

Data Module: Curating Data to Enhance Public Library Effectiveness

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1. Overview

This report describes four datasets, data collection methods, variables used from each, and how these datasets were used or consulted as part of the study *Public Library Services, Programs and Outreach, United States, 2015-2023*. We describe how these datasets are related and can be linked by secondary users. These datasets are housed at the Inter-university Consortium for Political and Social Research (ICPSR) as study 38653.

To successfully document outcomes associated with public library services, programs, and outreach in the United States (U.S.), we recommend aggregating and linking disparate demographic, input, output, and outcome data from the following sources:

1. The Institute of Museum & Library Services (IMLS) Public Libraries Survey (PLS),
2. The U.S. Census Bureau's American Community Survey (ACS),
3. The Public Library Association's (PLA) Project Outcome (PO) dataset, and
4. A national survey by the Association of Bookmobile and Outreach Services (ABOS)

which complements its Bookmobile and Outreach Information Repository (BOIR).

We make recommendations for aggregating and linking these datasets based on feedback we received from our project advisory committee. In this document, we describe the recommendation process to help data curators at ICPSR create a one-of-a-kind data product, including ACS, PLA, and ABOS data, and to help library researchers replicate and expand on our work.

2. Background

In 2022, ICPSR received a National Leadership Grant for Libraries (LG-252313-OLS-22) from IMLS. This grant proposed:

ICPSR and the University of Missouri's School of Information Science & Learning Technologies (SISLT) will create a novel dataset about library programming and

outreach outcomes to augment the PLS. The project team will extend the reach and significance of the PLS using data collected by ABOS and the Public Library Association. The team will aggregate, curate, enhance, and map this data to the PLS to identify effective programming and service decisions. Combining ABOS and PLA data and then housing them in a single location will enable library administrators and researchers to examine the results of library outreach and programming decisions on a granular basis. As subrecipients, ABOS and PLA will provide access to their data, amongst other curatorial activities. SISLT will provide subject matter expertise, lead an advisory committee, supervise the creation of a data module, and help create and disseminate graduate course materials.

While individual state libraries reportedly collect unique information on library programming and outreach, nationally, library researchers know very little about 1) the structure of library units that provide these services, 2) the support these units receive, or 3) detailed information about the district-level services that libraries provide. Furthermore, while PLS data include census tracts describing where a library Administrative Entity (AE) or branch is located, these have population sizes between 1,200 and 8,000. Thus, census tract demographic characteristics *do not reflect the populations of entire districts that libraries serve*. Our project seeks to address these limitations by collecting, distributing, and facilitating linkages of national data from the ACS, PLA, and ABOS, which can be used to supplement the PLS.

3. Data Sources

The Public Libraries Survey

The Institute of Museum and Library Services sponsors PLS data collection and retention. Data are gathered annually by state data coordinators across the U.S. and processed by the American Institutes for Research. The PLS provides two public data files, one documenting each of over 17,000 public library outlets and another at the AE level. AEs are agencies legally established under local or state law to provide public library services to local jurisdictions. In this project, we reference the AE file. This file provides aggregate data for library administrative

entities (i.e., systems) in the U.S. and territories, containing more complete data documenting inputs and outputs.

The PLS is a census survey collecting data from over 9,000 public libraries, including multi-branch and single-outlet libraries. The PLS attempts to include data from each public library administrative entity in the U.S. PLS data covers the following categories:

- **General data**, including address and other contact information, each library AE legal basis (e.g., municipal, library district, tribal), the number of people in the library's service area, county populations, and locales (e.g., urban, rural), and whether data changed in the past year.
- **Budget data**, including the amount of funding received from local, state, federal, and other sources; amounts spent on salaries and benefits; amounts spent on print, electronic, and other collection materials; capital revenue received from local, state, federal, and other sources; and capital expenses.
- **Library Resources**, including number and types of service outlets (e.g., branches, bookmobiles); service outlet square footage, hours of service; number of staff, including staff with an MLIS degree; sizes of print, e-book, audio, video, and other physical collections; electronic collections; the number of library programs offered for children, teens, adults, and general audiences; the number of the programs provided on-site, off-site, and virtually; and the number of public computers available.
- **Output data**, including the number of library visits made by patrons; the total number of borrowers; total circulation, children's material circulation, and electronic material circulation; attendance at children's, young adult, adult, and general programs; attendance at on-site, off-site, and virtual programs; the number of reference transactions;

the number of public access computer uses; the number of Wi-Fi sessions provided; and the number of visits to the library website.

Public libraries report their data annually to state data coordinators, who aggregate it and report it to IMLS. Data are reviewed at every step in the data collection and reporting process, and missing values are imputed using strategies provided in PLS documentation. Imputations are based on previous years' data from a library service outlet or regional norms among similar library service outlets. A Federal-State Cooperative System (FSCS) key in the PLS provides a unique identifier for administrative entities. This identifier is used in other datasets. Only libraries that meet the FSCS definition of public libraries are included in the PLS.¹ While the data product ICPSR created does not include PLS data, it allows researchers to create data linkages to the entirety of PLS data from fiscal year 2016-2021. In theory individuals can link the data product to PLS data from 2022 and 2023 once it is available. PLS data and documentation can be downloaded directly from the [IMLS website](#).

