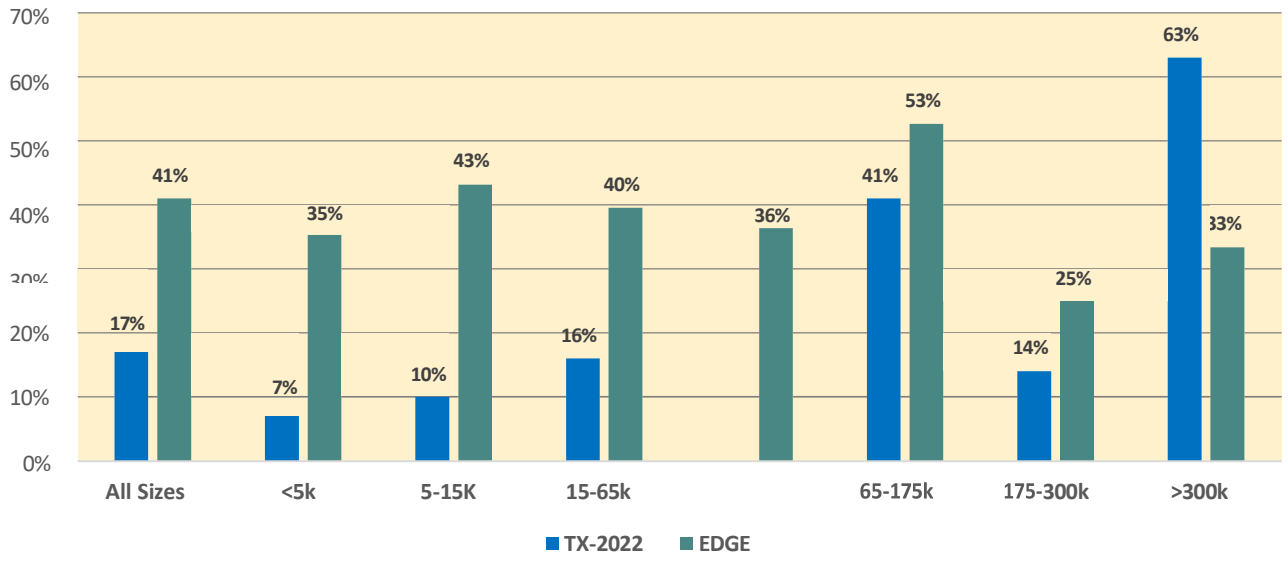
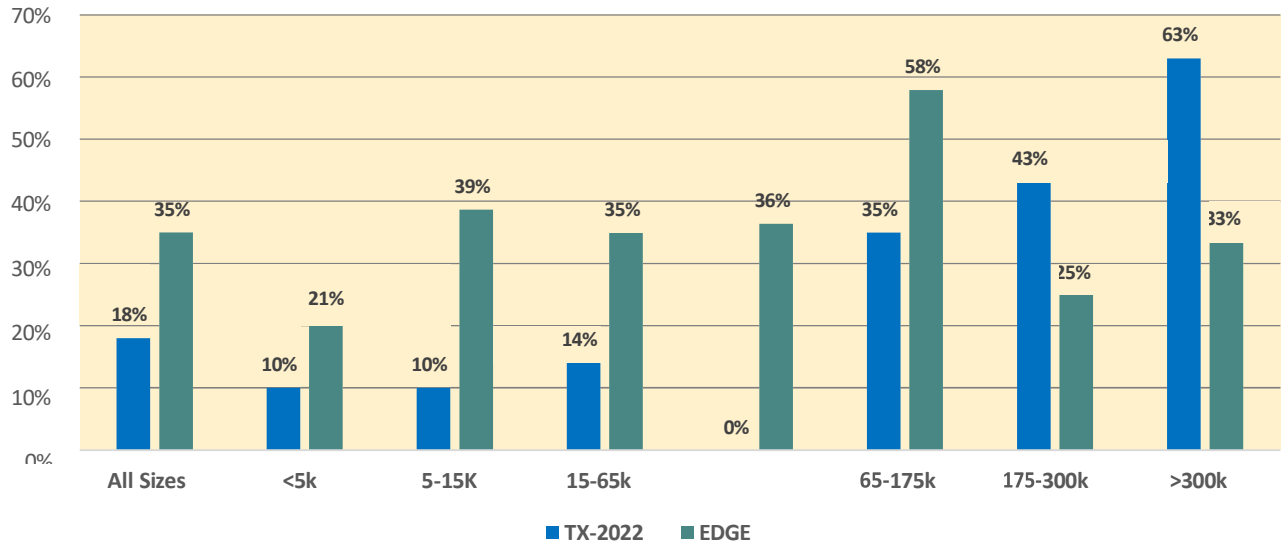


CHART 6.27. CLASSES ON SOCIAL MEDIA, MAIN LIBRARIES AND EDGE LIBRARIES, BY SIZE OF POPULATIONS SERVED



"Grants are time consuming, usually large grants are offered but not a lot of small grants for smaller projects. Would like to be able to apply for the smaller grants in shorter intervals, annually."

(Rachel Hadidi, Lake Dallas Library)

CHART 6.28. CLASSES ON USER-OWNED DEVICES, MAIN LIBRARIES AND EDGE LIBRARIES, BY SIZE OF POPULATIONS SERVED

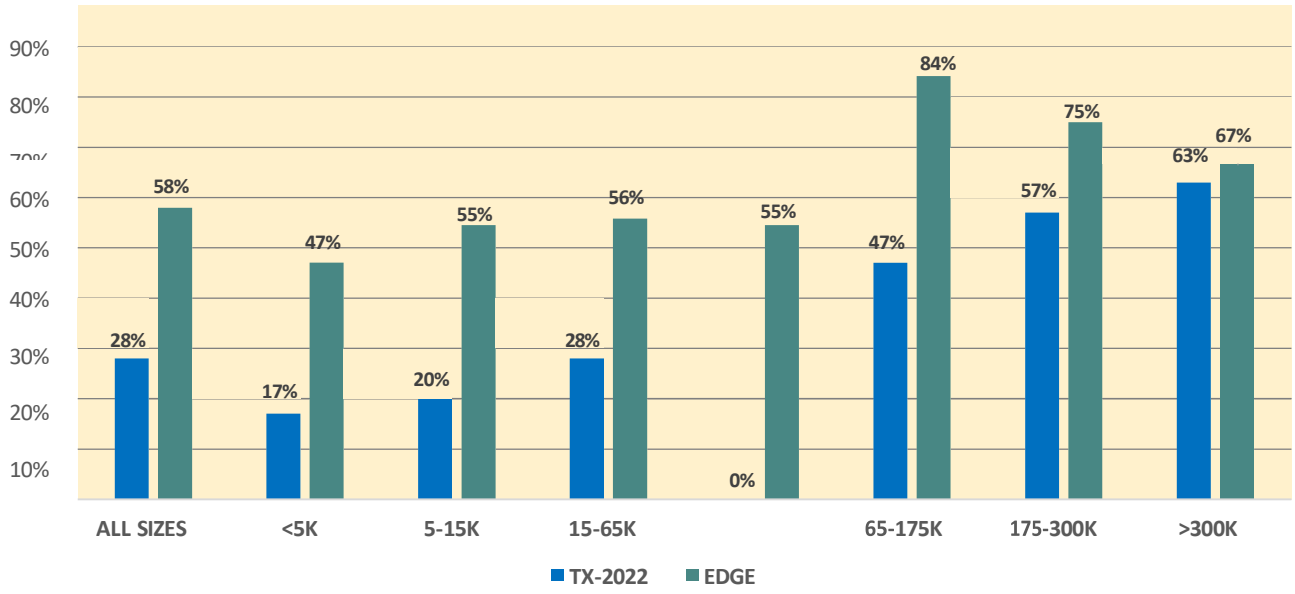


CHART 6.29. CLASSES ON DIGITAL SKILLS IN LANGUAGES OTHER THAN ENGLISH, MAIN LIBRARIES AND EDGE LIBRARIES, BY SIZE OF POPULATIONS SERVED

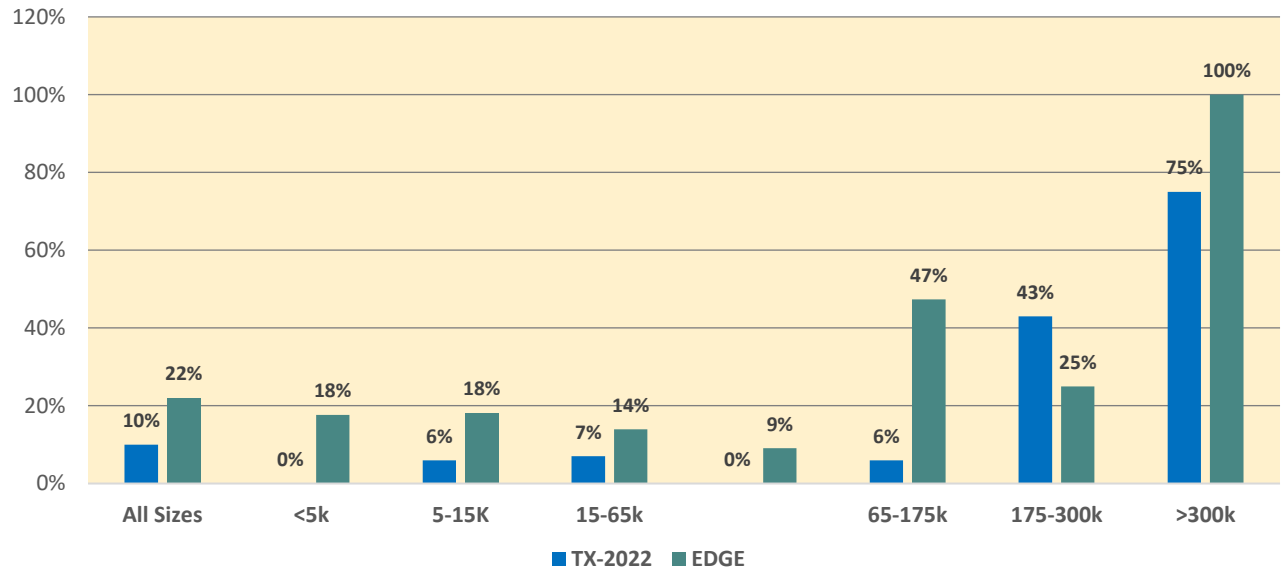


CHART 6.30. ONE-ON-ONE SUPPORT FOR USER-OWNED DEVICES, MAIN LIBRARIES AND EDGE LIBRARIES, BY SIZE OF POPULATIONS SERVED

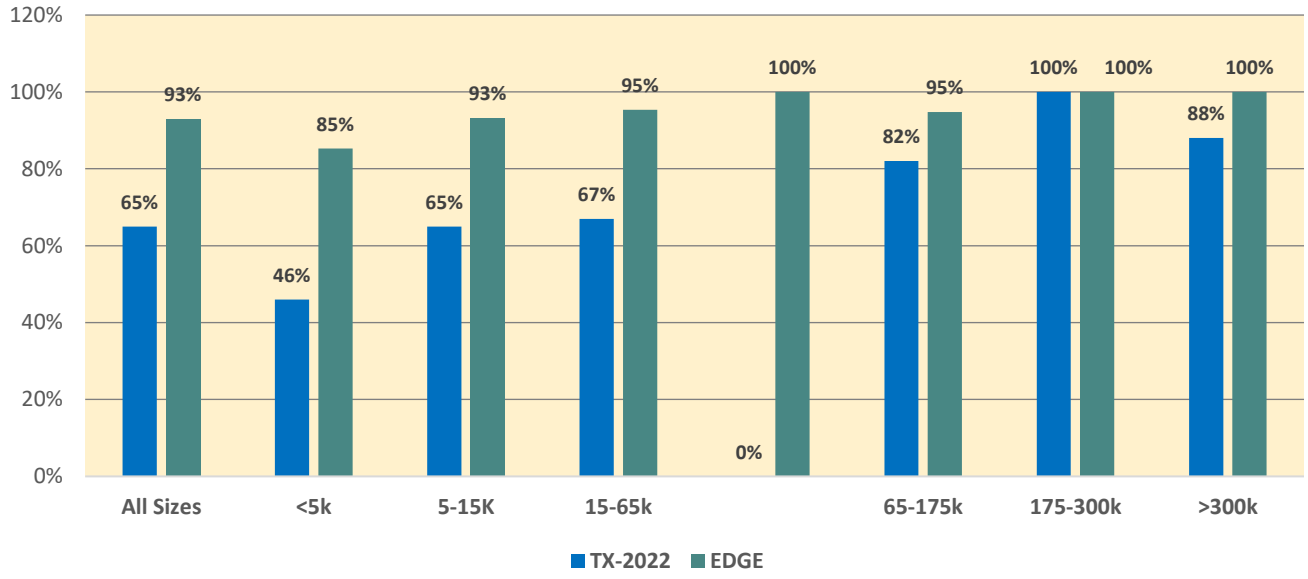
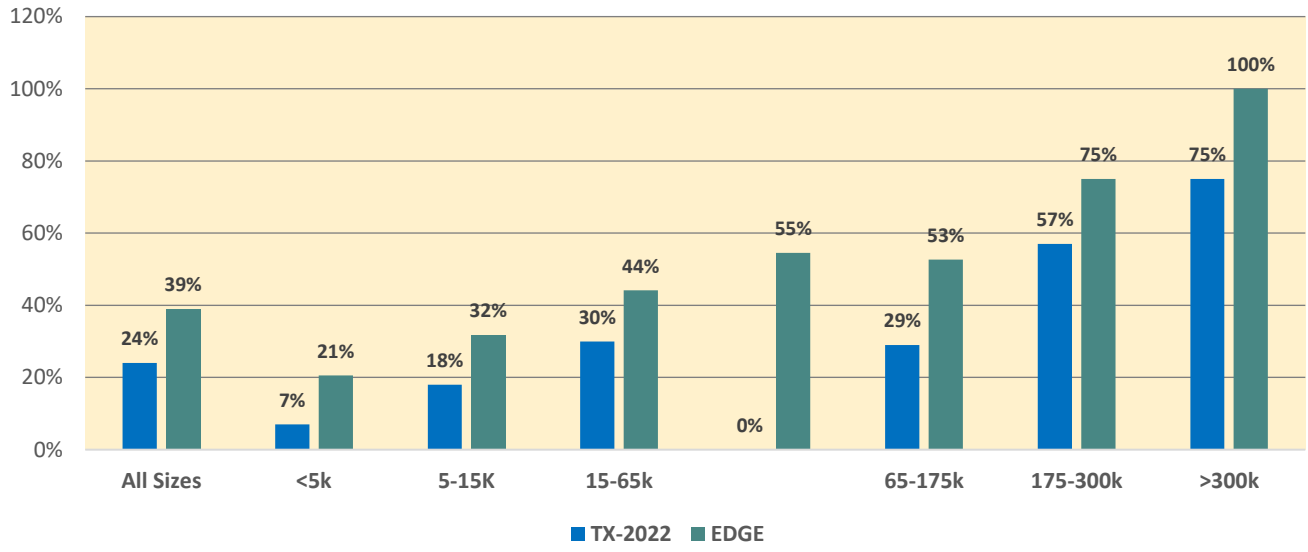


CHART 6.31. ONE-ON-ONE TECHNOLOGY SUPPORT IN LANGUAGES OTHER THAN ENGLISH, MAIN LIBRARIES AND EDGE LIBRARIES, BY SIZE OF POPULATIONS SERVED



Main Libraries Without Current Digital Literacy Training and Assistance

Data in the previous sections of this chapter demonstrate that smaller Texas libraries are providing fewer digital literacy assistance and training opportunities to patrons than libraries in more populous Texas communities. Smaller Texas libraries also are providing fewer digital literacy services and assistance than libraries in rural communities outside of Texas. A closer examination of the smaller Texas libraries was performed and revealed that 27 main libraries responding to the survey did not provide any digital literacy training or assistance. These 27 libraries do not offer one-on-one assistance, classes taught by staff or volunteers or individuals from other organizations, or self-paced curricula.[78]

One of the differences between the 27 libraries and those which do provide some type of assistance is found in their answers to the question: "Are there unmet digital literacy needs in your community?" A higher proportion of those without assistance believe there are not unmet needs, and a smaller proportion of those respondents believe there are unmet needs.

As shown in Table 6.16, twice as many librarians who responded to that question believe there are unmet needs compared to the librarians that do not provide training or assistance currently: 63% of all respondents compared to 33% of respondents without training or assistance. And there is a large difference between the two groups in their choice of "I do not know." More than half of the librarians that do not provide service said they did not know if there are unmet needs.[79]

[78] Thirty-two library directors responded to two survey questions with answers that indicated they did not provide any type of assistance or training. Five of the 32 directors later gave answers that they help patrons when needed. Because of those later answers the five libraries were omitted from this more detailed analysis of libraries without any type of assistance. For branch libraries, there were originally two managers who answered that no training or assistance of any kind was being provided. Upon further inspection of the responses, one librarian said the branch does assist in one-on-one situations. A second librarian said training that had been cancelled because of the pandemic would be re-starting in late May 2022. Consequently all 80 branch libraries were considered to be providing digital literacy assistance to some degree.

[79] The differences between the two groups are statistically significant ($p>0.01$).

TABLE 6.16. UNMET NEEDS COMPARISON OF ALL MAIN LIBRARIES AND LIBRARIES WITHOUT DIGITAL LITERACY ASSISTANCE

	Yes	No	I do not know
Respondents without Training or Assistance	33%	11%	56%
All Respondents	63%	6%	31%

N=169 (All Respondents), N=27 (No Training/Assistance)

A review also was conducted about the size of the libraries without any training or assistance. Ten of the 27 libraries serve fewer patrons than 5,000, 9 libraries serve populations between 5,000 and 15,000 residents, and the remaining 8 serve populations between 15,000 and 65,000. There is a definite slant toward the "no training/no assistance" libraries being small in size. Depending on whether three or four size categories are used, the result is statistically significant.[80]

Also, a rough categorization of main libraries locations was developed that placed all libraries into one of three groups based on county poverty data: poor communities, moderate wealth communities, wealthy communities.[81] As shown in Table 6.17, most of the libraries without training or assistance are in moderate wealth counties. And while twice as many libraries not providing digital literacy services are in poorer communities than wealthy communities, the differences are not statistically significant. About 60 percent of the libraries in the total number of director responses were in the medium wealth category, comparable to the proportion of libraries not providing assistance: 66%. These experimental data suggest that county wealth is not correlated to the absence of digital literacy training or assistance.

TABLE 6.17. WEALTH CLASSIFICATION OF COUNTIES SERVED BY MAIN LIBRARIES WITHOUT DIGITAL LITERACY ASSISTANCE

	Poor	Medium	Wealthy
No Training	6	18	3

[80] With three sizes, the result is significant ($p>0.05$). With four sizes, the result is not significant ($p>0.08$).
[81] More details about how the counties were classified and consequently how libraries were classified are available in a methodology supplement.

Some librarians provided comments about why they were not offering training or assistance currently:

- Four librarians said they wanted to implement some sort of program or effort in the future.
- Two librarians mentioned not having funds or staffing to implement programs.
- One librarian said she was unclear what digital literacy is.
- One librarian noted that most of her patrons use the library for basic access but then go to a nearby larger library system when seeking more advanced assistance or training.

Other reasons for the lack of training and assistance are possible. There may be few requests for digital literacy assistance. And because many of the libraries are relatively small and in rural areas, holding classes would be more difficult with fewer patrons and distance/transportation issues.

Estimated Expenditures for Current Digital Literacy Services

One goal of this research was to determine the amount of current staff time and resources which are being devoted currently to digital literacy services. Two lines of inquiry were chosen. The first examined summary data from the two surveys and yielded aggregate estimates of expenditures for current services at all Texas public libraries. The second approach reviewed costs and expenditures for individual public libraries, particularly for personnel costs involved in providing assistance and training.

Estimates of Current Resources Devoted to Digital Literacy

Both the library director and branch manager surveys contained the following question:

> *To conduct one part of this project, we are seeking information about the percentage of your operating funds that are spent on digital literacy services. Although we understand it may be difficult to determine, please provide your best estimate for expenditures that could be reasonably allocated to digital literacy staff time, software and curriculum, and equipment used in training. A very rough estimate will be useful to us.*

As shown in Table 6.18, approximately half of branch managers estimate they devote a very large (31%) or a significant (20%) amount of time to digital literacy. About one in five (17%) of the managers estimate they and their staffs spend 10 percent to 20 percent of their time, and about one- third (32%) of the managers estimate their digital literacy personnel time commitment is 10 percent or less. Estimated percentages for other operating expenditures and equipment are lower, with more than half

of the managers (17% in the "a small amount" and 35% in the "not much" column) indicating library equipment expenditures for digital literacy are below 10 percent.

TABLE 6.18. ESTIMATED PERCENTAGES OF BRANCH LIBRARY EXPENDITURES DEVOTED TO DIGITAL LITERACY SERVICES AND ASSISTANCE

	A very large amount (30+%)	A significant amount (20% to 30%)	A moderate amount (10% to 20%)	A small amount (5% to 10%)	Not much (less than 5%)
Library Employee Salaries & Benefits	31%	20%	17%	14%	18%
Other Library Operating Expenditures	19%	17%	33%	11%	20%
Library Equipment for Patrons and Classrooms	8%	18%	23%	17%	35%

N=65

Directors estimate they and their staffs spend lower amounts of time and resources as shown in Table 6.19. Approximately 40 percent of library directors estimate they and their staffs devote a very large or a significant amount of time to digital literacy. About one in six of the directors estimate they and their staffs spend 10 percent to 20 percent of their time, and 43 percent (14% in the "a small amount" column and 29% in the "not much" column) of directors estimate their digital literacy personnel time commitment is 10 percent or less. Estimated percentages for other operating expenditures and equipment are substantially lower, with approximately two of every three directors indicating library equipment expenditures for digital literacy are less than 10 percent.