American Community Survey

The American Community Survey (ACS), administered by the U.S. Census Bureau, is an ongoing survey to collect data about the American population. The ACS is used by governmental and non-governmental agencies, researchers, businesses, journalists, and others. The ACS has been administered every year since 2005 and collects data on social characteristics (e.g., ancestry, marital status, school enrollment), housing characteristics (e.g., type of housing, computer and internet access), and economic characteristics (e.g., employment, income, poverty

¹ Per 2021 IMLS PLS documentation, "A public library is an entity that is established under state enabling laws or regulations to serve a community, district, or region, and that provides at least the following: (1) an organized collection of printed or other library materials, or a combination thereof; (2) paid staff; (3) an established schedule in which services of the staff are available to the public; (4) the facilities necessary to support such a collection, staff, and schedule; and (5) is supported in whole or in part with public funds."

status). There are two forms for the ACS survey—one for households and one for group quarters (e.g., dormitories, nursing homes, prisons). Survey questionnaires are available in English and Spanish.

The ACS is a random sample survey. Data are collected by surveying random addresses across the U.S. and its territories, with roughly 3.5 million addresses surveyed yearly. ACS results are released in two forms: aggregate data, which groups multiple responses, and microdata, which displays individual respondents' responses. Identifying information is removed from Census data before release. This project uses aggregate ACS data.

ACS results are batched in different periods: 1-year estimates, 3-year estimates, and 5-year estimates. One-year estimates represent all surveys collected within a calendar year; these estimates have the most recent data but possess the largest margin of error due to sample size limitations. Additionally, because of the small sample size, the data in 1-year estimates are only released for areas with populations greater than 65,000. Five-year estimates aggregate 60 months of data. Because of this, 5-year estimates have a much smaller margin of error, including areas with populations of less than 65,000. This project uses ACS 5-year estimates.

For this project, PLA created a custom extract of 60 variables from the ACS 2018-2022 5-year estimates released in December 2023. These include variables already used by PLA (see *Appendix 3*) and additional variables selected by our advisory board (see *Appendix 2*). The chosen variables include age, race, ethnicity, household and family characteristics, education, and income. Information about how we created the custom extract is available with the data product through ICPSR, while additional ACS data is available through the [Census Bureau](#).

Project Outcome

[Project Outcome](#) is focused on capturing the outcomes of public library services and programs. It was developed and is maintained by the Public Library Association, an American Library Association (ALA) division. Project Outcome goals include demonstrating the outcomes of library services and showing how those services make a difference in the lives of library users and communities.

Project Outcome is an opt-in program that collects data via an online platform. When a public library opts to participate, they are provided with survey templates. Whenever respondents use the electronic data management tools provided by Project Outcome, their results are stored within the database managed by PLA. Libraries have access to their data through the Project Outcome system but cannot access data from other libraries. Project Outcome surveys are based on convenience sampling (patrons who participate in a program/service and voluntarily complete a survey at the end), and as such, the participants cannot be considered a random sample, nor is Project Outcome a census survey like the PLS.

Project Outcome collects data in eight service areas: *Civic/Community Engagement*, *Digital Learning*, *Early Childhood Literacy*, *Economic Development*, *Education/Lifelong Learning*, *Health*, *Job Skills*, and *Summer Reading*. Participating libraries may choose to collect data for one or more categories; rarely will a library collect data describing all categories. Typically, libraries will choose one or two categories to emphasize when collecting surveys and track their progress in those areas.

The unit of analysis in Project Outcome data is typically a program, service, or another structured interaction between library staff and patrons, with data collected to document the outcomes of that interaction. Data includes the date of a program/service, library names, state

and country of the evaluated library, the Project Outcome service area, type of program (the survey topic and program name), program attendance (if provided by the library), survey response count, and survey name. The survey name and a survey ID code are unique to each survey created in the system. Responses are collected anonymously. See *Appendix I* for a list of survey topics and standard questions.

This project uses Project Outcome data collected following its launch in 2015 through the end of 2023. Responses from non-US libraries and null responses were removed from the dataset. The curated Project Outcome dataset is available to researchers in ICPSR's [general archive](#).

Bookmobile Outreach and Information Repository

The BOIR is a data collection tool sponsored by the Association for Bookmobile and Outreach Services. The goal of the BOIR is to collect data on bookmobile and outreach services beyond what is provided by PLS and to provide an accurate perception of the value of library outreach. As part of this project, ABOS, in partnership with PLA, launched an opt-in survey in 2023—libraries choose to complete a survey and provide accurate information about their outreach services. Again, this was neither a census survey nor a random sample. ABOS distributed a survey in place of collecting data with the BOIR because the platform was not yet available to gather data nationally. Furthermore, disseminating a survey allowed ABOS to customize questions about the bookmobile and outreach surveys provided by public libraries nationwide.

Data were collected between June and October 2023. To generate awareness and encourage responses, ABOS coordinated a marketing campaign. The campaign included creating and disseminating paid advertisements in *Public Libraries Magazine*, *Public Libraries Magazine*

Online, *American Libraries Magazine*, and *American Libraries Magazine Online*, as well as leveraging email distribution lists maintained by the American Library Association and PLA. Additionally, ABOS generated awareness among member libraries of the survey by disseminating it via internal email channels and external social media accounts. ABOS offered \$25 gift cards to the first 60 respondents.

Survey contributors were individuals who provided responses on behalf of public library systems in the U.S., otherwise known as AEs. Contributors were designated points of contact for the Institute for Museum and Library Services Public Library Survey, or an administrator positioned to answer questions about bookmobile and outreach services. Data collected in the survey include the number of bookmobiles, whether outreach was provided by a stand-alone department, outreach budget, outreach staff and volunteers, frequency of outreach services, number of programs offered annually, circulation generated by outreach, as well as more specific questions about homebound services, books-by-mail services, early literacy outreach, and community services outreach.

The survey was also open to libraries outside the U.S. Canadian libraries were asked to provide a library symbol (unique identifier used in Canada) instead of an FSCS key. This project uses only valid data (~250 responses) from the ABOS survey, although the survey received ~420 responses. The curated ABOS dataset is available to researchers in ICPSR's [general archive](#).

4. Data Linkages

Below, we describe how the four datasets mentioned above relate. If funding is available in the future, it may be possible to combine all four of these datasets into a single file.

As seen in *Figure 1*, the PLS, Project Outcome, and ABOS data relate to one another by FSCS keys, while library names and locations confirm the validity of these relationships. FSCS keys are specific to library administrative entities rather than individual libraries. The PLS provides more detailed information about AEs than individual branch libraries.



Figure 1. Linking variables associated with four datasets.

Unfortunately, FSCS keys reflect highly localized geographies associated with public libraries, so they do not always align with the units from which U.S. Census Bureau data are obtained (i.e., census tracts). This means PLS, Project Outcome, and ABOS data must use a GeoID code to connect to the ACS. The GeoID is a code for census geographies that best approximates library service areas. Further information on GEO IDs and how they relate to census tracts can be found on the [census website](#). A GeoID is made up of: [summary level] [geographic component] [state] [place code].²

- Summary level: As explained in *Table 1* below

² For more information on Census Geographic Identifiers (GeoIDs) see: <https://www.census.gov/programs-surveys/geography/guidance/geo-identifiers.html>.

- Geographic component: 0000 (this number always stays the same)
- State: A 2-digit numerical ANSI/FIPS code
- FIPS place code

The ACS extract we provide for this project links to PLS geographies by matching GeoIDs to FSCS Keys (or IDs) using a process developed by PLA. When matching AEs to census geographies, the Geocode variable in the PLS should say what type of summary-level census geography to find. However, this variable is often problematic: it is not clear what “exactly” vs. “nearly matching” implies; “other” is not defined, and spot-checking suggests there are errors in codes assigned to libraries in the PLS. The table below lists PLS Geocodes with the type of census geography that PLA determined was the appropriate “best fit” match.

Table 1. Matching Geocodes from the PLS to Summary Level Codes

Geocode (IMLS PLS)	This means the library’s service area matches to a:	Summary level code (best match)	Summary level definition
CI1	Municipal Government (city, town, or village) (exactly)	160 or 060	Place or minor civil division
CI2	Municipal Government (city, town, or village) (most nearly)	160 or 060	Place or minor civil division
CO1	County/Parish (exactly)	050	County
CO2	County/Parish (most nearly)	050	County
MA1	Metropolitan Area (exactly)	310	Metropolitan or micropolitan statistical area
MA2	Metropolitan Area (most nearly)	310	Metropolitan or micropolitan statistical area
MC1	Multi-County (exactly)	050 multiple	County
MC2	Multi-County (most nearly)	050 multiple	County
SD1	School District (exactly)	950, 960, or 970	Elementary, secondary, or unified school district

SD2	School District (most nearly)	950, 960, or 970	Elementary, secondary, or unified school district
OTH	Other	unknown	

Below are two examples of GeoIDs that match libraries and corresponding PLS data.

Example 1: DeKalb Public Library, FSCSKey: IL0135, Geocode: CI1, City: DeKalb,

Stabr: IL. Therefore:

- Summary level (place): 160
- Geographic component (total): 0000
- State (Illinois): 17
- Place code (DeKalb city): 19161

GeoID = 1600000US1719161. The boundaries of this place (town) match the library's service area, so the population demographics reflect the population the library serves. However, this is a relatively straightforward example.

Example 2: Mid-Continent Public Library, FSCSKey: MO0004, Geocode: MC2, City:

Jackson, Stabr: MO. Therefore:

- Summary level (place): 050
- Geographic component (total): 0000
- State (Missouri): 29
- Place code (Jackson, MO): 095

GeoID = 0500000US29095. This library serves a population located across parts of three counties. However, only the county within which the AE is located is named in the PLS. It's also not specified in the AE file of the PLS which parts of the three counties the library serves, so finding census data that is an exact match for the library's legal service area population would require research on the individual library and the summing of multiple census geographies. The

PLS outlet file does include the address, city, and county for each library branch. Based on that, we can tell that Mid-Continent serves Jackson, Clay, and Platte counties. However, population figures in the PLS are only provided at the AE level.