TABLE 6.19. ESTIMATED PERCENTAGES OF MAIN LIBRARY EXPENDITURES DEVOTED TO DIGITAL LITERACY SERVICES AND ASSISTANCE

	A very large amount (30+%)	A significant amount (20% to 30%)	A moderate amount (10% to 20%)	A small amount (5% to 10%)	Not much (less than 5%)
Library Employee Salaries & Benefits	31%	10%	16%	14%	29%
Other Library Operating Expenditures	9%	25%	22%	18%	25%
Library Equipment for Patrons and Classrooms	4%	7%	21%	26%	41%

N=139

To investigate further, responses from library directors were segmented into three categories of libraries by populations served: large libraries serving populations above 175,000 patrons, medium-sized libraries serving populations between 15,000 and 175,000, and small libraries serving populations fewer than 15,000 residents.

Table 6.20 compares the percentages of the three categories of main libraries on employee salaries and benefits. Personnel cost estimates are greater for the medium-sized and small libraries than for the large libraries when the very large, significant, and moderate amount columns are combined. Perhaps surprisingly, almost two thirds of directors for large libraries estimate that less than 10 percent of their employee staff salaries are allocated to digital literacy. A similar pattern occurs with other operating expenditures: medium-sized and smaller libraries estimate they are devoting larger allocations of their expenditures to digital literacy than are the large libraries. (Table 6.21.)

TABLE 6.20. ESTIMATED PERCENTAGES OF MAIN LIBRARY EXPENDITURES DEVOTED TO DIGITAL LITERACY SERVICES AND ASSISTANCE, BY SIZE OF MAIN LIBRARY

	A very large amount (30+%)	A significant amount (20% to 30%)	A moderate amount (10% to 20%)	A small amount (5% to 10%)	Not much (less than 5%)
Large (>175,000)	31%	0%	8%	31%	31%
Medium (15,000-175,000)	38%	4%	20%	13%	25%
Small (<15,000)	25%	17%	14%	13%	31%
Statewide Aggregate	31%	10%	16%	14%	29%

TABLE 6.21. PERCENTAGE OF LIBRARY OTHER OPERATING EXPENDITURES DEVOTED TO DIGITAL LITERACY SERVICES AND ASSISTANCE, BY SIZE OF MAIN LIBRARY

	A very large amount (30+%)	A significant amount (20% to 30%)	A moderate amount (10% to 20%)	A small amount (5% to 10%)	Not much (less than 5%)
Large (>175,000)	0%	14%	0%	36%	50%
Medium (15,000-175,000)	5%	36%	25%	13%	20%
Small (<15,000)	14%	19%	24%	19%	24%
Statewide Aggregate	9%	25%	22%	18%	25%

Table 6.22 shows estimates for equipment and a different profile of expenditures. While amounts are much lower than for other operating expenditures and salaries and benefits, large libraries estimate they are spending more than medium-sized and small libraries of their equipment expenditures on digital literacy activities.

TABLE 6.22. PERCENTAGE OF LIBRARY EQUIPMENT EXPENDITURES DEVOTED TO DIGITAL LITERACY SERVICES AND ASSISTANCE, BY SIZE OF MAIN LIBRARY

	A very large amount (30+%)	A significant amount (20% to 30%)	A moderate amount (10% to 20%)	A small amount (5% to 10%)	Not much (less than 5%)
Large (>175,000)	7%	7%	29%	36%	21%
Medium (15,000-175,000)	4%	7%	18%	33%	38%
Small (<15,000)	3%	7%	23%	20%	48%
Statewide Aggregate	4%	7%	21%	26%	41%

These data are approximations and depend on how digital literacy is defined by each librarian, are subject to variation in the amount of time librarians thought about the survey question, and to unique situations.[82] Nevertheless, these data come from representative samples of main libraries by size and branches by location. In addition, a previous chapter has shown that in the aggregate, branch libraries provide more services than main libraries, which would suggest that marginally higher cost estimates would be given by branch managers rather than library directors. That conforms to the data in Tables 6.18 and 6.19.

Estimates of Current Statewide Expenditures for Digital Literacy

The estimates provided by library directors in Table 6.19 served as the starting point for a multi-step process that led to generating a statewide range of expenditures by Texas public libraries.

The first step was to find the product from multiplying the percentages for each of the five possible answers by the percentage ranges in each of the five categories of "A very large amount," "A significant amount," "A moderate amount," "A small amount," and "Not much. In Table 6.23, that occurs when the answer percentage of 30.9 for the "very large amount" category is multiplied by the category

[82] Several survey respondents noted that some of their library's expenditures for operating costs and equipment were located in the budgets of other departments.

percentage of 30 percent to yield 9.3 percent (.309 X.30 = .093 or 9.3%). For the "very large amount" category, the low-end calculation and the high-end calculation are the same because only one percentage (30+%) was shown in the answer option. For the next category of "a significant amount," the percentage choosing that answer (10.1 percent) was multiplied with the low-end of the answer range (20%), yielding 2.0 percent as the low-end of the range (.101 X .20= .0202 or 2.0%). Likewise, the percentage choosing that answer (10.1 percent) was multiplied with the high-end of the answer range (30%), yielding 3.0 percent as the high-end of the range (.101 X .30= .0303 or 3.0%).

The same computations occurred for the answer categories "a moderate amount" and "a small amount." For the final answer category of "Not much," the 28.8 percent was multiplied with a single, conservative percentage of 2.5 percent. Some libraries will have chosen zero or one percent and others perhaps three or four percent. The arbitrary conservative figure of 2.5 percent was selected as a compromise, yielding 0.7 percent (.288 X .025= .007 or 0.7%).

TABLE 6.23. COMPUTATION OF RANGES FOR EMPLOYEE SALARIES AND BENEFITS DEVOTED TO DIGITAL LITERACY SERVICES AND ASSISTANCE BY MAIN LIBRARIES IN THE AGGREGATE

	A very large amount (30+%)	A significant amount (20% to 30%)	A moderate amount (10% to 20%)	A small amount (5% to 10%)	Not much (less than 5%)
	30.9%	10.1%	15.8%	14.4%	28.8%
Low-End of Range	9.3%	2.0%	1.6%	0.7%	0.7%
High-End of Range	9.3%	3.0%	3.2%	1.4%	0.7%

Totals then are obtained by adding all five cells in each row. The low-end of range row is obtained as follows: 9.3% + 2.0% + 1.6% + 0.7% + 0.7%, for a sum of 14.3 percent. Similarly adding all five cells in the high-end of range row produces a sum of 17.6 percent after adding 9.3% + 3.0% + 3.2% +1.4% + 0.7%.

A similar set of calculations for other operating expenditures appears in Table 6.24.

TABLE 6.24. COMPUTATION OF RANGES FOR OTHER OPERATING EXPENDITURES DEVOTED TO DIGITAL LITERACY SERVICES AND ASSISTANCE BY MAIN LIBRARIES IN THE AGGREGATE

	A very large amount (30+%)	A significant amount (20% to 30%)	A moderate amount (10% to 20%)	A small amount (5% to 10%)	Not much (less than 5%)
	9.4%	25.2%	22.3%	18.0%	25.2%
Low-End of Range	2.8%	5.0%	2.2%	0.9%	0.6%
High-End of Range	2.8%	7.6%	4.5%	1.8%	0.6%

For other operating expenditures, the sum of low-end of range cells is 11.6 percent after rounding and the sum of the high-end cells is 17.3 percent after rounding. The sums for library equipment are not shown and were 7.0 percent on the low end and 11.2 percent on the high end.[83]

With the ranges for employee salaries and other operating expenditures determined, a publicly available TSLAC database was utilized to incorporate statewide totals of expenditures for those expenditures.[84] As shown in Table 6.25, statewide salaries and benefits were $396 million in the recent reporting period of fiscal year 2021. Other library operating expenditures statewide were nearly $114 million.

The respective low-end and high-end percentages for personnel costs and for other operating expenditures from the survey were then multiplied with the statewide totals from the TSLAC database. As shown in Table 6.25, the low-end range estimate for salaries and benefits is $56.7 million (.143 x $396.1 million = $56.7 million). The high-end range estimate is $69.8 million (.176 x $396.1 million = $69.8 million).

The low-end range estimate for other operating expenditures is $13.2 million (.116 x S113.9 million = $13.2 million). And the high-end estimate is $19.66 million (.172 x $113.9 million = $19.66 million) after rounding.

[83] Library equipment and software are included in the other operating expenditure category in TSLAC databases. Therefore, there were no further calculations for equipment in this process.
[84] The 2021 Central Library Statistics excel database was downloaded from https://www.tsl.texas.gov/ldn/statistics. These statewide totals are for fiscal year 2021.

The final step added the low-end estimates together and the high-end estimates together. The low-end estimate for salaries and benefits ($56.7 million) combined with the low-end estimate for other operating expenditures ($13.2 million) yields $69.9 million. The high-end estimate for salaries and benefits ($69.8 million) combined with the high-end estimate for other operating expenditures ($19.66 million) yields $89.48 million. Based on primary data from library directors, the range for current digital literacy services is a minimum of about $70 million and a maximum of about $90 million.

TABLE 6.25. ESTIMATED STATEWIDE PUBLIC LIBRARY EXPENDITURES DEVOTED TO DIGITAL LITERACY SERVICES IN 2021

	Percentage for Digital Literacy	Statewide Salaries And Benefits	Amount for Digital Literacy
Low-End of Range	14.3%	$ 396,110,829	$ 56,715,148
High-End of Range	17.6%	$ 396,110,829	$ 69,824,436
	Percentage for Digital Literacy	**Statewide Other Operating Expenditures**	**Amount for Digital Literacy**
Low-End of Range	11.6%	$113,989,439	$ 13,222,775
High-End of Range	17.2%	$113,989,439	$ 19,660,328
Total for Digital Literacy—Low-End of Range			$ 69,937,923
Total for Digital Literacy—High-End of Range			$ 89,484,765

Cost Estimates at Individual Library Level

As presented in chapter III, digital literacy services vary in how frequently they are delivered, if they are delivered in one-on-one sessions or through classes, what subjects and topics are presented, who the

instructors are, which patrons request assistance, where service occurs, and whether assistance is episodic or cumulative. Some libraries provide no services or assistance, many libraries educate their patrons primarily in one-on-one meetings, a number use locations such as community centers and senior living centers, and other libraries offer an extensive set of classes and self-paced courses. To estimate costs for any particular library seeking to start a program would require data on a large number of variables and involve compiling localized data about availability of trainers, existing equipment, and desired types of services.

Data collected in this project may help an individual librarian with her/his digital literacy programming. One key finding from interviews pertains to the ratio of preparatory time to classroom time. While some rough rules of thumb exist, for instance 1/3 hour to ½ hour for each hour of classroom time, that oversimplifies the situation. Common sense and experience suggest preparatory and logistic activities are more time-intensive at the beginning of training than in subsequent sessions. Librarians have provided information that the initial average ratio for a class may be one hour of preparatory time (including logistics) to one hour of classroom time, assuming the staff member has adequate training/experience. Then, as courses are repeated or additional classes are held, the amount of preparatory time declines. In the few cases for which reliable detailed data were obtained, the ratio may fall into a range of 20-30 minutes of preparation time to 60 minutes of classroom time eventually. In sum, preparatory time is not static.

Another finding is that hourly rates for training classes vary significantly depending on whether existing library staff are conducting the training or whether an individual from outside the library is the instructor. Hourly rates are known for existing employees while adult literacy trainers generally are paid $20 to $32 hourly. Hourly rates for other third-party service providers, such as private contractors or local college instructors, can range from $32-$50. Yet some libraries have utilized volunteers successfully for training at nearly no cost.

A third finding is that equipment and software are normally a minor portion of all costs. New equipment may be necessary for the training, but there are options for minimizing these costs. Equipment

purchases will differ substantially depending on existing equipment and whether refurbished equipment may be available from a national or local group. Software expenditures are minimal, assuming the equipment already have traditional operating systems and commonly used programs installed. Training software including instructor guides are available at no cost from TSLAC and other sources.

Chapter VII. Case Studies and Case Profiles of Services and Collaborations

Introduction

To appreciate the diversity and richness of the roles public libraries have in facilitating digital literacy within their communities, case studies and case profiles were developed. Some illustrate how libraries have performed specific types of training and assistance. Other studies and profiles show how libraries have helped their patrons with online assistance for job seekers, job training, and workforce development. Several describe services and assistance for specific types of patrons such as senior citizens and teens. A number focus on health and telehealth services. And still others are so unique as to defy easy categorization. Both innovative library activities and collaborations between libraries and other organizations are described. These case profiles may be viewed as "best practices" or "success stories," although some activities and collaborations are widespread.

The cases and profiles highlight libraries in all parts of Texas and of all sizes. The majority of cases were identified initially from the survey of library directors in spring 2022. Several questions solicited information. The first question was:

> *Does your library have any digital literacy service or approach that is successful and may be unique or innovative, and which may be of interest to others? As an example, have you discovered a technique that has proven very effective in attracting or retaining patrons in training classes? Is there is something you are particularly proud of and which you could provide information about? If so, please describe briefly. Otherwise, please go to the next question.*

Of the 171 survey respondents, 25 main library directors provided some type of response.[85]

A second question was:

> *Does your library have any programs or strategic partnerships with local groups, organizations, educational institutions, or governments specifically focused on digital literacy services or training? These might be related to workforce and employment for instance. If your library does*

[85] A very similar question on the branch library survey elicited 22 responses.

have one or more partnerships, please describe them briefly. If your library does not have any partnerships, please go to the next question.

Staff also reviewed responses to a third question.

From your experience, what works and what does not work in providing digital literacy training and teaching digital literacy skills? If you or your library has no digital literacy experience, please go to the next question.

Additional possible case studies and profiles were identified from the original set of 46 interviews with librarians.

A winnowing process was conducted by research staff, and library directors and branch managers were then contacted by email and telephone, asked to provide further information, and if they desired to participate further. Nearly all directors contacted provided further information and indicated they would be interested in being contacted again by phone or email. Based on these responses, staff narrowed further the candidate libraries.

The main criteria used in the selection process were that the activities entailed a collaboration between a library and one or more local organizations, demonstrated a unique or innovative way to serve patrons, addressed a challenge multiple libraries appeared to be facing, or in some way was thought to provide instructive experience for other librarians.

No field trips were conducted. All library directors and branch managers were contacted by email, telephone, or remote online software. All directors were asked about the specific information they had provided on their survey or in their initial interview and then were asked a series of additional questions soliciting other information that might be included in the profile. After the initial contact, a draft profile was developed and sent to the respective library director or branch manager to ensure accuracy and proper perspective. Nearly all of the case studies and profiles provided below have been approved by the librarians.[86] The types of cases are primarily distinguishable by the length of the descriptions, with case studies being more in depth than case profiles.

[86] When this report was submitted, responses had yet to be received from Pharr Memorial Library and from Little Walnut Creek Branch Library.

Cases from library systems and main libraries are presented in alphabetical order. Then a set of cases and profiles from branches are presented in alphabetical order by name of the branch. A third group describe activities of several non-profit organizations and one program from outside Texas. A final section lists approaches and techniques in use that project staff believe also warrant consideration. These short descriptions are presented in the language used by directors and managers in their survey responses.

Main Libraries and Systems

Austin Public Library

City: Austin
County: Travis
Population Served: 978,908

Snapshot: The pandemic revealed significant deficits in all aspects of digital literacy across the City of Austin (COA) with inequities based on age, location, race, and language. In response, the Austin Public Library (APL) developed a service model that integrates three critical components: digital navigation assistance, access to teleservices, and partnerships with community resource centers.

The program that emerged from the service model design was made possible, in part, from three grants awarded by and participation in learning cohorts from the Texas State Library and Archives Commission. The model is multifaceted though patrons benefit from its integration.

Several partners provide essential support including the Austin Free-Net (AFN), the COA Office of Telecommunications and Regulatory Affairs (TARA), the Community Technology and Telecommunications Commission **(**CTTC**)** and the Austin Public Library Commission. It is important to note that AFN, a long-standing community-based organization, has provided public access to the internet and digital literacy training for all Austin residents since 1995, focusing on serving lower-income community members.

The program is designed to reflect the customer-centric approach of the APL and its partners. In identifying residents most impacted by COVID, the library also collaborated with the Housing Authority of Travis County (HATC) and the Housing Authority of the City of Austin (HACOA) in addressing isolation of older residents.

Residents were polled about their needs, interests, and preferences for services. The feedback prompted

the APL to offer services on Saturday mornings at a nearby branch, as well as a community center located in the housing authority. The service model also considered barriers such as transportation, time, and childcare.

The Austin Public Library and Austin Free-Net digital navigators collaborate with community organizations to present a variety of information, such as health and employment-related resources, signing up for a library card, and checking out technology devices. All program content and materials are provided in both English and Spanish. Library and AFN staff provide digital literacy instruction and guide customers in navigating online resources and learning pathways.

AFN Learn & Earn Service Model

The library supported the expansion of this model for the Housing Authority of Travis County and Latinitas, a community-based organization focusing on teaching digital literacy to youth and parents. As part of this program, enrolled participants may earn their own device once they have completed a learning pathway of their choice.

Staff learned from several town hall-style meetings including that many residents were hesitant about checking out a laptop or using hotspots because of the financial liability associated with loaned devices, as well as the short-term loan period. Staff also discovered that device ownership appeals to new learners and increases participation in the program. The program coordinator for the Housing Authority of Travis County also decided to offer additional learning pathways relating to health, employment, parenting and online school resources.

AFN distributes donated devices via the Community PC Program, a joint venture between AFN and the COA Community Technology team. The volunteers and students who oversee the computer distribution to eligible residents gain workforce skills during their IT internships with the AFN and the Community PC Program.

Digital Navigation and Teleservices

Library staff, including digital navigators, help by phone, remotely, or in-person those residents who want to enhance their digital literacy and workforce skills. The assistance often includes trouble-shooting technical issues with loaned or personal devices. As noted earlier, transportation and childcare can pose significant barriers for some individuals who want to participate in structured and scheduled classes. This is an important reason home access and using an owned computer and hotspot are preferred, especially when engaging in private or sensitive conversations with healthcare providers or social service providers. Because of privacy concerns, APL has begun to install private consultation rooms at select neighborhood branches as an option for residents to receive assistance in accessing services through videoconferencing. A partnership with the Austin Community Court of the COA offering tele- court services through the neighborhood libraries is also under consideration.

Pending the implementation of Northstar as its digital literacy curriculum and credentialing platform, APL staff routinely offer "just in time" service to help people who call in or walk in for assistance. While individual assistance is intensive and requires resources, library staff believe that personalization is the most meaningful way to reach patrons.

APL cited a first-hand example of one patron who could not navigate online. This patron kept saying he "forgot his glasses" and could not read the text. However, during a side-by-side session, it became apparent to the staff that this individual had both limited literacy and difficulty controlling a mouse. Moving this individual to Google voice reduced the barriers and improved his outcomes.

Future Programming

APL is seeking more trained staff to deploy into communities, somewhat like a corps of navigators. APL is aware that a digital navigator should possess the skills to teach diverse learners. A TSLAC grant has allowed the library to train its digital navigators on language differences and resources, cultural competencies, and accessibility thus ensuring a blend of technical and teaching competencies that is essential for positive patron experiences.

The APL will continue to share and exchange service models with other libraries especially innovative programs. From a TSLAC grant, APL staff are participating in a digital navigator learning cohort. This forum fosters best practices, networking, and efficiencies by sharing resources. The APL assisted Nueces County and Bay City, as part of this effort, by sharing the process and templates used to launch a student card campaign for schools making virtual library materials and online resources accessible. The forum also introduces the APL staff to national and regional resources and strategies centering on the budgeting and marketing aspects of service design. Some of the cohort participants even attended a broadband summit that discussed digital access in Texas.

The library and its partners continue to explore unique opportunities to leverage talent and resources to better meet the needs of Austinites in a rapidly diversifying and growing urban city. Due to limited capacity, grant amount thresholds, and the extensive resources involved in researching, managing, and administering grants, the APL prefers partnering with other public or private entities in seeking funding for such projects as development of ready-made evidence-based curriculum, modules and kits and robust community engagement. More partnerships with companies through corporate social responsibility programs is another APL goal.

Chambers County Library

City: Anahuac
County: Chambers
Population Served: 39,657

Snapshot: This library partners with a civic club that raises funds for digital literacy programming for children, some with special needs.

The partnership with the West Chambers County Pilot Club started in 2017. The library sets priorities on the donations it receives from the club. Often special needs children are the focus. The initial fundraiser garnered $10,000 for “kid-friendly computers” that included pre- downloaded educational applications that allowed setting up early digital literacy stations for children.

A recent donation of $3,500 was used to purchase sensory items for two- to five-year-old children who play with them during their bimonthly "sensory time" sessions. The items are intended to engage the hand-eye coordination and motor skills of the children. The partnership is maintained by cordial and active communication among the librarians and the club members. The West Chambers County Pilot Club is centered on civic volunteerism.

Cozby Library and Community Commons

City: Coppell
County: Dallas
Population Served: 41,419

Snapshot: The library collaborates with area groups that provide coding instruction to middle and high school students.

The library hosts periodic coding programs that are taught by local organizations including the Wize Academy, iCode School, and Code Ninjas. This partnership allows the library to provide patrons who are typically middle school and high school students with coding instruction. Staff have not had training in this specialized area.

The library contributes the space, a projector and other audio-visual equipment. It also advertises the classes as part of regular outreach to the community. The classes are popular with room for as many as 100 students. Sometimes demand necessitates a waiting list. The main limitation to larger classes is the lack of equipment especially having enough laptops for the number of people interested in the classes. This issue is addressed by the coding organizations who either bring the necessary equipment, or patrons are informed ahead of time to bring their own equipment. The coding organizations provide their services free-of- charge as part of their marketing strategy. They also anticipate that students with a continued interest in coding can enroll (for a fee) in their standard programs.

Dallas Public Library

City: Dallas
County: Dallas
Population Served: 1,343,573

Snapshot: The position of digital literacy coordinator provides direction for the multi-faceted activities and initiatives that the Dallas Public Library (DPL) system undertakes. The coordinator also continues and promotes partnerships with local and national organizations enabling the DPL to offer a variety of digital literacy services to the community.