Acknowledging that there are limitations to matching GeoIDs with FSCS Keys, PLS proceeded to create an ACS extract matching AE service areas with census data that roughly describes these service areas. However, the matching method could be better. Below, we describe limitations and elaborate on how PLA conducted population spot checks to validate the matching.

Limitations

Due to resource limitations, PLA conducted its matching process by focusing on the *place* (incorporated city, town, village), *county subdivision*, and *county* level for each AE only. For libraries with a multi-county geocode, the PLS does not specify which parts of which counties are included in the service area. For most libraries with a metropolitan area geocode, those geocodes are inaccurate and the metropolitan area is not a good match for the service area. For libraries with a school district geocode, the PLS does not contain information like the name of the school district that would make it possible to match to that geography. *Table 2* shows three summary-level codes used to generate GeoIDs. Other summary-level codes were not used.

Table 2. Matching Geocodes to Summary Level Codes

Geocode	Summary level code matching logic	Summary level code
CI1, CI2, MA1, MA2, SD1, SD2, OTH	Place (city/town). If no match for place, then use county subdivision. If still no match, then use county.	160 or 60
CO1, CO2, MC1, MC2	County	50

The result is sometimes imprecise because PLA limited its matching of Geocodes to the place, county subdivision, and county levels. Furthermore, matches depended on city and county names in the PLS being close or the same as names used in [National Gazetteer](#) files. Matching the PLS with census data by creating GeoIDs is thus highly reliant on the accuracy of data provided by IMLS. The process of pulling ACS data for each AE is automated: based on the logic in *Table 2* above, information about the location from the most recent PLS (geocode, city, county, state, GNIS place code) is used to look up the best matching geography in the National Gazetteer files. That is then used to query the Census Bureau's ACS API and pull in data associated with each AE.³ Despite challenges in matching geographies, when the process was completed in March 2023, only 13 AEs of 9,215 in the FY21 PLS were missing GeoIDs.

To validate the result, PLA used population data from the PLS and the ACS to spot-check the accuracy of matches. Using example 1 from above, for IL0135, POPU_LSA and POPU_UND in the PLS are both given as 44,030. The ACS 5-year estimate for the same municipality was 42,908, indicating the matching process was largely accurate. Nevertheless, systematic checks have yet to be conducted. This process was developed primarily to help individual libraries access basic information about their community's characteristics; it was not originally intended to provide community data aggregated for use at the national level. Library service areas as a whole are complex and often not standardized to other types of geographic entities, which creates problems for any attempt to match libraries to community data on a national scale. For more information about the matching process, please contact PLA directly.

³ This process was developed for PLA's Benchmark: Library Metrics and Trends platform (www.librarybenchmark.org). For this grant project, we were able to take advantage of that infrastructure and export the ACS data for the geographic area associated with each library AE. At the time this work was undertaken, the most recent PLS data available was FY21. IMLS updated the Geocode variable in the PLS starting in FY22 and that will have implications for use of the data and geographic matching in future.

There are alternatives to this method. IMLS PLS files include latitude and longitude coordinates for locations and the codes for census tracts and census blocks of locations. However, the time constraints of matching library administrative units to geographic shape files are impractical. Given the PLA's experience in matching census data to individual library administrative entities, the project advisory board recommended that we employ the approach already used by the PLA, which was established before this project.

5. Technical Notes

In this section, we describe the final structure and steps taken to construct our final data product, which is available through ICPSR.

Final Structure of the ICPSR Data Product

This data product, ICPSR 38653, is structured as follows:

1. Dataset 0: Study-level documentation, including questionnaires, a codebook, and this Data Module,
2. Dataset 1: PLA Project Outcome Data,
3. Dataset 2: ABOS Survey Data, and
4. Dataset 3: Extract file of select ACS variables matched with FSCS Keys.

Each of these datasets is available in a standard suite of statistical packages (e.g., CSV, SPSS, R, and Stata) and underwent data processing by ICPSR data curators. Processing steps included renaming variables, adding value labels, recoding missing values, dropping unnecessary information, and removing direct identifiers. More detailed information about the data processing steps can be found within the ICPSR study codebook. These datasets can be linked/merged with other datasets (e.g., PLS) using the linkage variables and process described in Section 4 above.

Decision-making Process

Our project team convened an advisory board that included ten people to determine the best methods for curating these datasets. See *Appendix 4* for the names of participants. The advisory board included representation from public libraries, state libraries, research universities, library associations, and advocacy groups. We recruited board members in August 2022.