Digital Literacy Coordinator

The DPL established the digital literacy coordinator position for several reasons. Foremost is that branch libraries are required to offer digital literacy classes and tutoring. DPL believes the central coordination will allow the system to utilize efficiently staff talent at all levels and possibly expand program offerings.

An important task for the coordinator is to train staff on best practices for instructing and assisting patrons, including helping patrons on an individual basis such as navigating their privacy concerns. The coordinator is scheduled to teach digital literacy classes, but "the ultimate goal is to really be able to empower staff or volunteers to teach some of those classes and to have a suite of classes." The pandemic affected attracting teaching volunteers and starting some partnerships. For example, the pandemic prevented a local Microsoft Store from offering classes. The coordinator is seeking to reinstate this and establish other new partnerships.

DPL sought a person for the coordinator role with people, organizational, and communication skills. Having digital skills was a requirement as was the capacity to assess patron needs and the ability to plan for the immediate and longer-term future. The DPL converted a job vacancy into the digital literacy coordinator position.

Cardboard Project

DPL began collaborating with the Cardboard Project (CP) prior to the pandemic. CP helps people who lack digital access or skills apply primarily online for employment, housing, and other. Initially DPL

provided the Cardboard Project with space in a few branch locations where the group held office hours and classes for low-income community members. During the pandemic, this work shifted online with the CP essentially creating a virtual helpdesk. The plan is to restart in-person services.

In the fall 2022 the Cardboard Project and the Methodist Health and Hospital System will assist individuals in exam preparation for medical assistant certification. DPL will provide the space for these classes that also allow the digital literacy coordinator to talk to the enrollees about library resources. The Cardboard Project wants to establish a helpline for using and troubleshooting devices such as laptops, Chromebook, and hotspots to support library staff with device lending.

Cardboard Project is helping DPL create needed materials including videos and handouts. The organization is also translating library materials to languages other than English and Spanish (e.g., Korean and Amharic).

Parkland Hospital and Health Services

DPL and Parkland Hospital and Health Services are partnering to help library patrons with telehealth appointments. DPL plans to offer telehealth stations at branches in areas with low access to medical clinics. Telehealth appointments require patrons to have a device, internet access, and the associated skills. DPL will purchase and provide patrons with the necessary equipment and space for these appointments (e.g., a laptop and webcam, internet connection, a ring light, and a private room).

Public Library Association (PLA)

DPL recently applied for a PLA Digital Literacy Workshop Incentive grant to purchase USB storage devices as incentives for patrons to enroll in certain digital literacy classes. The grant will permit DPL to offer basic digital literacy classes using the Digital Learn curriculum. Patrons will learn digital skills through needs-based applications, such as online healthcare enrollment and job assistance.

DPL similarly plans to partner the fall 2022 with United Way to conduct digital literacy training on healthcare enrollment. DPL will provide the digital literacy instruction while on site healthcare

navigators for United Way will answer healthcare enrollment questions. Following a similar set-up, DPL plans to partner with Goodwill by using digital literacy classes to create LinkedIn profiles to aid patrons with job searches.

United States Department of Veterans Affairs

In partnership with the U.S. Department of Veterans Affairs (VA), DPL offers digital literacy courses for veterans at their central location. Experience has shown that veterans are punctual class participants, a tendency favored by instructors. Library staff teach classes with set curriculum but are flexible in answering participant concerns and interests. For example, instructors allow time to assist someone who needs help filing a claim with the VA or connecting with family on Facebook.

Edwards Public Library

City: Henrietta
County: Clay
Population Served: 10,471

Snapshot: This library benefits from the strong digital literacy leadership and advocacy of a prominent local elected official. The collaboration has led to improved technology access and education for the county.

The library and County Judge Mike Campbell recognize the value of technology access and education for a community. The county judge credits his civilian work background, which ranged from selling computers to working as an educational technology specialist, for gaining insight about the importance of internet connectivity and the benefits of technology

Judge Campbell holds positions on the boards of both the library and its foundation, regularly coming to meetings and offering input on technology. He often assures the librarians that he will speak in favor of their efforts before commissioners' court while also encouraging staff to apply for grants to acquire more digital resources. His other involvement has included helping the library to obtain its own internet connection separated from adjacent buildings that shared the service. In addition, Mr. Campbell has

assisted in searching for instructors and acquiring laptops for planned computer classes.

The library is collaborating with a provider to improve local broadband connection. As part of this collaboration, the community was polled to learn about their internet needs. The county judge also wants the library to offer online classes such as GED courses. His motivation for advocating for this initiative stems from his past work managing online classes. Librarian Norma Hearne-Ruiz describes the potential new classes as a "new technology changeover."

El Paso Public Library Literacy Center

City: El Paso
County: El Paso
Population Served: 681,728

Snapshot: The active outreach and marketing practices of the El Paso Public Library Literacy Center produce a variety of beneficial partnerships and opportunities for community members.

The Literacy Center (LC), a department of the El Paso Public Library, has the mission of "empowering struggling adults through education." Director Martha Toscano initiated the center in 1992 with a focus on English-as- second language (ESL) classes for adults. The LC presently offers an online high school program, career certificate programs, and diverse digital literacy training, including basic computer functionality, how to email, meet people digitally, use the internet, internet safety, and social media for both patrons and businesses (a popular activity).

April 2021 was pivotal in the history of the LC, especially as the pandemic highlighted the digital divide with communities lacking access to resources and services. To address this disparity, the Literacy Center was awarded a $20,000 Microsoft Digital Skills Initiative Grant, a joint Microsoft, and Texas Library Association collaboration. This funding allowed the LC to re- start its basic computer training classes. The budget allowed for $1,000 in printing services contracts; $3,000 for office supplies; $13,500 for promotional supplies, including billboards; and $2,500 for marketing supplies.

The Literacy Center also received 100 laptops as part of partnerships with the public housing authority and other agencies. Together they compiled a list of low-income residents whom they recruited to enroll in digital literacy training classes and subsequently awarding the laptops to graduates during the year.

The Microsoft grant enabled the Literacy Center to undertake city-wide marketing including six digital billboards, flyers, and providing marketing supplies from 4imprint.com for patrons to take home. The marketing outreach further enabled the LC to launch 34 outreach events, 110 workshops/webinars, 30 community partnerships, and record 4,334 patron/client engagements. Literacy Center staff visited all 14 branch libraries twice to talk with patrons about computer classes and digital literacy. Through the networking events the Literacy Center was able to establish multiple collaborations with non-profit organizations and businesses.

The Literacy Center hosted computer classes taught in partnership with *EveryoneOn,* a national organization dedicated to bridging the digital divide. The classes were held on-site while the digital instructor from *EveryoneOn* was virtual. Library staff were also on-site during classes to assist the participating patrons. The library staff also taught computer classes, adapting the extensive curriculum of *EveryoneOn.*

EveryoneOn donated an additional 45 tablets that the Literacy Center distributed to low- income residents who were on a device waitlist. The Literacy Center established a procedure of calling potential participants prior to the start of the training. Doing so proved effective in ensuring regular attendance in the six computer training classes that were conducted over a two-week period. Participants who completed the classes were rewarded with one of the donated devices.

Literacy Center Specialist Armando Salais noted that their multiple collaborations are a result of having space, knowledge of digital literacy, and a track record of working successfully with other organizations. In addition, the Literacy Center has access to all El Paso library branches, a feature that is attractive to many potential partner organizations.

Project Vida, an organization that helps small businesses, approached the LC to host a class teaching basic digital literacy and social media marketing for businesses at the Esperanza Moreno Branch Library. The class, *How to Use Social Media,* guided businesses on how to promote themselves on websites like Facebook and Instagram using hashtags, stories, and designed posts, among other avenues. *Canva 101* teaches people how to navigate Canva.com to construct logos, flyers, designs, and business cards. Salais noted that these monthly classes "are very helpful for small businesses."

The Literacy Center has also developed a partnership with the College of Agriculture and Human Sciences at Prairie View A&M University. The LC arranged, as part of this partnership, for the student organization, the 4-H Tech Changemakers, to teach computer skills to adults for one summer in its own and other branch library lab space.

The Literacy Center and the housing authority are exploring a partnership to establish a portable computer lab. Successfully implementing the lab would allow expansion to housing authority sites around El Paso.

Fort Worth Public Library

City: Fort Worth
County: Tarrant
Population Served: 909,585

Snapshot: The Fort Worth Public Library (FWPL) is introducing digital literacy classes in its branch locations that will follow the Northstar curriculum. The library has also created a train- the-trainer model to prepare library staff to teach these classes.

Digital Literacy Classes

The FWPL is striving to standardize its digital literacy curriculum affording patrons consistency of instruction regardless of the branch they visit. The Northstar Digital Literacy curriculum permits patrons to assess their skill level to determine the classes best suited to meet their needs. The library will initially

focus on basic computer and internet skills while also striving to offer classes on more advanced topics such as Microsoft Office and Google's G Suite. Classes will start with English instruction then offer Spanish instruction once Northstar updates its curriculum.

A pilot program initiated at several branch locations during the summer 2022 allowed the library to adjust the curriculum, instruction, and support before offering classes systemwide. While the roll-out focused on in-person classes, FWPL patrons who are unable to attend in- person classes have access to self-guided online learning, a benefit of licensing the Northstar curriculum. Patrons without a library card can still access online learning options through the FWPL website. The library also offers cardholders more advanced self-paced digital skills courses available from LinkedIn Learning.

Train-the-Trainer

To ensure their instructors are equipped to teach these classes, the FWPL created a preparatory train-the-trainer curriculum for staff. The curriculum consists of five sessions. The first one covers basic literacy skills, so instructors can recognize and help people who may struggle with reading and writing. The second session focuses on adult education principles. In the third session, staff learn about practical teaching strategies. The fourth session introduces the staff to the Northstar curriculum. The fifth and final session calls for staff to practice teach. The library is also planning to augment the curriculum with cultural awareness training.

Library staff also undergo an annual eight-week training program that spans how to perform staff duties and the rationale behind them. The theme for 2022 is customer service.

Harris County Public Library

City: Houston
County: Harris County
Population Served: 2,150,870

Snapshot: A digital grant has allowed the library to hire additional staff who provide patrons with varied services including multi-lingual assistance. Patrons also receive one-to-one lab instruction.

Digital Navigators

The Harris County Public Library (HCPL) was awarded a TSLAC Digital Navigator grant in May 2022. The program manager, Shane Harris, hired four employees who serve as digital navigators. The digital navigators have the skills and abilities to provide training in both group and individual settings in locations such as community centers, churches, and coffee shops. The training is for beginners. Patrons can contact the digital navigators for help over the phone or scheduling an appointment with them. The digital navigators also provide Chromebook and wi-fi hotspot instruction. All navigators are fluent in a second language such as Spanish or Hindi.

Advanced Classes and Instruction

Several HCPL branch libraries have developed maker or innovation labs. These labs offer one-to-one instruction by appointment, as well as class instruction on how to use digital devices. Branches use Beanstack software to track lab usage such as summer reading and applying the gathered information to engage more adults. One branch received publicity when a patron designed a 3D print of a robotic hand for use by a child. Innovation labs are partially funded by private donations.

Other Digital Literacy Needs

Some of the branch locations serve Vietnamese patrons. Information is generally first translated into Spanish and, depending on the branch, other languages spoken locally. The librarian noted that having multi-lingual staff enhances digital literacy program efforts instead of relying solely on translated materials. Some locations have also faced supply issues for translated materials as well.

Hewitt Public Library

City: Hewitt
County: McLennan
Population Served: 23,108

Snapshot: The library has gained a reputation as a problem-solving agent and a cornerstone of the community by implementing digital literacy programming.

In 2008 community members came to the library for support after suffering financial losses during the national recession. Patrons, many unemployed for the first time, relied on the library to learn basic computer skills as businesses shifted to online job application processes during that time.

The library was unprepared, however. With only three computers, Library Director Waynette Ditto applied for a grant. TSLAC subsequently sent a trainer and 10 laptops to conduct a train- the-trainer program. The trainer also visited towns throughout McClennan County to gain insight on needed computer skills.

After the training, the library adopted the TSLAC curriculum, amended it to meet community needs and staged the computer classes. Because the library lacked the space to hold the initial classes different venues were necessary. With local partnership support, classes and other programs were held at restaurants, churches, and the high school.

That community response led the city council to fund a major expansion of the library building facilitating access to programs and services. Once the library acquired more physical space and computers, it was able to offer classes with other partners. For example, it has since renewed a previous partnership with McLennan Community College to offer GED and small business programs at the library.

Library staff stay attuned to community needs by listening to and taking part in conversations around the community. And community input is discussed in weekly staff meetings, in which staff discuss how to problem solve, coordinate resources, and refer patrons to other entities in the community for help. During the pandemic, for instance, the library staff perceived the need for new programming to address how the pandemic was affecting the mental health of young adults. The library applied for and won a grant that supported staff in creating mental health toolkits for patrons to “destigmatize mental health.” The toolkits contained a variety of items including a journal, gardening seeds, and a list of mental health resources in the county.

Relationships and partnerships are integral in how the library serves the community. Notably, the librarian takes advantage of networking opportunities with city officials and leaders to promote experiences, opportunities, and needs of the library. This outreach resulted in the Ditto being asked to serve on the chamber of commerce board. Sitting on the board has afforded her the opportunity to build relationships with other civic-minded community members. These relationships, often with local businesses, have evolved into partnerships that support library events. Examples include providing food and resources easing the cost on the library.

Hondo Public Library

City: Hondo
County: Medina
Population Served: 9,436

Snapshot: The library has engaged in modern marketing practices to promote digital literacy programs.

The library recognizes the value of communicating with the community and raising awareness about digital literacy program offerings. Staff initiatives include promoting the recent library LinkedIn Learning subscription by using outreach activities such as placing a weekly column in the local newspaper free of charge. Other outreach methods include sending monthly e- newsletters to patrons and using social media outlets like Twitter and Facebook for cost-free publicity. New patrons are also sent pamphlets with bookmarks containing information on library programs. Staff believes that ongoing word-of- mouth promotion by participants is also an effective marketing tool.

Houston Public Library

City: Houston
County: Harris
Population served: 2,320,268

Snapshot: The library developed a strategic plan to re-start its digital literacy classes on a regional basis.

The plan focused on two innovative practices: (1) providing class attendees with worksheets to complete voluntary homework and (2) pre-loading digital literacy instructional videos on library laptops that patrons can check out.

Re-Introducing Digital Literacy Classes

Prior to the COVID-19 pandemic, the Houston Public Library (HPL) offered in-person classes for approximately 20 different digital literacy topics, ranging from basics (e.g., keyboarding and internet security) to more advanced subjects (e.g., Microsoft Excel). Courses were offered throughout the system with staff serving as instructors. A senior manager oversaw the training of instructors meeting monthly to share resources, pedagogical approaches, and teaching experiences. Staff also developed a standardized curriculum to build consistency across the system.

HPL is re-introducing digital literacy classes that were put on hold due to the pandemic. This process is guided by the One Houston, One Library strategic plan that considers past attendance and resources in choosing digital literacy class locations and times to stage digital literacy training. The plan also assesses equipment and space availability at the desired locations. For example, locations with computer labs must make sure software is updated.

The strategic plan divides the city into multiple regions, with at least one location in every region providing digital literacy classes on a regular and consistent basis. A manager and technology instructor will factor community needs and interests in their course selections. HPL is also considering open help sessions with set hours in locations where formal computer classes may not be feasible. In such instances, a branch may have to schedule an extra staff member to assist people needing computer-related help.

Voluntary Homework

Prior to the pandemic, a branch library created take-home worksheets on the topics covered in digital literacy classes. Functioning as voluntary homework, these worksheets enabled patrons to practice class assignments at home or on a library computer. HPL believes the worksheets "incentivize [patrons] to . . . keep at it so that they can gain those skills that they need," and give patrons essential future materials.

The worksheets were an attempt to retain students in digital classes, as students were more likely to stay invested in a class and come back to show their work to the instructor, who could then introduce them to new skills. HPL will incorporate this voluntary homework systemwide again. The only reported challenge at the time was having sufficient printing materials as patrons were not required to enroll for classes, leaving instructors to estimate the number of worksheets to have on hand.

Pre-Loaded Videos on Library Laptops

At the start of the pandemic, HPL recorded a series of videos on digital literacy basics. When staff realized that patrons checking out laptops might not have access to the internet or know how to access its YouTube page, these video files were installed onto all the library laptops that patrons could check out.

The videos were produced when the library was shifting to virtual programming because of the pandemic. A committee decided to focus on adults because children already had story time, crafts, and STEM programs. The entire process involved staff writing scripts, filming, and editing videos, and uploading to HPL social media pages. During the pandemic, HPL also purchased 100 laptops with federal connectivity funds and made the devices available for patrons to check out for up to three weeks. Patrons were allowed to request these devices through the system catalog and could choose their preferred branch location for delivery.

Despite the many benefits for patrons, the demands of updating videos and keeping up with changes to equipment and software are significant. For instance, some of the staff members presenting topics on-camera in the videos no longer work at HPL. That necessitated creating an entirely new video rather than editing a specific portion. As one HPL staff member notes: “Maybe it would be better to try and find Microsoft videos to do rather than library videos. But the advantage of the library videos is that at the end of each video, we can promote other library resources and services.”

As with any device lending program, administering devices can also be a challenge. HPL had to establish profiles for the laptops and a process to digitally cleaned them to ensure the privacy of previous users.

Lubbock Public Library

City: Lubbock
County: Lubbock
Population Served: 290,964

Snapshot: The library maintains several partnerships that complement their digital literacy services. A digital navigator program has served as the conduit for these collaborative efforts.

Multipronged Approach for Digital Navigator Program

In late 2021the Lubbock Public Library (LPL) was awarded a $70,000 TSLAC grant to implement a digital navigator program across the city. The library decided on a multipronged approach, collaborating with various partners to integrate the program into the community. With this grant, the Lubbock Public Library was able to purchase laptops that had Windows 10 installed. The library designed a digital navigator program for small businesses and expanded resources to the community with the help of South Plains College and Literacy Lubbock thus furthering their digital literacy goals.

Focus On Small Business Training at Their Locations

LPL branches already provided digital literacy training and classes pre-pandemic but noticed a drop in attendance for these classes post-covid. A novel approach was devised to improve attendance: target small businesses at their workplaces to conduct digital literacy training.

Currently being pilot-tested, the plan will offer digital literacy training in small business conference rooms and break rooms. This should mitigate some attendance issues and simultaneously elevate the technology base of employees at the host firms. The digital navigators will focus training on Google suite applications, and other free platforms such as Canva.

Additionally, training will include social media safety and best practices for posting a professional or personal account. The intention is to train on free applications so that all participants will be able to maintain access to the platforms with no financial obligation and use the applications with confidence. To build trust for the training, staff mentioned that the program funding came from American Rescue

Plan Act funds, the federal program that targeted financial relief to small businesses affected by the pandemic.

Realizing that the program has potential for growth, staff sees the first group of participants and businesses as a pilot that should generate positive testimonials for future outreach and marketing materials. Following the pilot, assuming it is successful, staff hope to increase participation by having board members of both the library and chamber of commerce contact small businesses in their respective networks. In addition, training will be offered in both Spanish and in English. Businesses with a large number of employees without GEDs or who employ non-native English speakers are a recruitment priority.

Other Partnerships

LPL has a strong partnership with South Plains College, a community college in the area. South Plains College is opening a new library with the goal of reducing their book collection, and instead focusing on increasing access to technologies. LPL was able to provide 10 laptops to the college library, which will in turn provide usage information.

LPL is partnering also with Literacy Lubbock, an organization that teaches ESL and GED classes. The organization also offers specialized digital literacy programs such as one for adults with dyslexia. Knowing that students struggle to find appropriate equipment for learning or to take practice classes for the programs run by Literacy Lubbock, LPL has contributed 10 laptops. In return Literacy Lubbock will share usage information.

> "… most librarians I think especially at a director level, …we see why we're not having people want to be public librarians anymore. Your university libraries are going to get remodeled. Your school libraries are going to get downsized but also remodeled if they're doing the rest of the school. But public libraries are really getting left by the wayside and we're doing the most non-book related work." - Lubbock Public Library Director

Mason County M. Beven Eckert Memorial Library

City: Mason
County: Mason
Population Served: 4,274

Snapshot: English language classes offered to Spanish speaking patrons include some instruction on digital literacy classes.

The library has a long-standing partnership with a Mason High School Spanish instructor, who has volunteered for over three years. In this partnership, the Spanish instructor hosts a class at the library that provides Spanish-speaking patrons with the opportunity to learn to read and write in English. The instructor manages the class while the library provides the meeting space and directs interested patrons to the instructor.

The class consists of two sections. One is computer-oriented and the other involves practical applications. Students begin the class using the public access computers of the library allowing them to practice basic computer skills and establish an email account. During this time, patrons may also use an online, English-based educational program for Spanish speakers. After about 30 minutes, the participants enter a community room to do practical application exercises such as writing and using flashcards to memorize familiar words or phrases needed in daily life. A childcare volunteer supervises the children of parents who attend class.

In the future, the library plans to partner with a local IT company to provide older citizens with digital literacy training and assistance.

Maud Public Library

City: Maud
County: Bowie
Population Served: 1,042

Snapshot: The library utilizes college and high school students as volunteers to provide digital device

assistance.

The library uses volunteers to help provide patrons with their digital literacy needs. Older adults are commonly the patrons who seek assistance. Most of the volunteers are from the local high school and community college. Many of the volunteers are often related to those seeking assistance. Volunteers from the high school frequently are members of the National Honor Society (NHS). The library is a popular choice for NHS students to complete their community service requirement before graduation.

Volunteers are mostly available to work on Friday mornings. They answer questions on varied subjects including aiding patrons with issues they might have with wireless printers, 3D printers, tablets, computers and cell phones. For example, a volunteer was able to work with an individual to connect a smartphone to a new SMART TV.

The director notes that the use of volunteers has gone well although assistance is somewhat hampered by the distance between the community college and the library. And while using volunteers is beneficial, the library needs financial support and more volunteers to increase digital literacy training.