The project team and advisory board met monthly from October 2022 to July 2023. Our early meetings focused on the composition of the advisory board and how to ensure that all stakeholders were adequately represented in our discussions. Participants shared their perspectives, including previous efforts to aggregate library data. An interactive whiteboard was created for participants to brainstorm about public library questions and challenges. From those meetings, the project team devised hypothetical research questions to answer using our data. Those discussion-starter questions provided a way to assess which ACS variables were most useful when combining ACS data with existing library data. Examples of research questions include:

- What library programming appears to augment or support other underfunded government services (e.g., e-government, homeless services, tax preparation, social services, daycare)?
- What programs or services are highly rated or highly popular in majority-minority libraries?
- What sorts of communities (e.g., rural-urban populations) take the most advantage of different types of outreach (e.g., homebound programs, books-by-mail, early literacy, etc.)?

In subsequent meetings, the advisory board refined and revised research questions, identified missing variables to answer those questions, reviewed variables in the PLS, PLA, and ABOS datasets, and prioritized which demographic information to add from ACS. We chose to incorporate demographic variables from the ACS because granular information on the topic, as it relates to library service areas, is rarely available at the national level. Our advisory board felt that complementing ABOS and PLA data would be best served by drawing linkages between these datasets to U.S. Census data and the PLS.

Group discussions were instrumental in the project reaching a consensus about ACS variables to include in our dataset. There were 1,392 ACS variables for us to choose from, so discussions revolved around the information most important for researchers to consider when studying the outcomes resulting from library services. We could not include every ACS variable in our dataset. Still, we learned that the advisory board effectively envisioned ways to combine disparate data and resources to answer questions using already collected data. Group discussions also allowed the project team to understand usability and other needs-based data reuse considerations. These discussions provided guidelines to follow when designing instructional materials.

6. Conclusion and Lessons Learned

For this project, we created an advisory board to prioritize data enhancements. Priorities were set at regular meetings and through discussions. One advantage to this approach is that our data product and linkage methods will be useful to constituents beyond our project team. We strove for diversity in our advisory board, with representatives from various association types (libraries, professional associations, advocacy groups, universities) and different racial and ethnic backgrounds. Discussions were wide-ranging and included multiple perspectives. The

number of meetings meant that advisory board members developed a level of comfort with each other, allowing rich conversations.

Nonetheless, recruiting representatives directly from public libraries (particularly rural public ones) was difficult because of their workloads. Another concern is that the ACS variables selected were similar to those initially proposed by project leaders. Future projects may explore alternative ways to gather feedback, particularly from groups who are not represented.

Alternative strategies to create future enhanced library datasets like this one might include: 1) scheduling individual meetings with potential stakeholders to talk about their concerns, then creating a dataset based on the needs most frequently expressed by stakeholders; 2) sharing lists of potential data items with a larger group of public library stakeholders and asking for feedback via a ranking system; and 3) hosting focus groups of librarians and library directors at relevant professional conferences. Collecting this information to support the creation of entirely new data products from diffuse but existing resources remains a promising direction for the library community to pursue.

While the PLS collects robust data on sectoral inputs (e.g., “money”) and outputs (e.g., “circulation”), the need for better and more timely data has been an ongoing concern in public librarianship, as indicated by the IMLS emphasizing outcomes in the grant process during the late 1990s and early 2000s, PLA’s Performance Measurement Task Force in 2013 (leading to Project Outcome in 2016), PLA’s new annual topical survey model starting in 2020, and the ongoing Measures That Matter initiative which began in 2015. This project incorporates each data source and connects them with federal demographic data, enabling users to compare services across similar demographic groups.

One lesson learned from our experience is the value of partnerships. Public library data collection happens on many fronts and for many ends. Multiple library organizations are involved in current data collection endeavors. While our project incorporated data from four different organizations (IMLS, Census, PLA, and ABOS), we know there are other data collection efforts that we did not include. Much needs to be done regarding sharing news about organizational data collection, increasing awareness of extant data sets, and promoting response rates for voluntary surveys. Smaller associations may have more capacity to contact their members, while larger organizations may have more capacity for data management and project administration. When large and small associations and organizations work together, they can maximize their impact.

In addition to the potential of partnerships to increase data collection and dissemination capacity, partners may want to design their research collection efforts with an eye toward interoperability. For instance, one of our challenges was linking disparate data sets created by different organizations for different purposes. Future groups wishing to connect their data sets to our data must ensure that the unit of analysis (the library administrative entity versus the library outlet) is consistent between their data collection and the PLS. Data structure needs to be considered before data collection.

As documented above, some challenges exist in connecting data about public libraries to information about their service population demographics. While the PLS is making strides in providing additional contextual information, we anticipate this will be an ongoing challenge. Library service boundaries change and do not necessarily conform to census geographies. In the future, a project could explore the feasibility of leveraging census microdata by FSCS ID, but the cost considerations of doing so may be an issue.

An undiscussed issue is the potential to enhance the PLS and other library datasets using data from resources we did not leverage. We propose combining, linking, and enhancing data focusing on demographic information and data relating to library programming and service outcomes. However, other information related to libraries' services (i.e., non-demographic variables) may be worth emphasizing. As we continue developing this enhanced data product, we plan to consider many lessons from our advisory board, including supporting librarians in telling stories using data and making our final product easy for public library directors and non-technical users. We also acknowledge that this is a one-time effort. If the enhanced data product available through ICPSR proves valuable to the library and information science profession, a similar structure should be implemented to facilitate future efforts.

Appendix A. Survey Questions

Below is a preview of the standardized Project Outcome surveys. Use the [survey management tool](#) to create and customize your surveys. To see a list of additional questions you can add to the standardized surveys, visit [Additional Survey Questions](#).

Immediate Surveys

Project Outcome's Immediate Surveys are designed to be distributed immediately after a program or service is completed and aim to help libraries better understand the immediate impact a program or service has on patrons and their intention to change behavior as a result. Responses for the four quantitative questions are on a Likert scale from “strongly disagree” (1) to “strongly agree” (5).

The Immediate Surveys are ideal for assessing the immediate impact of a program or service, informing program or service changes, and providing a "snapshot" for advocacy and reporting.

Topic	Survey Questions
Civic/Community Engagement	<p>Please take a few minutes for this brief survey and let us know if, as a result of participating in this program...</p> <ol style="list-style-type: none"> 1. You are more aware of some issues in your community. 2. You feel more confident about becoming involved in your community. 3. You intend to become more engaged in your community. 4. You are more aware of resources and services provided by the library. 5. What did you like most about this program? 6. What could the library do to better assist you with your involvement in the community?
Digital Learning	<p>Please take a few minutes for this brief survey and let us know if, as a result of participating in this program...</p> <ol style="list-style-type: none"> 1. You feel more knowledgeable about using digital resources. 2. You feel more confident when using digital resources. 3. You intend to apply what you just learned.

	<ol style="list-style-type: none"> 4. You are more aware of the resources and services provided by the library. 5. What did you like most about this program? 6. What could the library do to improve your learning?
Early Childhood Literacy	<p>Please take a few minutes for this brief survey and let us know if, as a result of participating in this program...</p> <ol style="list-style-type: none"> 1. You learned something that you can share with your children. 2. You feel more confident to help your children learn. 3. You will spend more time interacting with your children (reading, singing, talking, writing, playing). 4. You are more aware of resources and services provided by the library. 5. What did you like most about this program? 6. What could the library do to improve your children's enjoyment of reading?
Economic Development	<p>Please take a few minutes for this brief survey and let us know if, as a result of participating in this program...</p> <ol style="list-style-type: none"> 1. You feel more knowledgeable about what it takes to establish a business. 2. You feel more confident about establishing a new business. 3. You intend to apply what you just learned. 4. You are more aware of the resources and services provided by the library. 5. What did you like most about this program? 6. What could the library do to better assist you in starting a new business?
Education/Lifelong Learning	<p>Please take a few minutes for this brief survey and let us know if, as a result of participating in this program...</p> <ol style="list-style-type: none"> 1. You learned something that is helpful. 2. You feel more confident about what you just learned. 3. You intend to apply what you just learned. 4. You are more aware of the resources and services provided by the library. 5. What did you like most about this program? 6. What could the library do to better assist you in learning more?
Health	<p>Please take a few minutes for this brief survey and let us know if, as a result of participating in this program...</p>

	<ol style="list-style-type: none"> 1. You feel more knowledgeable about the health topic presented. 2. You feel more confident about taking care of you or your family's health. 3. You intend to apply what you learned to adopt or maintain a healthier lifestyle. 4. You are more aware of the health-related resources and services provided by the library. 5. What did you like most about this program? 6. What could the library do to better assist you in learning more about being healthy?
Job Skills	<p>Please take a few minutes for this brief survey and let us know if, as a result of participating in this program...</p> <ol style="list-style-type: none"> 1. You feel more knowledgeable about the job search process. 2. You feel more confident about the job search process. 3. You will use what you learned today in the job search process. 4. You are more aware of the resources and services provided by the library. 5. What did you like most about this program? 6. What could the library do to better assist you in your job search?
Summer Reading (Teen/Child)	<p>Please take a few minutes for this brief survey and let us know if, as a result of participating in this program...</p> <ol style="list-style-type: none"> 1. You learned something new from what you read or experienced. 2. You enjoy reading more. 3. You read more often. 4. You want to use the library more often. 5. What did you like most about the program/service? 6. What could the library do to help you continue to learn more?
Summer Reading (Caregiver)	<p>Please take a few minutes for this brief survey and let us know if, as a result of participating in this program...</p> <ol style="list-style-type: none"> 1. My child maintained or increased their reading skills. 2. My child is a more confident reader. 3. My child reads more often. 4. My child uses the library more often. 5. What did your child like most about the program/service? 6. What could the library do to help your child continue to learn more?
Summer Reading (Adult)	<p>Please take a few minutes for this brief survey and let us know if, as a result of participating in this program...</p>

	<ol style="list-style-type: none"> 1. You learned something new from what you read or experienced. 2. You enjoy reading more. 3. You read more often. 4. You want to use the library more often. 5. What did you like most about the program/service? 6. What could the library do to help you continue to learn more?
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Follow-Up Surveys

Project Outcome's Follow-Up Surveys are designed to be used 4-8 weeks after a program or service is completed and aim to help libraries better understand if patrons have changed their behavior or continued to benefit as a result of a program or service. Responses for the quantitative questions follow a yes/no and “please explain” format (unless otherwise specified).