Moore Memorial Public Library

City: Texas City
County: Galveston County
Population Served: 58,160

Snapshot: The library maintains a positive work atmosphere and a high standard of patron assistance with their "High Service Model" in their digital literacy offerings.

High Service Model

The Moore Memorial library champions what a former library director, Luke Alvey-Henderson, called a "high service model." This model describes the service approach for patron interactions, where reference librarians assist patrons for as long as they need. It also refers to the library theme to create

and maintain a space that emphasizes patron reassurance and empathy. This highly customer-friendly approach arose during the pandemic when safety precautions required librarians to sanitize each computer station after every use, a time- consuming task. The current library director, Cheryl Loewen, reports that many processes such as job and benefits applications moved online prompting staff to provide patrons additional attention.

Rather than saying "stick your hand up when you need help" and staying with the patron for a minimal amount of time due to other work, staff will now sit with patrons until they fulfill their needs. This service model is possible by having a "secondary" staff member as backup for the "primary" front desk employee. The "secondary" staff can take over the front desk if a patron needs extended help--whether it takes 30 minutes or two hours (in rare cases). Staff became much more efficient in these interactions over time, according to the director.

"Positive Reinforcement" Work Atmosphere

The library implemented a "positive reinforcement" work atmosphere intended to both encourage patrons as they seek help and recognize the emotional concerns of staff as they address the needs of patrons. To maintain the desired atmosphere, the director emphasized the importance of having staff reassure and cajole patrons. The director said that the tendency for patrons to apologize should be met with sympathetic and light-hearted acceptance by staff.

The library dedicates itself to creating "high positivity interactions" with patrons. Staff morale also is key to these interactions. Library staff perform varied assignments and receive support in accomplishing tasks. When the former director saw someone who was having a slow day, he frequently offered to finish their shift. Most of the time the staff member declined but the gesture "lifted their spirits" and helped mitigate burnout by librarian staff. The current director strives to let staff realize that they have value and can express their point-of-view in the workplace. She stated this approach has enhanced staff energy and positivity.

Pharr Memorial Library

City: Pharr
County: Hidalgo
Population Served: 120,626

Snapshot: Pharr Memorial Library charged a small fee for in-person computer classes to encourage attendance from patrons.

Prior to the pandemic, the library director at Pharr Memorial Library noticed that patrons often were less motivated to attend classes after their first session of digital literacy courses. In response, library staff began to test their assumption that if patrons paid for all the sessions of a particular class in advance, they would have more incentive to attend later sessions.

Patrons paid $10 for a six-week computer class comprised of weekly one-hour sessions, which worked out to $1.67 per session. The library marketed this opportunity by comparing it to more expensive alternatives, which were computer classes at the local college or through a private organization. At the end of the six weeks, participants received a certificate of achievement. If someone wanted to participate but was unable to pay the fee, library staff tried to help them find a sponsor to cover the cost of the class.

The new fee-based model and lower price compared to alternatives proved successful. In fact, more people signed up for classes than they had seats available, necessitating creation of a waitlist for the next six-week class. By the end of the six weeks, instead of the normal 2-3 participants still attending a class, nearly all 12 participants completed the course. The library plans to use this fee-based model when they reinstate in-person classes.

Plano Public Library System

City: Plano
County: Collin, Denton
Population Served: 287,677

Snapshot: The Plano Public Library (PPL) embraces its role in helping to bridge the digital divide in the community, recognizing digital literacy as a key skill for workforce success and an improved quality of life. The library uses a staff pool to meet programmatic and site needs. They believe that the "push and pull" of resources in their system model functions more efficiently for them than the traditional main and branch models. Digital literacy services encompass establishing community partnerships with non-profit organizations and businesses, balancing the needs of varied user groups, e.g., ESL learners, older adults, teens, and English- speaking adults; and offering digital training programs with Microsoft suite, Adobe, Cloud tools, 3D modeling/printing and social media.

The library system, with five locations and approximately 180 staff first approached digital literacy with regular in-person classes on Word and Excel using staff-created materials. The outreach and engagement team whose mission is to foster community partnerships and listen to area nonprofits, determined that the need for digital skills training was clear.

Nonprofits indicated individuals needed skills to secure and maintain a job. Workforce data showed a demand for a variety of digital skills. Yet despite the needs, library staff found that class engagement and follow-through were less effective than desired.

This information guided the digital literacy team to seek other opportunities to meet the identified community needs. In 2018 the library pivoted, as an outreach move, to offering basic technology classes at the facilities of their nonprofit partners. PPL provided devices, staff, and sometimes corporate volunteers. The system libraries contributed additional in- house training classes in business and career readiness. They also addressed the need to increase the digital literacy skills of teens and adults.

The library approaches digital literacy through a partnership focus that includes:

- Relying on nonprofits to refer clients who want to develop their basic skills. For example, the Local Good Center, a nonprofit providing ESL classes for largely immigrant populations, has expanded their programs to offer workforce readiness programs with assistance from the

library. Their clientele enter the programs speaking various native languages other than English, but they teach classes in English to help with fluency. Through this partnership, digital literacy training (basic classes, internet, using a computer) is provided in English and the Local Good Center offers a translator as well as childcare to encourage attendance.

- Strengthening an existing partnership, PPL added monthly tech training for the Brain Injury Network of Dallas. Their members are helping persons to rebuild skills after experiencing brain injury, cancer, or a stroke with some preparing to reenter the workforce where technology skills are vital.

- Enlisting corporate partners to teach digital literacy skills, provide bilingual, volunteer employees to translate or offer tech help. For example, Bank of America provided Spanish speaking volunteers to help with the translation for adult ESL students engaged in digital training programs.

Nonprofit agencies drew attention to the need for their clients to learn basic digital skills including how to use the mouse or navigate the enormous amount of information online to search for and secure jobs. Library staff also learned while conducting the training that one-to-one or one-to-two instruction is often necessary (and preferred) to successfully teach those without basic digital skills.

During the pandemic, the library arranged for Microsoft Store personnel to teach online classes on various Microsoft products, including Outlook, Power Point and OneNote. Staff also began teaching an Excel series in increasingly complex functions. A training curriculum was built in a "series" format to allow participants to learn, practice and build skills, class after class, to experience desired outcomes. These latter classes were well-attended by a diverse audience.

PPL training is broad-based. A grant from Google has made possible training on digital tools for daily tasks, and a business class on gaining visibility utilizing Google search and maps. A university professor presented a program on preparing for virtual job interviews and how applicant tracking systems work, supplemented by corporate human resource associates who offered insights on resume design and preparing for job interviews. Post-pandemic the library has continued to provide a wide range of technology training for more digitally literate adult and youth audiences via Zoom classes, while returning to in-person, one-to-one or small group outreach classes at nonprofits for basic skill development.

The PPL team actively seeks ways to involve corporate and community partners and has offered an introduction to 3D design (corporate presenter), Hour of Code programs for youth (corporate presenter), and coding and website design classes (presented by a group of college engineering students). Staff regularly teach classes on Excel, Google Suite, Adobe Creative Cloud tools, open-source software, and using LinkedIn for both business and job search purposes.

Staff also take the instructional lead in accessing e-Books and e-Magazines and introduce various library databases. Additionally, staff teach youth movie maker camps, 3D printing classes, 3D modeling software, how to use Google maps to promote a small business, basic HTML coding, using social media, and podcasting. The latter classes require basic digital literacy and serve a broad cross-section of the community.

How will the PPL continue to build capacity to deliver digital training and maximize access to the community? While the library has a large staff, not all are available or prepared to 1) teach; 2) facilitate application of concepts; or 3) train the trainer. The PPL leadership engages with the staff to determine their interests and training needs and create matching opportunities. Planning considerations include:

1. Virtual delivery has shown strong engagement for digitally capable audiences.

2. Use of YouTube as a large course format and just-in-time viewing has shown success. Class examples: Adobe suite use with hands-on activities and Excel training taught with budgeting application.

3. One-on-one services offered in collaboration with community partners focusing on basic computer skill training and functional activities such as filling out job applications; and

4. Follow-up consultation by scheduling one-on-one appointments with librarians as needed.

The most obvious impacts from PPL programs have been on individuals: growth in personal confidence and self-efficacy through digital skill-building; awareness of resources for practice and further learning; connection with libraries as a source of assistance. Further, community- based solutions are provided. Library offerings are conceived based on community needs, implemented with community partners, and benefit individuals, partner organizations, and the community. Additionally, library staff now embrace

the role of tech trainer and enjoy helping patrons improve their skills.

Importantly, nonprofit partners now recognize the library as a source for technology training and helpful resources for their clients/members. Many class participants obtain library cards to access and benefit from its resources. Corporate volunteer engagement has also expanded and strengthened.

Key goals for the future include ongoing engagement with the community, seeking additional opportunities to reach those with limited technology access or proficiency. This same engagement will enable staff to gauge existing program effectiveness through interviews, anecdotes, and experiences. Further collaboration and service to Spanish speaking communities is also important. Extending this service will require engaging these communities intensively and recruiting native Spanish-speaking staff instructors and volunteers.

Much of the future agenda will depend on the support of current and new partnerships. Library staff plan to pilot the DigitalLearn curriculum and investigate tools to improve the digital competencies of community members. Library leadership believes community partnerships will again be central to its future digital literacy impacts as they are currently and were in the past.

Pottsboro Area Public Library

City: Pottsboro
County: Grayson
Population Served: 3,792

Snapshot: Focusing on collaborations between older residents and younger person has proven productive for both groups. The library has created an innovative internal health program and in the community that has benefited residents and the library.

Pottsboro is a community near Sherman and Denison, North of the Dallas / Fort Worth (DFW) Metroplex. It is near Lake Texoma and is well known for its attractive rural lifestyle. Many professionals in the DFW

region see the attractiveness of the community and buy second homes there. Individuals often retire in Pottsboro despite lacking quality healthcare services locally. Because of this, many return to the Metroplex. While the "longevity economy" would be critical to Pottsboro, community members also believe long-term economic expansion will depend on retention of its youth. As a new librarian, Ms. Diane Connery began working on library activities for both groups.

She created eSports teams to facilitate positive after-school gatherings and increase their digital skills for workforce readiness.[87] She initiated an innovative program through a grant to build an Intergenerational Digital Navigator program – recruiting 15 high school teens to help aging members of the Pottsboro community with digital literacy needs. The kick-off activity was quite unique. Staff from the University of North Texas brought a simulation tool to Pottsboro that enabled the teens to experience the world through the lens of aging adults-– what it is like to live with low vision, poor hearing, and mobility challenges. The empathy built through this immersive experience allowed the students to clearly see the services needed by their community. The teens, as digital natives, engaged with community members to effectively use their phones, set up home devices, use a computer for the first time, and generally build digital skills. Further, the students gained important workforce relevant skills and became more invested in their community.

One of the students who worked with residents in a senior living facility in nearby Denison passed along a story from her experience. There, the students regularly helped with use of phone, tablets, and entertainment systems. During a visit, the student discovered that one of the residents had been given an Alexa device by a relative. This device remained "in the box" because no one could set it up. After the student set up the device, the resident's first request was "Alexa, play Elvis!" As the music played, generational gaps were bridged.

Recently with a TSLAC grant, the Pottsboro library has set up a novel program by hiring a community health worker to make the library a connector for digital health in the community. A nursing student was hired from Grayson College to develop the health liaison programs in the library. The health worker

[87] https://www.libraryjournal.com/story/dianne-connery-movers-shakers-2021%E2%80%93innovators.

engages patrons with portal access, insurance website use, and provider access. But the role is broader. The worker goes into the community at VFW and American Legion living areas and other sites, to train residents to check their own blood pressure, and cook healthy food. At the library itself, there are blood pressure devices, scales, and other over the counter devices as well as health cookbooks to check out. The library also has developed video training tools to help users understand how to use the devices and get the most out of the cookbooks.

As noted in a published article in *Library Journal:*

> "Connery also opened a virtual health room where people connect with health care providers twice a week to help manage such chronic conditions as asthma, high blood pressure, and diabetes. To help fight food insecurity, the library offered classes in cooking on a budget, as well as canning and food preservation. Connery also created an organic community garden with 100 beds."[88]

Because the library lacked the infrastructure to support the food provision strategy, Ms. Connery requested assistance from the American Heart Association, and that group responded with shelving and refrigerators to store food for distribution.

Ms. Connery has received a significant grant from Google National Digital Alliance to create a digital navigator program with a health emphasis. Pottsboro was the only library out of 18 national grants to receive this award, which will fund expansion of the telehealth program in Pottsboro for greater impact. This innovation may well benefit other communities throughout Texas. Not only has it proven valuable for individuals seeking health assistance, but the library now is also viewed as an essential governmental service because of its enhanced citizen impacts.

Quitman Public Library

City: Quitman
County: Wood
Population Served: 6,340

[88] Ibid.

Snapshot: Working with local businesses to provide food and water for library events and activities has been successful.

Located in northeast Texas, Quitman Public Library has received support from local businesses for its library events. Librarian Delene Allen has reached out to a multi-state, East Texas-based supermarket chain to provide food and to a local water distribution business for bottled water. She says that offering food for events planned before and after meals attracts guests and patrons to come and stay longer at the library. In the case where something isn't covered, the library "appeals to the Friends of the Library" to help raise funds." *"Food. Offer food and they will come."* -- Quitman Library Director

Rita & Truett Smith Public Library

City: Wylie
County: Collin
Population Served: 59,655

Snapshot: The Smith Public Library hosts fun and engaging digital literacy events primarily for schoolchildren.

The Smith Public Library hosts a monthly IDEA Lab for children in the third and fourth grades. The IDEA Lab, which began in 2021, focuses on teaching science-related topics to children through fun and educational activities, typically seeing 20 to 25 children a session. In March and April of 2022, the monthly IDEA Labs focused on teaching the children about 3D printing. In the first session in March, the library experts on 3D printing worked with the IDEA Lab staff to create a basic curriculum to teach the children how 3D printing works, its components, and the actual process. In April, the children then chose something to print and again learned about the process which they were able to see in action.

Additionally, the library was approached by the Career & Technology Education Department head of Wylie High School, who proposed a community cyber security event with different stations aimed at all age levels in April 2022. The students created a program of activities for elementary schoolchildren, middle schoolers, and senior citizens to learn more about cybersecurity. Some of the activities involved

teaching patrons about the importance of having safe passwords, how to remember passwords, games for patrons to try to beat digital "escape rooms," as well as a digital scavenger hunt. Children who completed the activities received a cyber security certificate. The library staff made sure the program ran smoothly, working to provide the high school students with whatever they needed for activities.

Library Director Ofilia Barrera reported on the success of the program and plans on making it a yearly occurrence after seeing the positive reception of the "excitement" and "passion" of the students teaching as well as the kid's and seniors' "sponge-like" learning. She commented on the significance of the high schoolers' experience as they engaged with what they learned in class and then practiced presenting and teaching it to patrons.

San Antonio Public Library

City: San Antonio
County: Bexar
Population Served: 1,845,675

Snapshot: Learn at the San Antonio Public Library (LSAPL) offers patrons in-depth digital literacy assistance. The program provides dedicated spaces, on-demand and scheduled staff assistance and small group sessions at select branch locations. Patrons can also earn a digital inclusion certificate by completing a self-paced digital literacy curriculum.

Learn at SAPL

The LSAPL, in existence for seven years, operates locations in areas with a demonstrated need for adult education services including digital inclusion and employment. A branch library hosts each center providing dedicated space with computers, staff, and a staff station. One center also has a play area for children. Each center is staffed with one full-time staff member known as an adult educator who is required to have an adult education background. Centers are open five days a week.

Initially, walk-in assistance was available throughout the day although the hours were changed considering the workload of the adult educator who was also responsible for small group classes and

outreach activities. Walk-in assistance is now offered five hours per day in recognition that this is the most feasible option for patrons who face barriers to attend scheduled classes (e.g., transportation, childcare, work). The remaining time is dedicated to scheduled one-on-one appointments, small group classes, and outreach.

A center considers how digital literacy services fit within the overall system and how to communicate them to the public, staff, and stakeholders. For instance, a center can offer small-group classes as can branches without a center. Staff systemwide conduct limited needs assessments before making referrals to centers as well.

Digital Inclusion Certificate

The digital inclusion certificate training was developed in 2019 by a library staff member participating in NTEN and the Google Fiber Digital Inclusion Fellowship Program. The library designed the curriculum to target people interested in developing basic digital literacy skills who could not attend scheduled classes but could take advantage of a drop-in instructional model.

The staff noticed the tendency of some patrons with an immediate need (e.g., help with a job application), and they wanted to offer those patrons a self-paced digital literacy curriculum to help them develop their skills. The pandemic-induced pause provided time for an evaluation of the certificate training with consideration given to renaming the program and making it more accessible and understandable.

The absence of an established drop-in instructional model prompted the LSAPL to develop a model patterned after available digital literacy resources like GCFLearnFree and DigitalLearn. Staff developed an innovative digital literacy print book directed at an English as a Second Language. They noticed that printed material is suitable for patrons uncomfortable with a computer.

A librarian stated that "*As much as we can, we try to leverage already existing resources so that we're not recreating the wheel."* Staff has also found that using available resources allows them the flexibility

to alter the curriculum when necessary. For example, if DigitalLearn makes changes to its module they can re-tool the curriculum without affecting the training. They also have flexibility with instructional modes by adapting a teaching approach preferred by a participant. The curriculum currently has five tracks that range from computer basics to Microsoft Office.

The curriculum is self-paced although the adult educators try to assist patrons as much as possible throughout the process. While the GCFLearnFree and DigitalLearn models have assessment tools, staff still conduct informal evaluations. A participant needing more aid can schedule an appointment with the adult educator.

Older Adults Device Lending Program

The LSAPL has established partnerships with local and national and local organizations who support services to underserved populations. This includes a device lending program geared toward older adults as well as a needs-based digital literacy instructional program.

Older adults can check out an iPad with internet access under a device lending program. The program offers free tech support and instruction through its partnerships with the City of San Antonio Department of Human Services–Senior Services, OASIS, and Senior Planet from AARP's OATS (Older Adults Technology Services). While a library card is required and the library manages the device lending, the City of San Antonio Comprehensive Senior Centers operates the program at ten locations.

The program was created in the fall of 2021 and was funded from a one-time gift of $150,000 from the San Antonio Public Library Foundation. Library leadership identified digital literacy and inclusion services to older adults as a priority, so they designed a program accordingly. Mirroring other libraries, LSAPL applies a three-pronged approach to digital inclusion, consisting of 1) instruction and knowledge, 2) access to devices, and 3) access to an internet connection.

The initial gift permitted the library to purchase 130 devices and unlimited data for a year. Staff subsequently applied for a TSLAC Relief Act Grant and was awarded about $180,000 that permitted

buying 200 additional devices and six months of data. Staff have also sought emergency connectivity funds from the City of San Antonio to continue providing data.

While LSAPL had significant funds to purchase devices, they did not have the resources to staff and manage the entire program. To leverage resources already in the community, staff approached the San Antonio Department of Human Services, Senior Services Division. The senior services division had on-going partnerships with organizations including OASIS, an organization that also provides instruction and tech support for the devices at participating senior centers. Older adults can seek digital services from other groups such as Senior Planet and an AARP OATS program that offers a tech helpline.

In addition to purchasing the devices, the library holds events at senior centers where they help older adults obtain library cards, check out devices, and present a short orientation about the devices. Additional class instruction is offered by the senior centers. Older patrons are allowed to keep the devices for up to six months after which they can renew them. This has worked out well as there has been enough demand to justify the existence of the program, but not so much demand that patrons cannot renew them. The library manages the lending and renewals through their catalog software.

Get Connected!

Get Connected! Is a partnership with Feeding Texas, Google Fiber, and the San Antonio Public Library. The program was launched in December 2021 with an inaugural class of 20 students. The LSAPL provide participants with basic computer instruction using the Northstar Digital Literacy curriculum, while food bank staff help them learn how to use the internet by exploring the food bank website, Get Help and YourTexasBenefits.com, and other related sites. The food bank holds classes regularly and assists clients in applying for low-cost broadband.

Get Connected! began as a project through the Digital Inclusion Fellowship. An initial goal of the project was to increase instructional capacity of the LSAPL staff on digital literacy. They partnered with the San Antonio Museum of Science and Technology (SAMSAT), which trained SAPL staff using Northstar's Digital Literacy curriculum.

Library staff who receive the Northstar training in turn provide basic digital literacy instruction to

GetConnected! participants at the San Antonio Food Bank. The program provides participants with refurbished donated laptops. The library and food bank have also contributed funds to purchase laptops and identify low-cost internet access options.

Schulenburg Public Library

City: Schulenburg
County: Fayette
Population Served: 2,913
Snapshot: The library developed a virtual program for teaching Czech language and history.

During the COVID-19 pandemic, the library was interested in offering additional online programming. Noticing a void in programming for patrons of Czech ancestry, library staff developed virtual classes that featured Christmas carols and pronunciation using Czech texts and videos. The initial success of the program motivated the staff to expand into Czech history including literature, language, and notable artists.

The library used the RingCentral platform that allowed them to hold programs longer than 40 minutes for a low monthly fee. The class format was generally split evenly between lecturing and interactive activities. The library partnered with the Czech Students Association to promote the program in Texas-based Czech newspapers. Additionally, the library found that word-of-mouth advertising by the participants was an effective outreach tool. They also accessed Czech websites and Wikipedia.

Due to the effectiveness of the outreach programs, the library garnered large audiences from Texas, as well as other states such as Virginia, New York, Oklahoma, and Nebraska. About a quarter of the participants were from out- of -state. The library required class attendees to request an invitation via email. On average, the library received about 100 invitation requests with about 20 people usually attending. Participants favored after-hours evening classes, which enabled staff to hold the sessions without interruptions. Unfortunately, staff did have to work longer and there were additional

preparatory activities beyond their regular responsibilities.

Several program participants have sought additional resources from the library especially the e-books referenced during the lectures. Some patrons also purchased and shared Czech books mentioned in class with library patrons. Others have volunteered at the library.

Branch Libraries

Forest Hills Branch Library

San Antonio Public Library

Snapshot: Library offers digital literacy training at neighborhood senior center, supported by a teaching assistant.

Librarian Mary Naylor of Forest Hills Library, located in the seventh district of San Antonio, runs quarterly digital literacy sessions for the seniors of the Doris Griffin Senior Activity Center. The classes are held in the activity center's computer lab, typically 45 minutes to an hour in duration, with normal attendance ranging from five to 12 seniors. After working with seniors on traditional library requests, Naylor identified their need for technological assistance, such as help accessing eBooks. In 2017, Naylor began offering free scheduled classes on the basic functionality of the seniors' personal devices as well as how to use online databases and catalogs like the Online Public Access Catalog (OPAC).

After teaching the classes alone, Naylor found that classes are easier to run and are more effective for the patrons with a teaching assistant. Her assistant from the branch staff answers individual questions and keeps the patrons on track, allowing Naylor to concentrate on instruction. The assistant, educated in digital literacy, quickly answers questions regarding a variety of devices to maintain the pace of the class. Naylor believes the seniors make noticeable progress with this structure.

Heights Neighborhood Library

Houston Public Library

Snapshot: Library has found that patrons prefer to attend classes in the late afternoon and early evening.

The Heights Neighborhood Library of the Houston Public Library serves the northwest-central area of the city known as Houston Heights. To maximize attendance, the library holds classes on computer basics on

Monday and Thursday in the early evening from 6:00 to 7:30 p.m. That time was selected after communication with the primary target audience, patrons over 50 years old. By that time, most individuals are off work and have a block of available time.

Library prefers to hold their computer classes in a question-and-answer format. Patrons come to the classes with questions, and a small group of staff is there to assist them. When needed, the library has lesson plans as a backup. Typically, there are two skill levels, people who need help with basic computer skills, and those who have the basic skills and need help with more complicated computer skills. When people from each skill level both attend the class, they split into groups to provide the most effective instruction.

Jenna Welch & Laura Bush Community Library

El Paso Public Library

Snapshot: Dual mission library offers a variety of digital literacy programming in the summer.

The Jenna Welch and Laura Bush Community Library was formed in 2003 by an interlocal agreement between El Paso Community College and the City of El Paso. Through its partnership with El Paso Public Library, it serves as an academic and public library. Because of its dual mission, incurred costs are divided between the community college and the city.

There is a 20-year history of summer programs at this library, with recent courses on coding, podcasting, and creating PowerPoints. The relationship between the library and the public school system has been integral to its success as information is sent home to the parents of K to12 students. In addition, the use of social media branding and word of mouth to advertise services and programs has been successful in attracting and retaining children and teens. Normally 250 to 300 students participate every summer, with the largest attendance from children five to 12 years old.

Summer sessions are free of charge to students. Costs to the library vary each year depending on the instructors. El Paso Community College faculty members are volunteers, and when they are unavailable,

external instructors are reimbursed. Total costs for instructors and supplies usually is approximately $12,000. Costs are divided between the college and city, with the library also securing grant funding during some summers.

Lamar Bruni Vergara Inner City Branch Library

Laredo Public Library

Snapshot: The library uses volunteers to support their programming.

The Lamar Bruni Vergara Inner City Branch Library of the Laredo Public Library is relying on volunteers to overcome staff constraints. They use two types of volunteers: those who volunteer internally at the library as staff and those who volunteer through two outside organizations, Laredo College, and the Literacy Volunteers of Laredo. The number of volunteers varies depending on programming and over time. Volunteers assist with various programs, including book clubs and ESL programming, while internal staff teaches classes on computer basics.

To ensure volunteers can assist and teach patrons effectively, the two external organizations screen and provide training for potential volunteers. Library staff, both full-time and volunteer, also attend these training sessions to provide guidance and oversight. Students from the Literacy Volunteers of Laredo tend to volunteer because they need to meet service hour requirements, or because they plan to become teachers and they consider volunteering at a library to be a useful experience. Other volunteers are retired educators who enjoy teaching and want to give back to the community. Laredo College encourages potential volunteers by often paying a stipend.

Las Palmas Branch Library

San Antonio Public Library

Snapshot: Las Palmas Library offers personalized hour-long digital literacy sessions to address specific questions and topics/subject areas from patrons.

The Las Palmas Branch Library offers personalized hour-long technology lessons through a program

called *Technology Tuesdays.* The program allowed patrons to sign up for an hour between 12:00 to 6:00 p.m. for one-on-one instruction regarding any specific technology question or topic. Though slow to start, time slots filled up every week, with few absences due to weather. Patrons came with diverse questions such as how to navigate database research, use PowerPoint or Word, connect to Wi-Fi, create social service accounts, and pay rent. If the patron had many questions, the librarian would ask the individuals what their top three questions were.

The program has been largely run by Librarian Lilia Perez. Ms. Perez emphasized the importance of coordinating with dedicated staff and their schedules to work around meetings, availability, potential sick days, and any other scheduling constraints to make sure the patrons had their hour.

The experience with *Technology Tuesdays* has been successful. Not only is there demonstrable progress in helping patrons with their initial question(s), about half of those who are helped sign up for new sessions in subsequent weeks. Perez has plans to utilize the same process in a new program called *Book-A-Librarian.*

Little Walnut Creek Branch Library

Austin Public Library

Snapshot: A partnership with the local public broadcasting channel has provided young children and their families an opportunity to earn devices while having fun.

Since 2020, the Little Walnut Creek Branch has collaborated with Austin PBS Kids to offer a program called "Play to Learn," which provides devices and device education to lower-income families in Travis County. Austin PBS Kids is a free, on-air, 24/7 television service for children that offers access to educational series for kids ages two to eight. Annually Austin PBS Kids donates 100 Samsung Android tablets to lower-income families with children between the ages of two and four.

Before participants are given their tablets, the devices are programmed with resources from library databases such as the Libby app as well as the PBS Kids app. To participate in the program and receive

their devices, participants agree to enroll in a 10-session course that teaches parents and children how to use the device and navigate digital spaces. An Austin PBS Kids representative organizes and conducts the course over Zoom in real time. The sessions are provided in both English and Spanish. Library staff at the Little Walnut Creek Branch library attend the sessions to help the participants navigate library resources and encourage them to sign up for library cards. After completing these virtual sessions, participants keep the tablets and have continued access to library resources such as library cards, virtual collections, databases, eBooks, and content designed for children.

To be chosen as a participant in "Play to Learn," an Austin PBS Kids representative recruits lower-income Travis County families with children who have not participated in other Austin PBS Kids programming. Melissa Holloway, an Austin PBS representative comments that "Austin PBS partners with local school districts and other community partners to gauge who might be interested in the program." Another method of finding participants for this program is access to "Bright" by Text, a service for families with children up to eight years old.

Over the past two years, this program has had an almost 100 per cent completion rate. Looking forward, Austin PBS Kids is making plans to transition the "Play to Learn" program to in-person. The "Play to Learn" program receives funding from the City of Austin Health and Human Services Department.

Mancuso Neighborhood Library

Houston Public Library

Snapshot: This branch helps on how to use a smartphone, download apps, and set up a hotspot available for checkout from the library.

The Mancuso Neighborhood Library has had requests from senior citizens and young family members who have recently acquired or been given new devices. Requests have been especially frequent during holidays. Library staff decided they should aid with smartphones and with helping patrons on downloading apps.

Another need was identified during the pandemic and is not being addressed with classes. When the

library began offering mobile hotspots for checkout during the pandemic, the staff noticed that first-time users were unfamiliar with the technology. The library now offers classes that help patrons understand how to use the hotspots. These classes provide instruction for using the library's online library databases and for checking out ebooks as well.

Besides these classes, Mancuso library staff offer one-on-one assistance on demand or by appointment. One-on-one walk-in assistance is limited to 15 minutes or less. If the staff believes that assistance will take longer than 15 minutes, patrons are encouraged to schedule an appointment for 30 or 60 minutes on a day and at a time convenient for the patron.

McCrane-Kashmere Gardens Neighborhood Library

Houston Public Library

Snapshot: Computer basics classes for seniors and online job search assistance for ex-felons.

The Eva Alice McCrane-Kashmere Gardens Neighborhood Library serves northeast Houston. After relocating temporarily to the Kashmere Multi-Service Center (MSC) because of Hurricane Harvey, library staff discovered that this location would facilitate new patron programming. The Kashmere MSC already housed a senior center as well as the Community Re-Entry Network Program, which was dedicated to assisting formerly incarcerated individuals with re- entering society.

Classes for Formerly Incarcerated People

The library partnered with the City of Houston Health Department to provide the resources needed for these individuals to transition back into the community. Library staff provided classes that teach necessary digital skills to find employment, including how to create resumes, write cover letters, and apply for jobs. Now, the location for these classes is under renovation. Prior to that, they would typically have classes four days a week.

Classes for Seniors

A lack of transportation or mobility can be a difficult barrier to overcome for seniors if they want to visit

the library. Because the library was temporarily adjacent to a senior center, the library was able to increase its digital literacy class offerings to include a range of topics such as computer basics, social media, and Canva. Since moving back to its home location, the library has continued to provide off-site classes at two different locations, three times a week. Twice a week they hold classes at a neighborhood community center, and once a week they do so at the Kashmere MSC. Library staff have found that consistency with classes for seniors is extremely important. Once senior patrons recognize the class as a valuable resource, they commit to putting time and effort into attending each week.

Device access, however, has been a limiting factor for seniors. If older adults learn skills and have access to the resources necessary to apply and maintain those skills, they can become more independent. This neighborhood library participates in the Houston Public Library device lending program. There were 116 Smart hotspots and 82 laptops with internet access available for checkout. Unfortunately, demand for these devices is greater than the supply. Patrons can check out hotspots and laptops for three weeks only, and patrons can go weeks or even months before they have access to a device at home again.

Memorial Park Branch Library

El Paso Public Library

Snapshot: Memorial Park Branch Library employs a unique approach to teach patrons about basic computer equipment and programs.

This branch library uses a unique, three-month, and three-level regimen in teaching patrons about digital literacy. Classes are conducted weekly. The first month is devoted to an introduction to computers. This class is for patrons who have never touched a mouse or sat in front of a computer. Librarian Martha Andrade has her patrons learn about basic computer functions and mechanics, including how to use a mouse by drawing in Microsoft Paint and playing solitaire, thus gaining familiarity with the keyboard.

During the second month patrons learn about Microsoft Word and apply their acquired knowledge in creating flyers, recipes, and resumes. The third month teaches patrons how to safely browse the internet

and use email to communicate with family. Other patrons are encouraged to attend the classes that best fit their needs, and training time is added if there is demand, such as how to use a spreadsheet.

Librarian Andrade developed the curriculum based on her computer experience while also adapting teaching material offered by the Goodwill Community Foundation. She said it is important to assess the skill level of a patron even if you must start with the most basic functions and mechanics. She reports the training appears effective; she has seen people who have never touched a computer go from a total lack of understanding to emailing their grandchildren and avoiding online pop-ups. She notes also that these exercises are effective in both a class setting and one-on-one sessions.

While effective for all types of patrons, she thinks these exercises are especially well-suited to help older patrons who are more reticent to start from the "very, very beginning." From her experience, many older patrons shun or hesitate initially in obtaining digital literacy training but become convinced once they gain proficiency in communicating with family and performing other online tasks in a short time span.

Pan American Branch Library

San Antonio Public Library

Snapshot: San Antonio branch librarian educates patrons on online misinformation and internet safety.

Internet Safety

While branch manager at San Antonio's Pan American Branch Library, Steven Barrera, now at San Antonio's Potranco Branch Library, recognized the need to educate patrons about internet safety and in particular the rise in misinformation. He encouraged patrons to fact check information they encountered on social media. As such, he began posting flyers in the library, which informed patrons about how to spot fake news. However, he found that older patrons were still prone to believe most things they read online. In response, Barrera began offering a class on how to spot fake news.

At the Pan American Library, Barrera taught the class to small groups, typically with three to five people

who were generally around the age of 50. The class emphasized the need to be skeptical, fact check certain information, and be aware of the political biases of news entities. Barrera believes that patrons demonstrated progress and by the end were asking the "right questions." Barrera began a planning a class on internet safety after noticing that, despite his informational flyers, patrons were still clicking on phishing links and spam emails. While the class is still being planned, the curriculum has been selected: a packet from the *Electronic Frontier Foundation* on teaching an internet safety class.

Notably, with sensitive topics like internet safety and biased social media, Barrera acknowledged the risk of harassment. After putting up the flyers at the Potranco Branch, one community member politicized the information and targeted the library and Barrera personally with insults and threats. While Barrera recognized that pushback was greater than initially expected, he says this experience reinforced a "greater need" to inform others about misinformation and internet safety.

Charles B. Stewart-West Branch Library

Montgomery County System

Snapshot: A rotating computer analyst structure provides help with advanced digital literacy skills during open labs.

The Charles B. Stewart-West Branch Library of the Montgomery Library System offers patrons assistance on advanced digital literacy topics, such as content creation and design, programming, web design, app development and coding. Three computer analysts work within the Montgomery Library System and collaborate with the library IT team to conduct open lab sessions and assist community members who are interested in learning any of the aforementioned topics.

The computer analysts serve the seven branches comprising the library system. Each computer analyst rotates to two branch locations three times a month. With this rotating system, the computer analysts can spend enough time at each branch to host open labs that are called "Tech Talk." During the specific times on designated days, anyone can enter the computer lab to ask the computer analyst working on site. However, three times a week, the time for "Tech Talk" is usually devoted to addressing more advanced digital literacy skills. All assistance is free to community members.

The department budget covers the salary of the computer analyst and the acquisition of devices, such as computers. No grants have been used to develop or operate this program.

Shepard-Acres Homes Neighborhood Library

Houston Public Library

Snapshot: Proposed program that teaches people how to find and use digital coupons to save money.

The Shepard-Acres Homes Neighborhood Library anticipates launching a program on digital coupons to help patrons who may be struggling economically. If approved by the Houston Public Library administration, the program, called "Dining on a Dime," would offer patrons a method for saving money when purchasing groceries. In the past, this library location offered an Extreme Couponing program, that was paper based. Digital coupons can be accessed on a single device and are not as easily misplaced as physical coupons.

To participate, patrons would only need to bring a personal mobile device (like a smartphone or tablet) that can access the internet. Staff teach patrons how to download mobile applications for major grocery store chains. Staff also teach patrons how to use these apps to find coupons for items they may want to purchase. Library staff lead the program, and no additional costs are anticipated for the library.

Non-Profit Organizations Assisting Texas Public Libraries

As pointed out in chapter II, many essential tasks of daily life such as applying for jobs, paying bills, making healthcare appointments, and utilizing government services have shifted to the internet, and those unconnected have been unable to keep up. An invigorated concern for digital inclusion has inspired organizations to overcome barriers through community programs.

One such organization, Austin Free-Net, whose efforts to provide access to technology started in 1995, offers multiple programs. Their *Learn and Earn* program invites eligible lower-income community

members to a unique digital literacy learning program--if community members complete certain training steps with a device, they are able to keep it at no cost. Additionally, through a partnership with the City of Austin, Austin Free-Net offers the *Community PC Program,* which distributes computers to eligible non-profit organizations whose clients do not have personal computer access.

Comp-U-Dopt utilizes the network to distribute technology as well as with their own *Learn2Earn* program for lower-income high school students and their families. They have partnered most notably with the Harris County Library to make laptops available to students. In 2020, Comp-U-Dopt and the Harris County Library System partnered to turn a generous donation of devices into "Pi-tops," a small modular laptop powered by a Raspberry Pi and made these available to students in need.[89] Comp-U-Dopt's STEAM (science, technology, engineering, arts, and mathematics) team has been housed at the Houston Public Library Carnegie Neighborhood Library and Center for Learning.[90]

Two non-profit organizations specifically identified by directors as being significant resources for Texas public libraries are profiled below. A program from the Las Vegas-Clark County Library District in Nevada also is described.

TechSoup.org

TechSoup provides libraries, charities, foundations, and churches with product donations, services, and education at low or no cost. Its yearly reach is broad dealing with thousands of organizations across dozens of countries and territories, facilitating the philanthropic and nonprofit related activities of over 180 corporations and foundations, and enabling distribution in the United States of over $420 million in donated or discounted resources.[91] TechSoup received financial support from five grants from the Bill and Melinda Gates Foundation between 2004 and 2014. These grants enabled the organization to

[89] Harris Co. libraries partner with organization to give laptops to students. ABC13 Houston. (2020, September 9). Retrieved September 9, 2022. Video no longer available.
[90] Comp-U-Dopt. (2018, June 26). Comp-U-Dopt announces 10 years of providing computers and technology education to underserved youth in Houston Area. Comp-U-Dopt Announces 10 Years of Providing Computers and Technology Education to Underserved Youth in Houston Area. Retrieved September 9, 2022, from https://www.prnewswire.com/news-releases/comp-u-dopt-announces-10-years-of-providing-computers-and-technology-education-to-underserved-youth-in-houston-area-300423520.html
[91] All data and information in this profile were provided by TechSoup.

connect libraries with donations and discounts since 2002 and to serve libraries with free content, webinars, and newsletters since 2008.

TechSoup for Libraries

Eligible libraries and groups include:

- Public Libraries with an IMLS listing
- Public libraries with 501(c)3 status
- Friends of the Library or Library Foundation groups with 501(c)3 status.[92]

The organization states that "the majority of U.S. and Texas libraries are now members of TechSoup." From 2015 to July 2022, 378 Texas libraries saved about $4.5 million by requesting (1,928 orders) TechSoup products. The organization calculated an average cost savings of $11,700 for each Texas library.

Overview of TechSoup Technology Donations and Discounts

The top product donations requested by Texas public libraries include:

- Microsoft Windows
- Microsoft Office Standard
- Mobile Beacon Hotspots with Unlimited Broadband Internet Service
- Factory-Refurbished Laptop and Desktop Computers and Monitors
- New Discounted Desktops, Laptops, Tablets, Printers and Servers from Dell, HP, and Lenovo
- Adobe Acrobat Pro and Adobe Creative Cloud
- Bitdefender GravityZone Business Security 1-Year Subscription
- Norton Small Business 1-Year Subscription
- GrantStation online grant research tools, 1-Year Membership
- Intuit QuickBooks Online Plus • Reboot Restore Rx Pro (to restore public access computers to clean install settings)
- Zoom

The Microsoft Office and Windows products are for public access computers, Mobile Beacon offers hotspots and Sprint mobile broadband for internet use. The Dell, HP and Lenovo affiliate programs offer

[92] Libraries can check which items are available to them by using an eligibility quiz accessible through https://www.techsoup.org/eligibilityquiz. Libraries also can learn where to obtain Tech donations by browsing the catalog for the Nonprofit Tech Marketplace (www.techsoup.org) to obtain leads on major brands requiring low administrative fees.

discounts up to 30 percent of the cost of new laptops, monitors, desktops, printers, and servers. All the equipment is rated commercial grade.

Their Refurbished Hardware Program has supplied TechSoup members with affordable, factory-remanufactured laptop and desktop computers and monitors. This IT equipment costs 30 to 50 percent less than equivalent new models. All the refurbished hardware devices are brand-name commercial-grade IT equipment. The computers have Windows 10 preinstalled, most have one-year warranties, and shipping is free. (https://www.techsoup.org/refurbished-computers)

TechSoup Courses and Free Resources

TechSoup has an array of 128 low-cost, "train-the-trainer" on-demand, self-paced courses for library staff and volunteers. The Microsoft Digital Skills Center has beginner to advanced digital literacy training on all popular Microsoft applications like Word, Excel, PowerPoint, and Outlook. These digital literacy courses are also available in Spanish. (https://techsoup.course.tc/catalog) .

Public libraries can sign-up for (1) a monthly newsletter that features a curated list of news, tips and resources from fellow librarians and library tech experts, (2) webinars and forums, and (3) education and training. A "Get Help" page on the TechSoup.org website allows users to navigate such items as requesting products and services, managing requests, creating an account, and participate in community discussions.

Further Information

Mr. Jim Lynch, who spent several years leading TechSoup for Libraries services, has written an article entitled "How Salado Public Library Serves It Rural Texas Community". Mr. Lynch remarks that "*The library has experienced a strong increase in physical and electronic circulation in the last year, despite … the pandemic. Salado Library is a great example of a library that started as a volunteer effort but managed to transition to become a professional full-service library for their rural community*."

Mr. Lynch's article is available at https://blog.techsoup.org/posts/how-salado-public-library-serves-its-

rural-texas-community.

EveryoneOn.org

EveryoneOn connects families in underserved communities to affordable internet service and computers and also delivers digital skills training. The mission of the organization is to "democratize (the) power of the internet and technology." EveryoneOn has partnered, and seeks to work with, public libraries and other entities in Texas and around the country.

EveryoneOn began in 2012 as a public awareness campaign and digital inclusion pilot called Connect2Compete (C2C). C2C was a flagship program for K to12 students that provided affordable internet service to qualifying families. The EveryoneOn campaign represented a collaboration between libraries and private companies around the country.

Program Highlights

EveryoneOn has a service model that includes:

Partnerships with Internet Service Providers (ISPs). The organization works with cable and wireless ISPs to deploy affordable internet to low-income households at a price usually between $10 to $20 per month.

Technology-Enabled Awareness and Access. Creates an environment for affordable internet, computers, and digital literacy training. Requires using the Offer Locator Tool (below) to facilitate recommendations on low-cost options in an area.

People and Partners on the Ground. A team and network of partner organizations around the country bring offers and services directly to families.

It offers the following resources:

- *National Offer Locator Tool*—Easy-to-use platform of local low-cost internet and computer offers, and digital skills training by zip code; https://www.everyoneon.org/find-offers.
- *Enrollment Assistance Hotline*—Live, one-on-one help enrolling in low-cost internet (available in select cities).

- *Enrollment Events & Device Distributions*—In-person events to help a community and its members to sign up for low-cost internet and/or receive affordable devices.
- *Digital Skills Academy*—Tailored individual and organizational trainings for public libraries and other entities that build local capacity and equip communities with skill to participate in the digital world.

Collaborating with EveryoneOn

EveryoneOn has interacted extensively with the El Paso Public Library and several government housing authorities located in Austin, Brownsville, Dallas, Edinburg El Paso, Harlingen, Houston, McAllen, and San Antonio.