The Follow-Up Surveys are ideal for assessing the impact of a program or service after some period of time, informing internal planning, measuring progress toward strategic goals, and providing evidence for advocacy.

The Follow-Up Surveys take more staff time and planning than the Immediate Surveys. For planning support, visit [Following Up with Patrons](#).

Topic	Survey Questions
Civic/Community Engagement	<p>Please take a few minutes for this brief survey. As a result of participating in this program...</p> <ol style="list-style-type: none"> 1. I became more involved in the community. 2. I used what I learned to do something new or different in the community. 3. As a result of participating in this program/service, I checked out a book, attended another program, or used another library service or resource. 4. What did you like most about this program or service? 5. What could the library do to help you continue to learn more?
Digital Learning	<p>Please take a few minutes for this brief survey. As a result of participating in this program...</p> <ol style="list-style-type: none"> 1. I completed a task I could not do or could not do as well before. 2. I used the digital skill(s) I learned to do something new or different.

	<ol style="list-style-type: none"> 3. As a result of participating in this program/service, I checked out a book, attended another program, or used another library service or resource. 4. What did you like most about this program or service? 5. What could the library do to help you continue to learn more?
Early Childhood Literacy	<p>Please take a few minutes for this brief survey. As a result of participating in this program...</p> <ol style="list-style-type: none"> 1. I learned new ways to do the following with my child(ren): <ul style="list-style-type: none"> ○ Read ○ Sing ○ Play ○ Talk ○ Write ○ Other (fill in) 2. You feel more confident to help your children learn. 3. You will spend more time interacting with your children (reading, singing, talking, writing, playing). 4. You are more aware of resources and services provided by the library. 5. What did you like most about this program? 6. What could the library do to improve your children's enjoyment of reading?
Economic Development	<p>Please take a few minutes for this brief survey. As a result of participating in this program...</p> <ol style="list-style-type: none"> 1. I learned how to: <ul style="list-style-type: none"> ○ Start a new business ○ Improve an existing business ○ Expand an existing business ○ Other (fill in) 2. I used what I learned to do something new or different. 3. As a result of participating in this program/service, I checked out a book, attended another program, or used another library service or resource. 4. As a result of participating in this program/service, I accessed other community or business resources. 5. What did you like most about this program or service? 6. What could the library do to help you continue to learn more?
Education/Lifelong Learning	<p>Please take a few minutes for this brief survey. As a result of participating in this program...</p>

	<ol style="list-style-type: none"> 1. I used what I learned to complete a task or goal. <ul style="list-style-type: none"> ○ Yes: What task or goal did you complete? ○ No: What could the library do to help you complete your task or goal? 2. I used what I learned to do something new or different. 3. As a result of participating in this program/service, I checked out a book, attended another program, or used another library service or resource. 4. What did you like most about this program or service? 5. What could the library do to help you continue to learn more?
Health	<p>Please take a few minutes for this brief survey. As a result of participating in this program...</p> <ol style="list-style-type: none"> 1. I learned new ways to do the following for my or my family's health: <ul style="list-style-type: none"> ○ Talk to a healthcare provider ○ Eat better ○ Exercise ○ Find health information ○ Take care of mental well-being ○ Other (fill in) 2. I am better able to take care of my or my family's health. 3. I changed at least one health-related behavior. 4. As a result of participating in this program/service, I checked out a book, attended another program, or used another library service or resource. 5. What did you like most about this program or service? 6. What could the library do to help you continue to learn more about being healthy?
Job Skills	<p>Please take a few minutes for this brief survey. As a result of participating in this program...</p> <ol style="list-style-type: none"> 1. I did a job search. 2. I used what I learned to search for a job in a new or different way. 3. I applied for a job I likely would not have applied for. 4. I received an interview or offer for a new job in the area that I wanted. 5. What did you like most about this program or service? 6. What could the library do to help you continue to learn more?

Appendix 2. ACS Variables Added by Project Advisory Board

- DP02_0001E: Households by type, Total households
- DP02_0007E: Households by type, Total households, Male householder, no spouse/partner present, With children of the householder under 18 years
- DP02_0011E: Households by type, Total households, Female householder, no spouse/partner present, With children of the householder under 18 years
- DP02_0014E: Households by type, Total households, Households with one or more people under 18 years
- DP02_0015E: Households by type, Total households, Households with one or more people 65 years and over
- DP02_0016E: Households by type, Total households, Average household size
- DP02_0050E: Grandparents, Number of grandparents responsible for own grandchildren under 18 years
- DP02_0054E: School enrollment, Population 3 years and over enrolled in school, Nursery school, preschool
- DP02_0055E: School enrollment, Population 3 years and over enrolled in school, Kindergarten
- DP02_0056E: School enrollment, Population 3 years and over enrolled in school, Elementary school (grades 1-8)
- DP02_0057E: School enrollment, Population 3 years and over enrolled in school, High school (grades 9-12)
- DP02_0058E: School enrollment, Population 3 years and over enrolled in school, College or graduate school
- DP02_0069E: Veteran status, Civilian population 18 years and over

- DP02_0070E: Veteran status, Civilian population 18 years and over, Civilian veterans
- DP02_0071E: Disability status of the civilian noninstitutionalized population, Total civilian noninstitutionalized population
- DP02_0072E: Disability status of the civilian noninstitutionalized population, Total civilian noninstitutionalized population, With a disability
- DP02_0089E: Place of birth, Total population, Native
- DP02_0094E: Place of birth, Total population, Foreign born
- DP02_0113E: Language spoken at home, Population 5 years and over, English only
- DP02_0116E: Language spoken at home, Population 5 years and over, Spanish
- DP02_0118E: Language spoken at home, Population 5 years and over, Other Indo-European languages
- DP02_0120E: Language spoken at home, Population 5 years and over, Asian and Pacific Islander languages
- DP02_0122E: Language spoken at home, Population 5 years and over, Other languages
- DP03_0008E: Employment status, Civilian labor force
- DP03_0009E: Employment status, Civilian labor force, Unemployment Rate
- DP03_0088E: Income and benefits (in 2022 inflation-adjusted dollars), Per capita income (dollars)
- DP03_0096E: Health insurance coverage, Civilian noninstitutionalized population, With health insurance coverage
- DP03_0099E: Health insurance coverage, Civilian noninstitutionalized population, No health insurance coverage
- DP04_0045E: Housing tenure, Occupied housing units

- DP04_0046E: Housing tenure, Occupied housing units, Owner-occupied
- DP04_0047E: Housing tenure, Occupied housing units, Renter-occupied
- DP05_0066E: Race alone or in combination with one or more other races, Total population, White

Appendix 3. ACS Variables Collected by PLA

- DP02_0059E: Educational attainment, Population 25 years and over
- DP02_0068E: Educational attainment, Population 25 years and over, Bachelor's degree or higher
- DP02_0112E: Language spoken at home, Population 5 years and over
- DP02_0114E: Language spoken at home, Population 5 years and over, Language other than English
- DP02_0152E: Computers and Internet use, Total households
- DP02_0153E: Computers and Internet use, Total households, With a computer
- DP02_0154E: Computers and Internet use, Total households, With a broadband Internet subscription
- DP05_0001E: Sex and age, Total population
- DP05_0005E: Sex and age, Total population, Under 5 years
- DP05_0006E: Sex and age, Total population, 5 to 9 years
- DP05_0007E: Sex and age, Total population, 10 to 14 years
- DP05_0008E: Sex and age, Total population, 15 to 19 years
- DP05_0009E: Sex and age, Total population, 20 to 24 years
- DP05_0010E: Sex and age, Total population, 25 to 34 years
- DP05_0011E: Sex and age, Total population, 35 to 44 years
- DP05_0012E: Sex and age, Total population, 45 to 54 years
- DP05_0013E: Sex and age, Total population, 55 to 59 years
- DP05_0014E: Sex and age, Total population, 60 to 64 years
- DP05_0024E: Sex and age, Total population, 65 years and over
- DP05_0033E: Race, Total population

- DP05_0067E: Race alone or in combination with one or more other races, Total population, Black or African American
- DP05_0068E: Race alone or in combination with one or more other races, Total population, American Indian and Alaska Native
- DP05_0069E: Race alone or in combination with one or more other races, Total population, Asian
- DP05_0070E: Race alone or in combination with one or more other races, Total population, Native Hawaiian and Other Pacific Islander
- DP05_0071E: Race alone or in combination with one or more other races, Total population, Some Other Race
- DP05_0072E: Hispanic or Latino and race, Total population
- DP05_0073E: Hispanic or Latino and race, Total population, Hispanic or Latino (of any race)
- DP05_0079E: Hispanic or Latino and race, Total population, Not Hispanic or Latino, White alone

Appendix 4. Participants

Project Team

- A.J. Million, ICPSR, University of Michigan
- Denice Adkins, School of Information Science & Learning Technologies, University of Missouri
- Sara Goek, Public Library Association
- Christina Reyes, Association of Bookmobile and Outreach Services
- Cathy Zimmerman, Association of Bookmobile and Outreach Services
- Alex Toma, ICPSR, University of Michigan

Advisory Board

- John Chrastka, EveryLibrary (Library Advocacy)
- Shelli Golson-Mickens, Innovation Network (Public Library, Researcher)
- Christine Himes, Illinois Institute of Technology (Researcher)
- Linda Hofschire, Library Research Service, Colorado State Library (Researcher)
- Katina Jones, Public Library Association (Library Association, Researcher)
- Lesley Langa, OCLC (Researcher)
- Kate McDowell, University of Illinois, Urbana-Champaign (Researcher)
- Marisa Pelczar, IMLS (Researcher)
- Gustavo Rotondaro (Statistician)
- Jerianne Thompson, Tualatin Public Library (Public Library)