In the El Paso collaboration, EveryoneOn provided 100 laptops/tablets as an incentive to "train to earn the device," a program being run by the El Paso Public Library (EPPL) with a Public Library Association grant. That grant enabled EPPL to buy 100 laptops and conduct 34 outreach events to identify and target low-income participants. This initiative grew as 30 other community entities participated, ultimately serving 334 people in digital literacy training. In addition to providing the laptops and tablets, EPPL also sent out an informational postcard that directed users to EveryoneOn's Locator Tool so they can get low-cost internet at home. The locator tool is available at: https://www.everyoneon.org/find-offers.

A senior EveryoneOn representative stated that its customer support team:

- provides technical assistance upon request and may use unearmarked funds to support its local efforts;
- is alert to address problems in the field, such as replacing instructors who "don't work out" with ones that are part of the community; and
- has found that the demand for training is significant, often exceeding the timeframe for offered courses.

EveryoneOn advises that potential local partners consider following a sequential strategy that offers (1) digital literacy and classes, (2) connectivity, and (3) devices. The representative encourages their potential partners to approach large businesses in their community that may want to donate items such as computers, tablets, and printers. EveryoneOn has standards that it applies to the products it promotes.

Contacting EveryoneOn

The organization has begun work on a new five-state initiative that includes Texas. For further information about this initiative and for additional information regarding utilizing the services and programs of EveryoneOn, librarians should contact the organization via their website:

https://www.EveryoneOn.org.

Las Vegas-Clark County Library District

City: Las Vegas, NV
County: Clark

Snapshot: A library system in Las Vegas used a federal grant to provide mobile devices and service to low-income earners and individuals experiencing homelessness.

The Las Vegas-Clark County Library District partnered with Nevada Homeless Alliance (NHA) and Nevada Partnership for Homeless Youth (NPHY) to distribute 383 Moto G Pure smartphones with unlimited service including calling, text, and data. Recipients were low- income earners and individuals experiencing homelessness for an 18-month lending period. The phones were acquired after the library district applied and received a $200,000 grant from Nevada State Library, Archives and Public Records using distributed funds from the American Rescue Plan Act.

The idea came about when libraries closed due to the pandemic, and LVCCLD Executive Director Kelvin Watson saw students who did not have access to the internet while completing their homework in library parking lots. This inspired Watson to apply for the grant that required funds to be spent on improving broadband access for the community. Watson recognized the best way to do so would be through providing smartphones with 5G hotspots and distributing them to community members lacking accessibility to connectivity. “Access to technology is a basic human right and public libraries play an essential role in making this possible for our most vulnerable residents,” Watson told *The Las Vegas Sun*. After acquiring the phones, the library district partnered with NHA and NPHY to check out devices

at a Clark County Library event. The event included wrap-around social service providers in a vendor fair, library card sign-ups, immunizations, a shower truck, and a live-hands on tutorial with T-Mobile and library experts guiding recipients on how to use their new device.

Program costs included the devices and 18-months of service to make unlimited calls and operate the 5G hotspot capability. Each phone was pre-programmed with over 50 social service providers contacts, and five of the most used library apps. These apps provided easy categorized assistance for care with education, food, health, housing, legal, transit, and work.

When grant funds are exhausted, customers may keep the device and phone number. They may engage with any telecom provider of their choice to continue service. Internal conversations will be had to best determine how to continue serving those in need. The program does not track usage of any pre-installed software for customer privacy purposes, although that could be performed to understand what services are used most by the participants.

Additional Approaches and Techniques

We have several librarians who are passionate about certain technologies and give them the opportunity to be trainers in an area they love and have others assist so they too can be trainers in the future. – Richardson Public Library

One year we provided usb/flash drives for all attendants. Another year, the computer teacher provided a cd with Microsoft word and excel examples and how-to. – Sinton Public Library

We have worked with two local banks to provide laptops for on-line banking training and have gone to a local senior citizen resident to teach basic skills. – Chandler Public Library

Typing classes have been very popular at our branch for "teens" The pre-teens come to the class and their parents are very keen to have them attend. We have also offered the class to adults, and while it was not quite as successful, we still had a decent turnout throughout the series. Coding classes are always popular with the teens. There is some good software for purchase, but using free software is always good as well. –- Spring Branch Library, Harris County Public Library

…our instructors focus on very positive reinforcement. There is a lot of embarrassment and shame around technology and we work to remove it. --Texas City Public Library

Chapter VIII. Recommendations To TSLAC and Texas Librarians from Research Findings

The recommendations presented in this report address critical issues confronting Texas libraries and staff who want to upgrade the digital literacy knowledge and skills of their patrons. The recommendations are intended to support the multi-faceted service delivery approach that is required to achieve this goal. The UT-Austin project team compiled library-based data from interviews, case profiles, and surveys to identify gaps and problems that exist. The findings of this comprehensive, statewide project are the foundation for the recommendations.

The project data have shown that the challenges are varied. As a result, the recommendations are designed to provide a partial roadmap for future digital literacy program planning at the state and local levels. Most require additional resources for new TSLAC grant programs with Texas libraries, staff research, and outreach activities. All the grant-related recommendations are predicated upon TSLAC securing new resources beyond those provided by the Texas Legislature.

Several of the recommendations pertain to needed TSLAC research and evaluation especially (1) assisting librarians in assessing the digital needs of their patrons, (2) collecting statewide information on resident skill levels, (3) improving attendance for digital literacy classes, (4) dealing with equipment options and (5) establishing partnerships. The recommendations also call for TSLAC to provide guidance on digital resources and promote best practices of Texas libraries.

TSLAC should increase its older adult programming and supplement its Digital Literacy toolkit offerings by producing videos about the offerings and adding advanced modules to the existing set. Other recommendations relate to current and future grant programs administered by TSLAC and potential federal funding. These grant-related recommendations are categorized into two priority groups. Several final recommendations are offered for librarians.

Recommendations For TSLAC

Grant Programs by TSLAC

One set of findings that emerged from our interviews and surveys is that funding is an issue at libraries from program initiation, augmentation, and innovation. TSLAC should identify areas of maximum leverage to provide the funds to amplify what is working, test what is new, and strive for a comparable level of service for all digital literacy programs. Some possibilities are presented below. All of the following recommendations are predicated on TSLAC securing funding from forthcoming federal programs versus its Texas state appropriation. The recommendations are grouped into first and second priorities based on current digital literacy needs and likely outcomes from the grants.

First Priorities

Initiate Grant Programs for Small Libraries in Texas

Problem Addressed/Background--Texas libraries provide less digital literacy training than other libraries in the United States. Compared to the most recent benchmark data from the 2020 survey by the Public Library Association, Texas libraries provide less training and patron assistance on nearly all topics than their counterparts elsewhere in the United States. The disparities are greatest with the smaller libraries as large Texas systems in many instances actually provide more training and assistance than library systems in U.S. cities in the aggregate. Closing the gap with smaller libraries in other states could be addressed by initiating several grant programs:

1. A grant program specifically for smaller libraries--Some libraries only need $5,000 to implement a new digital literacy activity. Although TSLAC administrative costs would be higher because of the larger number of applications, the return on numerous small investments is likely to be high both in terms of output and goodwill.

2. A grant program to increase the supply of digital literacy trainers--Grants could be given for libraries that follow a train-the-trainer approach for high school and college students, who would then teach the next summer or during a subsequent semester. Some grants might be given strictly for training the students in teaching, some grants might be given for students who already have the necessary technology and training competencies, and some might offer reimbursement for librarians who would work with the students in a hands-on aide role with particular populations such as older adults.

3. Establish small reimbursement grants of $2,000 for any librarian who completes a training course on teaching digital literacy, teaching fundamentals, or teaching technology or software courses. This type of program might incentivize librarians who do not currently offer any type of training or personalized digital literacy assistance and also for some libraries to increase the number of staff who would have those abilities for future training.

Establish a Grant Program for Best Practices in Digital Literacy

Problem Addressed/Background--New approaches and practices should be encouraged and supported financially. Difficulties with securing classroom enrollments and a lack of available trainers locally were commonly mentioned in interviews. No easy solutions are available for these macro problems. Nevertheless, there may be ways to address issues that have contributed to the larger problem. This grant program would be devoted to best practices and potential best practices. Funds would be allocated for possible solutions to widespread problems of many TSLAC libraries. A small number of grants might also be given for funding second stage projects of an existing best practice in a different setting. And some grants might fund practices in Texas that have been successful for libraries in other states.

Make One-on-One Assistance a Higher Priority

Problem Addressed/Background--Classes have received the bulk of the attention in this project. Yet, based on all the interview and survey data, one-on-one assistance is both the more common and frequently preferred method. It is also viewed as often being the most effective method of teaching digital literacy. To encourage librarians to continue or begin providing one-on-one assistance, a promising reimbursement schema might be explored. This might be as simple as providing reimbursement at a librarian's current hourly pay rate up to a maximum percent total time such as 5% or 7.5%. Libraries might be chosen by some type of lottery process if demand exceeded expectations. Although both classes and one-on-one assistance must be successful methods over the long term, encouraging more one-on-one assistance may be beneficial until some class attendance challenges are resolved.

Establish a Mentor-Protégé or Peer-to-Peer Program for Small Libraries

Problem Addressed/Background--Mentor-Protégé programs are common in industry and certain types

of government purchasing activities in which larger more sophisticated entities mentor smaller entities. This would be a grant program in which larger libraries mentor smaller libraries on specific digital literacy training offerings. The large main libraries could give strategic guidance to the smaller "protégé" libraries, train librarians at the smaller libraries if needed, and possibly give sessions on particular topics to patrons of the protégé libraries at the outset. The main libraries would be reimbursed for their time and effort. Both the main library and protégé library would be required to participate in regular meetings.

Another component of this grant program or a separate program entirely might emphasize peer-to-peer technical assistance without a specific partnership between two libraries. Grants could be offered to main libraries that provide rural libraries with access to real-time support. These could be Zoom office hours or something similar to some university libraries' "Chat with Us" functions, where undergraduate students can chat online with librarians in real time.

Second Priorities

Facilitate Leadership and Professional Development Opportunities

Problem Addressed/Background--While professional library training opportunities exist, more general opportunities from external leadership training programs would be beneficial, especially for librarians from rural, small city and inner-city communities. One leadership training opportunity is available for multiple community leaders from the Texas Rural Leadership Program. Another opportunity for an individual librarian is the Texas Municipal League's Leadership Academy. Neither of these options entails a significant cost. Nonetheless, support from TSLAC may allow some librarians to participate who otherwise could not. More information about each of these programs appears in Appendix I.

Promote Digital Literacy Networking by Branch Administrators and Managers

Problem Addressed/Background--Branch libraries must adhere to directives from central systems. Without interfering in traditional administrative functions, improved communication and information sharing across branches in different metropolitan areas could prove beneficial. Discussing common issues and unique delivery approaches for digital literacy may lead to greater productivity. A grant might

be given to support networking of central administrative staff who oversee branches and perhaps another grant for supporting networking of branch managers at one or more annual professional meetings.

Develop a Pilot Project for Librarians Pursuing Digital Literacy Innovation Strategies
Problem Addressed/Background--Digital literacy innovation strategies should be encouraged, and librarians with potential breakthrough strategies should be supported financially to develop their ideas. A fellowship program that provides salary support for part of a current librarian's compensation would entail few risks and relatively few resources. This would support a specific digital literacy idea and project, would reimburse part of that librarian's time over a 12-month period, and require approval from the individual's superior. Two or three fellowships could generate an outstanding new approach while also demonstrating to librarians their ideas about digital literacy are desired.

Consider Specific Issues in Future Grant Programs
Problem Addressed/Background--Current needs of main librarians and branch librarians are fairly similar in terms of classes, access to hotspots and wi-fi, and materials in other languages. Future TSLAC programming should reflect those general needs as well as specific derivative findings such as the possibility of creating or locating training modules in languages in addition to Spanish and devising alternatives for supporting hotspot expenses beyond a grant period. Also marketing and publicity costs for new digital literacy classes should be looked at closely because of attendance issues for many libraries. Less emphasis should be placed on software in future grant programs.

Outreach Activities

Increase the Awareness of TSLAC Toolkit Offerings
Problem Addressed/Background--From multiple interviews and from survey responses, many librarians in smaller communities and numerous managers in branches, are unaware about existing TSLAC curriculums. Several individuals stated that TSLAC should provide standard or turnkey materials. Additional outreach about the current materials would be very beneficial and is also warranted.

Assistance with Evaluating Digital Literacy Curriculums
Problem Addressed/Background--While some librarians are unaware of existing digital literacy training

resources, other librarians have expressed a different dilemma. Information about digital literacy training modules and the number of available resources and organizations can be overwhelming to someone looking for videos or teaching materials. It may be helpful if TSLAC would help curate resources and promote select resources through monthly newsletters or social media pages. This would be a service that is equivalent to providing user feedback on products or services on major buying sites.

Publicize Digital Literacy Best Practices in Texas Libraries

Problem Addressed/Background--One approach to maintaining visibility for digital literacy would be to start a series on best practices from Texas libraries (including branches) and from outside Texas. Even if this electronic newsletter were quarterly and relatively short, and provided only if a librarian opted in to receive it, the information should be useful. If this type of communication were restricted by state statutes, perhaps information could be shared with one of more non-profit organizations as part of their newsletters and blogs. These non-profits organizations have been working productively with Texas public libraries and partnerships and sharing such information would seem worthwhile.

TSLAC Services & Focus

Older Adults/Seniors Should Receive More Programmatic Attention

Problem Addressed/Background--Older adults/seniors comprise 40-50% of the patrons seeking digital literacy assistance and services from Texas libraries. There are cases about existing senior-oriented programs and some potential partnerships that are planned. Yet compared to the proportion of patrons who are requesting assistance, current activities are subpar. TSLAC should consider new programming or additional activities focused on this demographic. Alternatives should be devised based on identifying best practices nationally, in-depth interviews with Texas librarians training seniors now, contacting organizations that cater to seniors and may have training programs, and learning more about techniques for training that may be unique or particularly successful with seniors. Also apps for older adults should be highlighted and shared with both interested directors and managers. Examples of such apps are highlighted in Appendix H.

Develop Short Video Digital Literacy Navigation Tools

Problem Addressed/Background--Due to lack of familiarity with digital training and experience among

key patron demographics, TSLAC should consider creating a new set of short overview videos for the Digital Training Toolkit. These would show integration of programmatic offerings that would achieve such patron goals as developing and maintaining a social media presence, building a resume, writing a cover letter, or developing a family budget. The videos, for example, could show sequentially the modules of an integrated task that students complete.

Enhance the Marketing Skills of Librarians

Problem Addressed/Background--Promoting library services in the digital age requires training in both foundational and intermediate marketing concepts. Social media promotional techniques and event internet sites may be as important as the traditional media of newspapers and newsletters. Consideration should be given to providing CEU or training to librarians who are unaware of these topics, need a refresher course, or desire more advanced training.

Make Advanced Training Modules Accessible to Librarians

Problem Addressed/Background--TSLAC could add advanced modules to the existing training toolkit. These could include both sophisticated methods of well-known programs and classes on creating new content, not consuming content. Establishing partnerships with major libraries or individual trainers may help TSLAC to offer upper end courses. There is no reason why advanced training cannot be offered via an online platform to patrons in many communities when demand may be low in individual towns and cities. While the advanced content may already be available from other sources currently, offering new niche courses would increase the likelihood that TSLAC's toolkit would be considered more frequently as a source. Another possible addition to the toolkit would be to adapt digital literacy training modules to haptic, smart phone, and tablet devices.

Needed Research/Evaluation

Assessing the Digital Literacy Needs of a Community

Problem Addressed/Background--A segment of Texas librarians, particularly in small communities, do not know if there is a need for digital literacy services and assistance. Thirty percent of library directors and more than 20% of branch librarians do not know if their patrons need digital literacy services. The need is particularly acute among librarians serving populations fewer than 5,000 patrons as nearly 60% of such librarians said they did not know. Almost a third of librarians serving populations between 5,000

and 15,000 say they do not know. Moreover, nearly one in five librarians serving populations between 15,000 and 175,000 also say they do not know the extent of digital assistance needed by their respective communities. Two resources, one already identified by TSLAC, are described in Appendix G and should be helpful to librarians. Additional possible tests should be identified to help librarians who wish to gauge the needs of their patrons. As some librarians noted, they believe there are unmet needs but that is based solely on anecdotal impressions.

Helping Librarians Assess Individual Patron Digital Literacy Needs

Problem Addressed/Background--Successful digital literacy training requires an understanding of a patron's background and goals, as well as extant skills and abilities. Besides existing diagnostics such as that from NorthStar, TSLAC may wish to review other diagnostics that could be used by librarians. One identified in this research is being tested by Tyson Foods, the major food company that is seeking to enhance the digital literacy skills of tens of thousands of company employees. This 16-question assessment is thought to be accurate 80% of the time and can be administered within 3-5 minutes, in a face-to-face format. If that or other diagnostics prove useful, they should be added to the existing TSLAC toolkit.

Gathering Statewide Data on the Digital Skills of Texas Residents

Problem Addressed/Background--This research project did not identify a systematic and detailed assessment of the digital literacy skills of Texas residents. In 2021 the State of Hawaii performed an exemplary statewide survey of its residents. If a statewide patron survey were conducted in Texas by a professional survey organization that regularly performs general population surveys and included appropriately large samples of residents in both rural areas and large city neighborhoods, librarians would have a better roadmap of patrons' current needs. Results from this survey would generate data that many librarians do not currently possess, and this survey could be performed without requiring much if any of their time. This type of statewide survey also would enable digital skills of residents in the state to be compared to those in other states that may performing surveys. Further, it would provide a baseline to measure impact of programs if the survey were repeated in five years.

Improving Poor Attendance for Digital Literacy Classes

Problem Addressed/Background--More attention should be devoted to identifying successful methods

for achieving attendance goals. One potential source of such methods may be best practices from government departments that market successfully in voluntary programs. Perhaps those practices could be adapted to work for libraries. Ideas also may be obtained from best practices of for-profit, direct marketing firms and non-profit organizations. Educational institutions also have become more sophisticated about approaches for predicting estimated enrollments for in-person, non-degree classes. Additional insights also may be gleaned from further identification of best practices about classroom attendance by libraries in other states.

Determine Appropriate Metrics and Outcomes of Equipment Option Programs

Problem Addressed/Background--A number of the larger library systems in Texas have programs of various types involving equipment options. All the programs were considered positively. Issues with cost would seem a limiting factor for more widespread adoption among libraries, however. It is likely that a significant amount of data and evaluative information about equipment option programs may be available from outside of Texas. This type of analysis could summarize studies that may have already been performed and provide guidance for Texas librarians about the value as well as the operational pros and cons of the various approaches.

Libraries and TSLAC Should Continue to Establish Digital Literacy Partnerships

Problem Addressed/Background--Digital literacy spans an ever-changing landscape of hardware and software, with the ever-evolving needs of individuals in their personal, vocational and social spheres of life. Resources, human and physical, were widely noted by librarians as lacking to meet the growing needs in their communities. Viewing TSLAC and the libraries themselves as sources of these resources is inadequate. One option is to concentrate on potential new partnerships with private businesses. Not only do an increasing number of mid- and larger-sized businesses allow employees some time off for volunteering purposes, more and more businesses provide assistance directly through their corporate social responsibility units. Identifying these potential Texas partners and then sharing that information with local librarians would be one potentially valuable approach.

Further Work Should Be Performed on Cost Estimates

Problem Addressed/Background--An inordinate amount of project staff time was consumed by

attempting to identify costs of digital literacy training and services. Minimal cost data could be located. There is a definite need for further work. At the aggregate level, there is further work to be performed about the accuracy of estimates such as contained in chapter VI. A second and more important task would be to develop aggregate estimates for public libraries to achieve a certain level in digital literacy services. One method would be to select 30 main libraries with robust, current digital literacy programming. These 30, appropriately spread across three or four size categories, would be asked to provide detailed expenditure data for different types of classes and one-on-one assistance.[93] Once data for these benchmark libraries were obtained, an aggregate estimate could be derived. The gap between current levels of expenditures in chapter VI and presumably the greater levels of expenditures for libraries with robust programs, would indicate what is yet needed to achieve that level of digital literacy statewide.

Cost estimates at the library level are quite complex and should be simplified. If further cost estimate data are needed for grant programs, one focus should be placed on the costs of providing one-on-one assistance. There are two reasons for this recommendation: one-on-one assistance is the preferred method of delivering digital literacy assistance and training, and equipment inventory and requirements vary significantly. If additional research is conducted on estimated costs for classes, it should concentrate on cost differences for classes taught by different types of instructors: internal staff, outside volunteers and non-profits, part-time local instructors, and others. A final line of cost research could attempt to achieve more precision about the ratio of preparatory time to classroom time. Further examples from the field would help determine how quickly the ratio declines.

Recommendations For Librarians

Create Partnerships

To supplement current staff time, some librarians may choose to create partnerships with local educational institutions or non-profit organizations, locally or nationally. Partnerships also have been

[93] The project survey results could not distinguish clearly between the amount of time for one-on-one assistance and time for classes.

developed with chambers of commerce and increasingly, medium-sized and large companies provide their employees with time off for volunteer endeavors. Numerous partnerships have been developed with state government agencies. For new and refurbished equipment, there are several national non-profit organizations that have worked extensively with Texas libraries. Several of those are described in the chapter on case studies.

Plan of Action for Implementing Digital Literacy Services

Many ideas and advice about digital literacy services are readily available from colleagues and from TSLAC professional staff. Take advantage of training materials already being offered at no charge and developed for use by Texas librarians: https://www.tsl.texas.gov/workskills. This site has numerous materials available in English, Spanish, and Vietnamese on computer basics, internet basics, email, and introductions to Microsoft Word and Excel. Both student modules and librarian/teacher/instructor guides with lesson plans are available. In addition, there are standalone courses and materials on job search and resume writing. These modules, activity worksheets, and other resources have been prepared after extensive analysis and are specifically designed for Texas libraries and citizens.

The TSLAC website also contains resource materials that will help with other aspects of promoting and staging new digital literacy services. Examples of these resources appear below.

- Module 8: Additional Resources

  A. Teacher Tips
  1. Tech Training Best Practices
  2. Working With Lower Literacy Adults
  3. Library Resources for Tech Training

  B. Promotional Materials
  1. Course Descriptions
  2. Example Flyer 1
  3. Example Flyer 2
  4. Example Registration Form
  5. Program Welcome Letter
  6. Tips for Promoting Your Classes

Additional information and advice from interviews conducted during this research were:

1. Be sure to offer some courses that are important to patrons, such as online safety and security, even if patrons do not realize their importance or may wish to take something else such as social media.

2. Be aware of your audience and the devices they are going to be using. Some experienced training practitioners believe the choice of an appropriate device is important for patrons when they start. Smartphones and tablets are touch-oriented and less complicated than using a keyboard and CPU. However older adults usually prefer computer keyboards and monitors because of their larger sizes. Also some patrons will be unfamiliar with a keyboard and may need to view big, explicit images for a very basic orientation at the beginning.

3. Finally, remember that you and your staff may be more familiar with existing computers than with a tablet if that is what might be used in the training. Do not forget that an aide may be very helpful. While the teacher or instructor delivers the course material, having an aide circulating among patrons and giving personalized attention to patrons has proven effective according to experienced instructors.

Acknowledgments

The research team wishes to thank the Texas State Library and Archives Commission for their support and cooperation in completing the project. Gloria Meraz, Director and Librarian, provided leadership throughout this initiative and personally assisted with data collection at one stage. Cindy Fisher provided guidance, information, help, and encouragement throughout the project.

We are especially indebted to the public library directors who so graciously provided data, and who contributed their time in sharing information. Without their cooperation, this project would have been much more difficult and the report less complete. We wish to express our gratitude to the Institute for Library and Museum Services of supporting this project.

The Bureau of Business Research, IC² Institute, The University of Texas at Austin

The Bureau of Business Research is organizationally located in the IC² Institute at The University of Texas at Austin. It was established in 1926 and conducts applied research to strengthen the state's business environment. Throughout its history, the Bureau and its work have been characterized by objectivity and independence. The Bureau's prolific publications history includes numerous economic assessments and program evaluations. The IC² Institute was established in 1977 with the vision that science and technology are resources for economic development. The IC² Institute is directed by Professor S. Craig Watkins, the Ernest A. Sharpe Centennial Professor at the University of Texas at Austin.

Project Staff

Dr. James Jarrett, Senior Research Scientist, Bureau of Business Research, IC² Institute, The University of Texas at Austin, served as the principal investigator. Dr. Greg Pogue, deputy executive director at the IC² Institute was senior researcher. Maclain Scott, Emily Spandikow, and Jorge Anchondo performed research, project management, and vital analytical and literary expertise. Additional research analysis was performed by undergraduate research assistants: Riley Church, Cecilia Guerra, Sameen Rahman, Anuraag Routray, Jaxson Shealy, Sydney Shoemaker, Lisa Silvestre, and Jasmine Wright.

The research was performed in calendar year 2022.

Appendices

Appendix A: Materials Related to Initial Set of Qualitative Interviews

Part 1: Librarian Contact and Communication Sequence

Part 2: Questions in Qualitative Interview

IC² Digital Literacy Project | Spring 2022

Librarian Contact and Communication Sequence

1. Initial Email to Librarians (Senior staff person sends to librarians individually; if they don't respond, he'll email again the following Thursday)

Subject: Texas Public Library Digital Literacy Interview Request Dear Director **[Last name]**,

My name is [senior staff member], and I'm a researcher at UT-Austin's IC² Institute. I'm writing to you because I'm part of a research team that's working on a digital literacy project supported by the Texas State Library and Archives Commission (TSLAC). You may have seen the project announcement in Gloria Meraz's email from Monday.

For this project, we're talking with librarians around Texas about the digital literacy needs in your communities, the digital literacy services your libraries offer, as well as the barriers to, and opportunities for, expanding such services and resources. Using the data librarians like you provide, we will create a report for TSLAC to share with Texas legislators and other stakeholders.

I understand you're busy, but we'd very much like to hear what you have to say about digital literacy and the needs of your community. **May we interview you within the next few weeks at a time of your convenience?**

The interview would be approximately 30-40 minutes, conducted over Zoom or the phone (depending on your preference) by one of our project researchers. The interview would be recorded but your identity would be kept confidential. If we wish to attribute a quotation to you by name, we will request your permission.

If you're willing, please let us know your availability here:
Qualtrics link

Thank you for your time, [Name of Staff Member]

2. Follow-up Email (Staff sends to librarians who complete the qualtrics schedule survey/agree to initial email; Undergraduate Research Assistant (UGA) will be CC'd)

Dear Director [Last Name],

Thank you! We appreciate your participation. I've CC'd **[UGA]**, the undergraduate researcher who will conduct the interview. The interview will be held on **[insert date/time]**. Here's the Zoom link: **[insert UGA's Zoom link]**.

I've also attached for your review a copy of the interview questions and the interview conditions. At the start of the interview, **[UGA]** will ask for your official consent to participate in the study.

All the best,
[Name of Staff Member]

Questions in Qualitative Interviews/Initial Zoom Sessions

Researcher-Facing Version

Name of Library/Branch:
Community/County/ Name of Interviewee:
Date:

Project Description and Interview Conditions:

In this study supported by the Texas State Library and Archives Commission (TSLAC), we are interviewing Texas librarians to learn about the digital literacy services offered by Texas public libraries as well as the digital literacy needs and challenges in their communities. If you agree to an interview, I'll record the interview and we will talk for 30-40 minutes. We will treat this recording as confidential, and when we report results, you will be assigned a pseudonym (fake name). If we wish to attribute a quotation to you by name, we will request your permission. Your recording will be kept in secure, password-protected digital storage that the university has set up to safeguard research data. It will only be accessible by the research team.

Taking part in this research study is voluntary. You do not have to participate, and you can stop at any time. If you decide to withdraw before this study is completed, we will delete your data.

With these conditions in mind, are you willing to be interviewed today?

Introduction: [***Start Recording***] *(Ask the participant if they've had a chance to read the interview conditions ahead of time. If the participant* ***has read*** *the above interview conditions ahead of time, ask if they agree to them. If they agree, still re-iterate the purpose of the project, sponsorship, time commitment of this interview, and that they can stop their participation if they'd like. Then proceed with the interview questions. If the participant* ***has not read*** *the conditions, read the above statement aloud as a script before proceeding with the interview questions.)*

To begin, could you please tell me your name and the name of your library? What does digital literacy mean to you?

Current DL Services:

What kind of digital literacy training do you provide, if any?
(Prompt with items below if needed—do not read otherwise. If the Librarian says they do not provide any training or assistance of any kind, either with current library staff, outside consultants, or in partnerships with other entities, then skip to Challenges, Constraints, Unmet Needs.)
One-on-one assistance (informal/as needed)
One-on-one assistance (scheduled)
Formal classes offered by library staff
Formal classes offered at the library but taught by someone else
Formal classes offered by volunteers at the library
Online, self-paced classes
Other, please specify _____
None

Does your library offer **classes or instruction** on:
(Prompt with items below if needed—do not read otherwise)
Basic computer skills Email and chat
Office productivity software
Using the internet for search Online safety, privacy and security
Social media
User-owned devices, such as eReaders, iPods, tablets, smartphones
Digital skills that are available in languages other than English
Other, please specify _____
None

Does your library offer **individual help** and assistance (one-on-one) on:
(Prompt with items below if needed—do not read otherwise)
Basic computer skills Email and chat
Office productivity software
Using the internet for search
Online safety, privacy and security
Social media
User-owned devices, such as eReaders, iPods, tablets, smartphones
Digital skills that are available in languages other than English
Other, please specify _____
None

Which training curriculums are you (or your trainers) using for your classes and individual instruction if you offer that type of assistance? _____

(Try to get them to name the program such as Google skills, Northstar (baseline assessment), others ….)

Does your library offer individual help and assistance (one-on-one) OR classes and instruction specifically:

- to help seniors use digital resources, programs and services
- to help limited English speakers use digital resources, programs and services
- to help people with cognitive and physical disabilities use digital resources, programs and services
- to help other groups of patrons *(if so, please ask them to identify those groups)*

_____

Does your library offer any **advanced classes or individual help** with digital skills such as:
(Prompt with items below if needed—do not read otherwise)

- Programming, web, and app development Digital business analysis
- Digital marketing and content creation Digital design and data visualization Digital product management
- Data science
- User experience design
- Other, please specify _____

Does your library have any programs or **strategic partnerships** with local groups, organizations, educational institutions, or governments specifically focused on digital literacy services or training?
If your library does, please describe them briefly. _____
If your library does not have any partnerships in this area, why is that?

_____

Challenges, Constraints, Unmet Needs

Are there unmet digital literacy needs in your **community**?
Yes, no, not applicable
(If there are no unmet needs, go to Advice and Information for Others)

If yes, what are these needs? Select all that apply We need more classes.

- We need more trainers.
- We need more places to access free wi-fi and computers
- We need materials in other languages. Please specify languages needed.
- We need space to hold classes
- The community is generally low on computer skills
- Other, please specify

_____

Which groups of patrons (if any) are seeking digital literacy assistance? *(Does demand differ by age, race, income, or other socioeconomic characteristics?)*

In terms of your community's needs, which are the most important services (or skills) needing attention and the ones you would like to address through new library programming?

What are the greatest challenges your library system faces in providing digital literacy assistance or training? _____

If funding is limiting what digital literacy services your library can provide, what would be your priorities if you had additional resources to spend?
(Prompt with items below if needed—do not read otherwise)

- Technology/equipment to conduct training of all types
- Staff and consultant compensation to perform training of all types Purchases of software
- Other, please specify *(Probe for as much detail as possible)*

  _____

Do you have any type of plan or strategy to provide more DL services in the future?
If yes, please describe. _____

If it is a formal plan, can you send us something via email?

Advice and Information for Others

From your experience, what works and what does not work in providing and teaching digital literacy? _____

Does your library have any digital literacy service or approach that is successful and may be unique or innovative, and which might be of interest to others? Is there something you are particularly proud about and about which you could provide more information? If so, please describe briefly, and we may get back to you later in the project.

Do you know of any other library in this region that is doing something unique or is very successful with their DL services? _____

Do you have any recommendations for things that TSLAC might do to assist you and other libraries with their DL offerings? _____

What else should we know or would you like to say about digital literacy *(that we may not have talked about today)*? _____

Final Question

We want to be respectful of your time, and only have one more question:

To conduct one part of this project, we are seeking information about the percentage of your operating funds that are spent on digital literacy services. Although we understand it may be difficult to determine, please provide your best estimate for expenditures that could be reasonably allocated to digital literacy staff time, software and curriculum, and equipment used in training. Even a very rough estimate will be useful to us.

Percentage of staff time devoted to digital literacy training and assistance:

_____

Percentage of operating expenditures devoted to software and curriculum purchases/licenses: ___

Percentage of equipment purchases devoted to digital literacy training and assistance: _____

(Prompt with items below if needed—do not read otherwise)
A very large amount (30+%)
A significant amount (20% to 30%)
A moderate amount (10% to 20%)
A small amount (5% to 10%) Not much (less than 5%)

Ending

(Confirm Action Items if the librarian promised to send something)

Thank you again for sharing your information and your views.

Post Interview

After Interview Concluded—Notes on Follow-up Items or Notes about anything in particular:

_____

Should this be considered seriously as a potential case because they are offering something unique, implementing something creatively, is illustrative of a particular challenge or constraint, and would probably be of interest to other, similar libraries in Texas?
No Yes _____ Why (brief) _____

Appendix B: Materials Related to the Survey of Library Directors

Part 1: Initial Email to Library Directors

Part 2: Reminder Email to Library Directors Who Had Yet to Respond

Part 3: Survey Instrument

Initial Email to Library Directors

SUBJECT: Texas Public Library Digital Literacy Survey Request

Dear Director [LastName]:

On March 21st, Gloria Meraz, Director and Librarian of the Texas State Library and Archives Commission (TSLAC), sent you an email about a project on digital literacy in Texas public libraries. The purpose of this study is to:

- Collect data on the current practices of Texas public libraries in offering digital literacy training;
- Assess the barriers to, and necessary resources for, expanded training and support of community digital literacy;
- Develop cost estimates for enhancing digital literacy services;
- Document digital literacy collaborations between libraries and community partners such as schools, institutions of higher education, local workforce development boards, and chambers of commerce; and
- Identify areas of strength in digital literacy training and areas in need of support and programming.

This survey questionnaire, which can be accessed by clicking on the link below, will require less than 30 minutes of your time. *You do not need to complete the survey in one session.* Rather, you may save your responses and return at another time. All information and responses gathered from the survey will be kept confidential: no responses from individual libraries will be identified in the final report, unless we specifically ask for your permission to identify your library.

Your input will help to ensure that findings from the survey reflect the unique characteristics of your library system as well as similar libraries across the state. Your response will enable TSLAC to provide data to inform elected officials, the media, and funders about public library digital literacy efforts. The study will help also to guide libraries in future planning of facilities and digital literacy services.

Please share your information with us and respond by noon on Wednesday, 30th. If you have any questions about the survey or the overall project, please contact me at jj@ic2.utexas.edu or Emily Spandikow at ESpandikow@ic2.utexas.edu.

Thank you.
Sincerely,

James E. Jarrett, Ph.D.
The IC² Institute
The University of Texas at Austin

Begin Survey

A Reminder Email to Library Directors Who Had Not Yet Responded

SUBJECT: Reminder: Public Library Digital Literacy Survey Request

Dear Director [LastName]:

This is another request that you help with a survey on digital literacy in Texas public libraries. Your knowledge about the benefits of your library's services and needs is critical if we are to compile accurate statewide information for the Texas State Library and Archives Commission.

Most librarians are providing their information, ideas, and perspectives in less than 30 minutes. Also you may start the survey and then return at a later time if interrupted.

Please share your information by noon on Monday, April 18th. You can start the survey by clicking on the button below.

If you have any questions about the survey, please contact me at jj@ic2.utexas.edu or Emily Spandikow at ESpandikow@ic2.utexas.edu . Further information about the project is available in the March 21st email to you from Gloria Meraz, State Librarian and Director of the Texas State Library and Archives Commission, or from Director Meraz's blog: https://www.tsl.texas.gov/director/heavy-lifting-its-what-builds-tomorrow/

Thank you.

Sincerely,

James E. Jarrett, Ph.D.
Bureau of Business Research
The University of Texas at Austin

Begin Survey

Texas Public Library Digital Literacy -- Main

1. Current Digital Literacy Training

What kind of digital literacy training does your library provide, if any? Please check as many as apply.

- ☐ One-on-one assistance (informal or as needed) One-on-one assistance (scheduled in advance)
- ☐ Formal classes offered by library staff
- ☐ Formal classes offered and taught by volunteers
- ☐ Formal classes offered and taught by outside organization/consultant Online, self-paced classes
- ☐ Other, please specify below None of the above
- ☐ If other, please describe briefly your other training approach.

Texas Public Library Digital Literacy -- Main

2. Current Digital Literacy Services

Does your library offer **classes or instruction** on any of the following? Please check as many as apply.

- [ ] Basic computer skills Email and chat
- [ ] Office productivity software (e.g. Word, Excel, etc) Searching the internet
- [ ] Online safety, privacy, and security Social media (Facebook, Instagram, etc)
- [ ] User-owned devices (e.g. eReaders, tablets, smartphones) Any of the above in languages other than English
- [ ] Other, please specify below None of the above
- [ ] If other, please describe briefly your other training class or type of instruction.

Does your library offer **individual help and assistance** (one-on-one) on any of the following? Please check as many as apply.

- [ ] Basic computer skills Email and chat
- [ ] Office productivity software (e.g. word, excel, etc) Searching the internet
- [ ] Online safety, privacy, and security Social media (facebook, instagram, etc)
- [ ] User-owned devices (e.g. eReaders, tablets, smartphones) Any of the above in languages other than English
- [ ] Other, please specify below None of the above
- [ ] Please describe your other subject(s) which you offer individual help on.

Which training curriculums are you or your trainers using for your library's classes and individual help.

- [ ] We do not use any curriculum
- [ ] We use multiple curriculums (please specify below) I do not know their names
- [ ] Other (please specify)

Does your library offer **classes and instruction** on any of the following? Please check as many as apply.

- [ ] To help older patrons/senior citizens use digital resources, programs, and services
- [ ] To help limited English speakers use digital resources, programs, and services
- [ ] To help people with physical or cognitive disabilities use digital resources, programs, and services
- [ ] To help children use digital resources, programs, and services
- [ ] To help low-income patrons use digital resources, programs, and services
- [ ] To help adults use digital resources, programs, and services for employment opportunities
- [ ] To help patrons use digital resources, programs, and services to create new content Other, please specify below
- [ ] None of the above
- [ ] Please describe any other groups of patrons offered classes for spedific purposes.

Does your library offer **advanced** classes/instruction or individual help on any of the following? Please check as many as apply.

- [ ] Programming, web design, app development Coding
- [ ] Digital business analysis/data visualization Digital marketing
- [ ] Content creation/digital design Digital product management Data science
- [ ] User experience design
- [ ] Other, please specify below
- [ ] None of the above

Please describe any other advanced digital topics your library offers help on.

Does your library have any programs or strategic partnerships with local groups, organizations, educational institutions, or governments specifically focused on digital literacy services or training? These might be related to workforce and employment for instance. If your library does have one or more partnerships, please describe them briefly. If your library does not have any partnerships, please go to the next question.

Texas Public Library Digital Literacy -- Main

3. Unmet Needs

- Are there unmet digital literacy needs in your community?

  - [ ] Yes
  - [ ] No
  - [ ] I do not know

Texas Public Library Digital Literacy -- Main

4. Challenges, Constraints, Unmet Needs

What are the key digital literacy needs in your community? Please check as many as apply.

- [ ] We need more classes. We need more trainers.
- [ ] We need space to hold classes.
- [ ] We need more places to access free wi-fi and computers.
- [ ] We need materials in other languages. (Please specify below.)
- [ ] The community is generally low on computer skills.
- [ ] Other, please specify below

Please describe your community's other digital literacy needs

In terms of your community's needs, which are the most important services or skills needing attention? Please specify below the most important, the second most important, and the third most important of the choices you checked in the previous question.

Most Important:

Second Most Important:

Third Most Important:

In terms of demographic characteristics, which groups of patrons (if any) most often seek digital literacy assistance? Please describe the groups briefly. If there is no pattern in patrons seeking assistance, please skip to the next question.

Do you have any type of plan or strategy to provide more digital literacy services in the future? If you do, please describe it below briefly. If you do not, please skip to the next question.

If funding is limiting what digital literacy services your library can provide, what would be your priorities if additional resources were available? Please rate how beneficial each option would be. If funding is sufficient at the present time, please skip to the next question.

	Not Beneficial	Somewhat Beneficial	Moderately Beneficial	Quite Beneficial	Extremely Beneficial
Technology and Equipment to Conduct Training					
Compensation for staff/Consultants to conduct training					
Purchases of software for everyday use					
Purchases of training curriculums					
Funding for training of current library staff					

Other priorities (please describe briefly)

IC2 TEXAS STATE LIBRARY AND ARCHIVES COMMISSION

Texas Public Library Digital Literacy -- Main

5. Advice and Information for Others

From your experience, what works and what does not work in providing digital literacy training and teaching digital literacy skills? If you or your library has no digital literacy experience, please go to the next question.

Does your library have any digital literacy service or approach that is successful and may be unique or innovative, and which may be of interest to others? As an example, have you discovered a technique that has proven very effective in attracting or retaining patrons in training classes? Is there is something you are particularly proud of and which you could provide information about? If so, please describe briefly. Otherwise, please go to the next question.

Do you have any recommendations for TSLAC that would assist you and other libraries with their digital literacy offerings? If so, please describe briefly. Otherwise please skip to the next question.

What else would you like to say about digital literacy that may not have been asked in the previous questions? Please describe briefly or skip to the next question.

IC²

TEXAS STATE LIBRARY AND ARCHIVES COMMISSION

Texas Public Library Digital Literacy -- Main

6. Ending and Background Information

What is the population of your library's legal service area? Please choose from the available population ranges, based on your response in the most recent Texas Public Libraries Annual Report.

- ◯ 1,000,000 or more
- ◯ 300,000-999,999
- ◯ 175,000-299,999
- ◯ 65,000-174,999
- ◯ 15,000-64,999
- ◯ 5,000-14,999
- ◯ Under 5,000

To conduct one part of this project, we are seeking information about the percentage of your operating funds that are spent on digital literacy services. Although we understand it may be difficult to determine, please provide your best estimate for expenditures that could be reasonably allocated to digital literacy staff time, software and curriculum, and equipment used in training. A very rough estimate will be useful to us.

	A very large amount (30+%)	A significant amount (20% to 30%)	A moderate amount (10% to 20%)	A small amount (5% to 10%)	Not much (less than 5%)
Library Employee Salaries & Benefits	◯	◯	◯	◯	◯
Other Library Operating Expenditures	◯	◯	◯	◯	◯
Library Equipment for Patrons and Classrooms	◯	◯	◯	◯	◯

Other (please specify)

This is for project administrative purposes only. No response needed.

	X	Y	Z
A	◯	◯	◯
B	◯	◯	◯
C	◯	◯	◯

Appendix C: Materials Related to the Survey of Branch Managers

Part 1: Initial Email to Branch Managers

Part 2: Reminder Email to Branch Managers Who Had Yet to Respond

Part 3: Survey Instrument

Initial Email to Branch Managers

SUBJECT: Texas Public Library Branches—Survey Request—Digital Literacy

Dear Director [LastName]:

On March 21st, Gloria Meraz, State Librarian and Director of the Texas State Library and Archives Commission, sent an email to all public library directors requesting information about digital literacy services in Texas public libraries, including branches. This study is (1) collecting data on the current practices of Texas public libraries in offering digital literacy training; (2) assessing barriers to expanded training and services; and (3) identifying areas of strength in digital literacy training and areas in need of support and programming. Further information about the project is available at Director Meraz's blog.

Samples of branch libraries and main libraries throughout Texas are being contacted to obtain information, and your branch is being asked to participate. This series of questions will require less than 30 minutes of your time. *You do not need to complete the survey in one session.* Rather, you may save your responses and return at another time. All information and responses gathered from the survey will be kept confidential.

Your knowledge about the benefits of your branch's services and needs is critical if we are to compile accurate statewide information. Your input will help ensure that findings from the survey reflect the unique characteristics of your branch. Your response also will enable TSLAC to provide data to inform elected officials, the media, and funders about public library digital literacy efforts.

Please share your information with us and respond by noon on Wednesday, April 13th. You can start the survey by clicking on the button below.

If you have any questions about the survey or the overall project, please contact me at jj@ic2.utexas.edu or Emily Spandikow at ESpandikow@ic2.utexas.edu or Cindy Fisher at TSLAC: cfisher@tsl.texas.gov.

Thank you.

Sincerely,
James E. Jarrett, Ph.D.
Bureau of Business Research
The University of Texas at Austin

Begin Survey

A Reminder Email to Branch Managers Who Had Not Yet Responded

SUBJECT: Reminder: Texas Public Library Branches Digital Literacy Survey Request

Dear Branch Director [LastName]:

On March 21st, Gloria Meraz, State Librarian and Director of the Texas State Library and Archives Commission, sent an email to all public library directors about digital literacy services in Texas public libraries, including branches. This request was part of a TSLAC-funded project described in Director Meraz's blog: https://www.tsl.texas.gov/director/heavy-lifting-its-what-builds-tomorrow/

Your branch is being asked to participate. This will require less than 20 minutes of your time. You do not need to complete the survey in one session. Rather, you may save your responses and return at another time. Please share your information and ideas by responding before noon on Tuesday, April 26th. You can start the survey by clicking on the button below.

Individual responses will remain confidential and anonymous and will not be shared publicly. Your input will ensure that findings reflect the unique characteristics of your branch and contribute to a statewide profile of digital literacy services and needs by branches. TSLAC will use the summarized data to inform elected officials, the media, and funders about public library digital literacy efforts.

If you have any questions about the survey or the overall project, please contact me at jj@ic2.utexas.edu or Emily Spandikow at ESpandikow@ic2.utexas.edu or Cindy Fisher at TSLAC: cfisher@tsl.texas.gov.

Thank you.

Sincerely,

James E. Jarrett, Ph.D.
IC2 Institute
The University of Texas at Austin

Begin Survey

Digital Literacy in Texas Public Library Branches

1. Current Digital Literacy Training

- What kind of digital literacy training does your branch provide, if any? Please check as many as apply.

☐ One-on-one assistance (informal or as needed) One-on-one assistance (scheduled in advance)

☐ Formal classes offered by library staff

☐ Formal classes offered and taught by volunteers

☐ Formal classes offered and taught by outside organization/consultant

☐ Online, self-paced classes

☐ Other, please specify below None of the above

☐ If other, please describe your other training approach briefly.

Digital Literacy in Texas Public Library Branches

2. Current Digital Literacy Services

Does your library branch offer **classes or instruction** on any of the following? Please check as many as apply.

- [ ] Basic computer skills Email and chat
- [ ] Office productivity software (e.g. Word, Excel, etc) Searching the internet
- [ ] Online safety, privacy, and security Social media (Facebook, Instagram, etc)
- [ ] User-owned devices (e.g. eReaders, tablets, smartphones)
- [ ] Any of the above in languages other than English
- [ ] Other, please specify below None of the above
- [ ] If other, please describe briefly your other training class or type of instruction.

Does your branch offer **individual help and assistance** (one-on-one) on any of the following? Please check as many as apply.

- [ ] Basic computer skills Email and chat
- [ ] Office productivity software (e.g. word, excel, etc) Searching the internet
- [ ] Online safety, privacy, and security Social media (facebook, instagram, etc)
- [ ] User-owned devices (e.g. eReaders, tablets, smartphones)
- [ ] Any of the above in languages other than English
- [ ] Other, please specify below
- [ ] None of the above

Please describe your other subject(s) which you offer individual help on.

Which training curriculums are you or your trainers using for your library's classes or individual help.

- [ ] We do not use any curriculum
- [ ] We use multiple curriculums (please specify below) I do not know their names
- [ ] Other (please specify)

Does your library branch offer **classes and instruction** on any of the following? Please check as many as apply.

- [ ] To help older patrons/senior citizens use digital resources, programs, and services
- [ ] To help limited English speakers use digital resources, programs, and services
- [ ] To help people with physical or cognitive disabilities use digital resources, programs, and services
- [ ] To help children use digital resources, programs, and services
- [ ] To help low-income patrons use digital resources, programs, and services
- [ ] To help adults use digital resources, programs, and services for employment opportunities
- [ ] To help patrons use digital resources, programs, and services to create new content
- [ ] Other, please specify below
- [ ] None of the above

Please describe any other groups of patrons offered classes for specific purposes.

Does your branch offer **advanced** classes/instruction or individual help on any of the following? Please check as many as apply.

- [ ] Programming, web design, app development Coding
- [ ] Digital business analysis/data visualization Digital marketing
- [ ] Content creation/digital design Digital product management Data science
- [ ] User experience design
- [ ] Other, please specify below
- [ ] None of the above

Please describe any other advanced digital topics your library offers help on.

Does your library branch have any programs or strategic partnerships with local groups, organizations, educational institutions, or governments specifically focused on digital literacy services or training? These might be related to workforce and employment for instance. If your library does have one or more partnerships, please describe them briefly. If there are no partnerships, please go to the next question.

Digital Literacy in Texas Public Library Branches

3. Unmet Needs

- Are there unmet digital literacy needs in the neighborhood(s) your branch serves?

- [ ] Yes
- [ ] No
- [ ] I do not know

Digital Literacy in Texas Public Library Branches

4. Challenges, Constraints, Unmet Needs

What are the key digital literacy needs in your neighborhood and nearby community? Please check as many as apply.

- [ ] We need more classes. We need more trainers.
- [ ] We need space to hold classes.
- [ ] We need more places to access free wi-fi and computers.
- [ ] We need materials in other languages. (Please specify below.)
- [ ] The community is generally low on computer skills.
- [ ] Other, please specify below.

Please describe your community's other digital literacy needs.

In terms of your community's needs, which are the most important services or skills needing attention? Please specify below the most important, the second most important, and the third most important of the choices you checked in the previous question.

Most Important:

Second Most Important:

Third Most Important:

In terms of demographics, which groups of patrons (if any) most often seek digital literacy assistance? Please describe the groups briefly. If there is no pattern in patrons seeking assistance, please skip to the next question.

Do you have any type of plan or strategy to provide more digital literacy services in the future at this branch? If you do, please describe it below briefly. If you do not, please skip to the next question.

If funding is limiting what digital literacy services your library can provide, what would be your priorities if additional resources were available? Please rate how beneficial each option would be. If funding is sufficient at the present time, please skip to the next question.

	Not Beneficial	Somewhat Beneficial	Moderately Beneficial	Quite Beneficial	Extremely Beneficial
Technology and Equipment to Conduct Training					
Compensation for staff/Consultants to conduct training					
Purchases of software for everyday use					
Purchases of training curriculums					
Funding for training of current library staff					

Other priorities (please describe briefly)

Digital Literacy in Texas Public Library Branches

5. Advice and Information for Others

From your experience, what works and what does not work in providing digital literacy training and teaching digital literacy skills? If your branch has no experience with digital literacy, please go to the next question.

Does your library branch have any digital literacy service or approach that is successful and may be unique or innovative, and which may be of interest to others? As an example, have you discovered a technique that has proven very effective in attracting or retaining patrons in training classes? Is there is something you are particularly proud of and which you could provide information about? If so, please describe briefly. Otherwise, please go to the next question.

Do you have any recommendations for TSLAC that would assist you and other library branches with their digital literacy offerings? If so, please describe briefly. Otherwise please skip to the next question.

What else would you like to say about digital literacy that may not have been asked in the previous questions? Please describe briefly or skip to the next question.

IC² TEXAS STATE LIBRARY AND ARCHIVES COMMISSION

Digital Literacy in Texas Public Library Branches

6. Ending and Background Information

To conduct one part of this project, we are seeking information about the percentage of your operating funds that are spent on digital literacy services. Although we understand it may be difficult to determine, please provide your best estimate for expenditures that could be reasonably allocated to digital literacy staff time, software and curriculum, and equipment used in training. A very rough estimate will be useful to us.

A very large amount (30+%)	A significant amount (20% to 30%)	A moderate amount (10% to 20%)	A small amount (5% to 10%)	Not much (less than 5%)

Library Employee Salaries & Benefits	◯	◯	◯	◯	◯
Other Library Operating Expenditures	◯	◯	◯	◯	◯	◯
Library Equipment for Patrons and Classrooms	◯	◯	◯	◯	◯

Other (please specify)

This is for project administrative purposes only. No response needed.

◯ A ◯ B ◯ C

Appendix D: Project Data Collection Overview

Project Data Collection Overview

Contacted Libraries—Opportunity to Provide Information

Surveys:
Main Survey Sample: 298
Branch Survey Sample: 121 and Fillable PDFs: 18 = 139

Interviews Attempted: 59

Mains and 46 branches=105

Contacted Libraries—Information Received From

Main Survey: 171 (165 complete, 5 partial)
Branch Survey: 80 (75 complete, 5 partial)
Fillable PDFs: 19 Electronic survey: 61 (56/5)

Interviews: 51
32 Mains, 14 branches, with 5 other interviews about costs only (4 directors, 1 branch manager)

Data collected from approximately 300 discrete main and branch libraries

207 Mains or approximately 41% of total of 500
95 Branches or approximately 32% of total of 300

Appendix E: Patron Populations Served by Main Libraries Responding to the Survey

Patron Populations Served by Main Libraries Responding to the Survey

The goal of digital literacy training and assistance by public libraries is to reach as many Texans as possible. Because the focus in this report is on libraries as the units of analysis, the numbers of patrons served can be overlooked at times. Below is an elementary estimate of the theoretical sizes of patron populations being served by respondents to the main survey.

For the sake of argument, let's assume that each library in each major population category could reach the upper limit of patrons. For libraries under 5,000, each of the 43 respondents could reach 5,000 and combined, the 43 respondents could reach 215,000 (5,000 X 43). Likewise, the numbers for the other categories would be:

Category 5,000 to 15,000, with 49 respondents= 735,000 (15,000 X 49)
Category 15,000 to 65,000 with 46 respondents= 2,990,000 (65,000 X 46)
Category 65,000 to 175,000 with 18 respondents= 3,150,000 (175,000 X 18)
Category 175,000 to 300,000 with 7 respondents= 2,100,000 (300,000 X 7)
Category 300,000 to 1,000,000 with 3 respondents=3,000,000 (1,000,000 X 3)
Category 1,000,000 or more with 5 respondents=5,000,000 (1,000,000 X 5)

Of course, the largest category is underestimated as we know several of the respondents are systems that are at least twice as large. If we increase the per library estimate to 1,500,000 for that category, the total then becomes 7,500,000.

The point of this exercise is to show that the total populations served by the smallest three categories of libraries is a maximum of 3,940,000: (215,000 + 735,000 + 2,990,000). That is for the 138 respondents. The maximum total populations served for the 25 respondents between 65,000 and 300,000 is 5,250,000. And the total population served by the 8 respondents from libraries above 300,000 is 10,500,000 (3,000,000 + 7,500,000).

Appendix F: Additional Analyses and Findings--Branches

Part 1: Populations Served by Branch Libraries

Part 2: Similarity of Digital Literacy Programming By Branches and Main Libraries

Additional Analyses and Findings--Branches

Populations Served by Branch Libraries

While there is no precise method for determining the area and the population within that area for branch libraries, very rough estimates can be generated. Large Texas counties with branch libraries and their total county populations are shown in the following tables. The most relevant is the first table, as that captures more than 75% of the total number of Texas branches, excluding bookmobiles: 254 of 328 branches statewide. Although Tarrant, Montgomery, and Collin counties are unique, the other counties are fairly similar in the population served numbers. For these 13 counties in the aggregate, a branch serves an average of nearly 70,000 people (68,950).

TABLE APP.1. AVERAGE POPULATIONS SERVED BY BRANCHES IN MAJOR TEXAS COUNTIES WITH FIVE OR MORE BRANCHES

County	# of branches in county	County Population Estimate, July 2021	Average Population Served by Branch in the County
Harris	70	4,728,030	67,543
Dallas	40	2,586,050	64,651
Bexar	33	2,028,236	61,462
Travis	24	1,305,154	54,381
Tarrant	20	2,126,477	106,324
El Paso	14	867,947	61,996
Fort Bend	12	858,527	71,544
Brazoria	12	379,689	31,641
Nueces	7	353,079	50,440
Webb	6	267,945	44,658
Montgomery	6	648,886	108,148
Jefferson	5	253,704	50,741
Collin	5	1,109,462	221,892
Totals:	254	17,513,186	68,950

Number of branches are from all library systems in that county. Bookmobiles were excluded. Only counties with five or more branches are shown. County population estimates downloaded from: https://www.census.gov/data/tables/time-series/demo/popest/2020s-counties-total.html Release date: March 2022

There are other large Texas counties that have few branches or are without branches, however. Those are shown in Table App.2. For those counties, the population served average for a branch increases

more than five-fold to over 360,000. And if those counties without any branches are excluded, the average per branch for the other counties still is nearly 250,000.

TABLE APP.2. AVERAGE POPULATIONS SERVED BY BRANCHES IN MAJOR TEXAS COUNTIES WITH THREE OR FEWER BRANCHES

County	# of branches in county	County Population Estimate, July 2021	Average Population Served by Branch in the County
Lubbock	3	314,451	104,817
McLennan	3	263,115	87,705
Hidalgo	3	880,356	293,452
Denton	2	941,647	470,824
Cameron	1	423,029	423,029
Bell	1	379,617	379,617
Williamson	0	643,026	N/A
Galveston	0	355,062	N/A
Hays	0	255,397	N/A
Smith	0	237,186	N/A
Totals	13	4,692,886	360,991

Excluding the four large counties without any branches, the total population is 3,202,215 and the average population served is 246,324.

A final set of data in Table App.3 shows the averages for all 23 large counties and for those 19 counties with branches currently.

TABLE APP.3. AVERAGE POPULATIONS SERVED BY BRANCHES IN MAJOR TEXAS COUNTIES WITH AND WITHOUT BRANCHES

Twenty-Three County Totals	Total Branches	Total Population	Average Population Per Branch
All Twenty-Three Counties	267	22,206,072	83,169
Excluding Four Large Counties Without Branches (19)	267	20,715,401	77,586

As can be seen, the average population per branch does not change appreciably from the average for the large counties with the most branches currently. The change is only from 68,950 to either 77,586 or 83,169 depending on how many counties are included. While rough, these numbers provide some indication of population served equivalents to the main library populations.

Similarity of Digital Literacy Programming By Branches and Main Libraries

In Chapter 3 and elsewhere in the report a comparison of branches and mains indicated that branches in the aggregate offer more digital literacy services and assistance than main libraries in the aggregate. A separate research question arose: do branch libraries resemble any particular type or segment of main libraries?

To answer this question, answers for survey questions 1-6 and 8-9 were compared for all branch libraries with two different groups of main libraries: those serving populations of 65,000 to 175,000 and those serving populations of 15,000 to 175,000. On the eight questions, there was a clear demarcation. For four questions, branches were quite similar to the main libraries in the 15,000-175,000 group. For two other questions, branches were less similar but still more alike that grouping than the 65,000-175,000 group. On one question, branches were equally alike and for the last question, branches were more similar to the 65,000-175,000.

From this brief set of comparisons, it is clear that branches are fairly similar in digital literacy programming to main libraries that serve populations between 15,000 and 175,000.

Appendix G: Two Resources for Determining Local Digital Literacy Needs

Digital Divide Worksheet

A worksheet available from TSLAC is a good template for gathering data on computer and internet use and the internet service providers in an area. (Originally developed by the Arizona State Library, Archives, & Public Records, this worksheet can be found under www.tsl.texas.gov › files › Comunity-Data-Digital-Divide-Data-worksheet-v3

The process is somewhat complicated because of the external links. Nonetheless, using the template will provide data such as the following for an unnamed Texas zip code.

Households with a computer	87.6%
…with a desktop or laptop	75.6%
…with a smartphone	73.9%
…with a tablet or portable wireless computer	52.9%
…with other	2.4%
Households with a broadband internet subscription	51.2%
…cellular data plan	71.6%
…broadband	51.2%
Satellite	22.7%
…dial-up phone	0.2%
…other services alone	0.0%

I3 Connectivity Explorer

This website requires an account, which is free. Once inside the site, one is able to build a community profile based on census tracts. All the data on internet connectivity that is publicly available through the American Community Survey of the Census Bureau can be accessed, along with a large array of

demographic data. It is possible to find the number of households in a census tract without a computer, the number and percentage with a smartphone, and the number and percentage with a tablet. Also other files have been uploaded such as the locations of all libraries, including branches, schools, and health care facilities. Moreover, these data can be shown both visually and with accompanying tables. The GIS capabilities enable a user also to build census tracts by towns, census districts, counties, and in agglomerations of counties or metro areas. This site was utilized by the project research team, and it was extremely useful.

The site, https://i3cex.internet-is-infrastructure.org/sessions/new, has been maintained by an individual for years, and has now become part of CrowdFiber (An NRTC Solution). According to the website, CrowdFiber is part of the National Rural Telecommunications Cooperative https://www.nrtc.coop . It is unknown if there will be any changes regarding access to the site or if any fee will be imposed.

Observations

There is a significant amount of valuable data and information in both resources. The I3 Explorer offers visual representations of the data, although there is an initial learning period required. The sheer amount of data on connectivity combined with numerous demographic variables provides a powerful tool. When one adds the ability to show library locations and the adjacent census tract geographies, it is an excellent resource. The digital divide worksheet utilizes some of the data sources as the I3 Explorer site and may suffice for obtaining new information about a community's needs. One can also compare data across zip codes and geographies that may be adjacent.

To improve usefulness, benchmarks should be added for categories of geographies. Currently, neither resource yields appropriate information or standards against which one's community can be compared. Statewide averages are inappropriate for instance. What is needed at a minimum would be averages for groups of counties with Texas' 254 counties divided into groups on similar characteristics. A librarian in a small, rural community needs to be able to compare local data with other similar counties. A librarian in a neighborhood library of a large Texas city needs to be able to compare local census tract data with other census tracts in the city and other cities. Adding those benchmarks will give librarians a more accurate comparison to assess the digital literacy needs of their patrons than they have presently.

Appendix H: Examples of Apps and Programs for Older Adults/Senior Citizens

Examples of Apps for Older Adults/Senior Citizens

Below are a number of examples of apps and programs for older adults. All except the last program are apps that librarians could pass along directly to older patrons or to younger patrons and individuals seeking to contact senior citizens either locally or elsewhere. The last app, Mon Ami, would be useful principally as a resource for librarians. The listings below were reviewed in general, although they are not specifically endorsed in any way. There are many other available apps as well.

Papa: Papa is an online resource that connects the older adult community to people who can assist them in many ways. Through Papa, older adults gain connections to prevent loneliness, help with their transportation needs, and assistance with day-to-day tasks. They app emphasizes on assisting underserved populations. https://www.papa.com/

Eldera: Eldera is a video chat service that allows children to meet with mentors of older generations. The website matches children with elders to meet once a week virtually. Children are able to use this resource to learn about more perspectives and the world around them, while seniors are afforded communication and advisory opportunities. https://www.eldera.ai/

Generation Tech: Generation Tech allows teenage volunteers to connect with individuals who have retired. The goal is to prevent older adults from feeling unfulfilled once they are no longer working. Activities by the teenage volunteers focuses mainly on providing older adults with technology skills. https://gentechco.org/

Big and Mini: Big and Mini is a service where older adults are matched with younger people based on interests. Then, the two individuals have the ability to have phone calls or video conversations. The goal is to minimize loneliness in older adults and end social isolation. https://bigandmini.org/

Alcove: Alcove uses virtual reality (VR) to connect with family and friends who are unable to physically be in the same place. They strive to connect people of all ages through VR. https://alcovevr.com/

MyndVR: MyndVR strives to increase the quality of life in older individuals. Its goal is to make therapy and cognitive/memory exercises fun. https://www.myndvr.com/

Mon Ami: Mon Ami is a system database designed to assist aging and disability agencies. Volunteer services range from calling on the phone to meal delivery. Librarians could use the database if he/she is new to the neighborhood or community or are situated in larger cities. https://www.monami.io/

Appendix I: Two Texas Professional Leadership Programs

Texas Rural Leadership Program

The Texas Rural Leadership Program offers Leaders in Action workshops for rural Texas communities to educate and engage community leaders for specific local initiatives and obstacles. According to their website, their "skill-building" curriculum strives to create a team- oriented, educational atmosphere that exercises concepts taught such as "leadership competencies" and "asset-based community development." Emphasis is placed on participant engagement and working with the specific strengths, weaknesses, and goals of individual communities.

In order to host a program, a "TRLP core team" must be formed to manage Leaders in Action. Coordinators will be chosen from this team who will work with and be coached by the TRLP training team, in order to "plan, coordinate, and build local interest" in the program. The individual workshops range from $300 to $500 and their workshop series runs from 3 to 6 workshops in the price range of $1,200 to $5,000. The workshops may be online or in-person. More information is available at: https://trlp.tamu.edu/leaders-in-action-curriculum/

Texas Municipal League Leadership Academy

As described on their website, the Texas Municipal League's annual Leadership Academy is a two-course, six-day program, designed to enhance the leadership skills of officials who serve Texas cities. The 2023 sessions will be held in April and May with two courses: Personal Leadership Effectiveness and Ethical and Influential Leadership. These courses will occur over a combined, six-day program. In addition to city managers and assistant city managers, past participants have included department directors from finance, human resources, planning, and transportation. Space is available each year for 75 future leaders. The registration fee in 2023 is $795 for the two courses. More information is available at: https://tmlleadershipacademy.org/

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