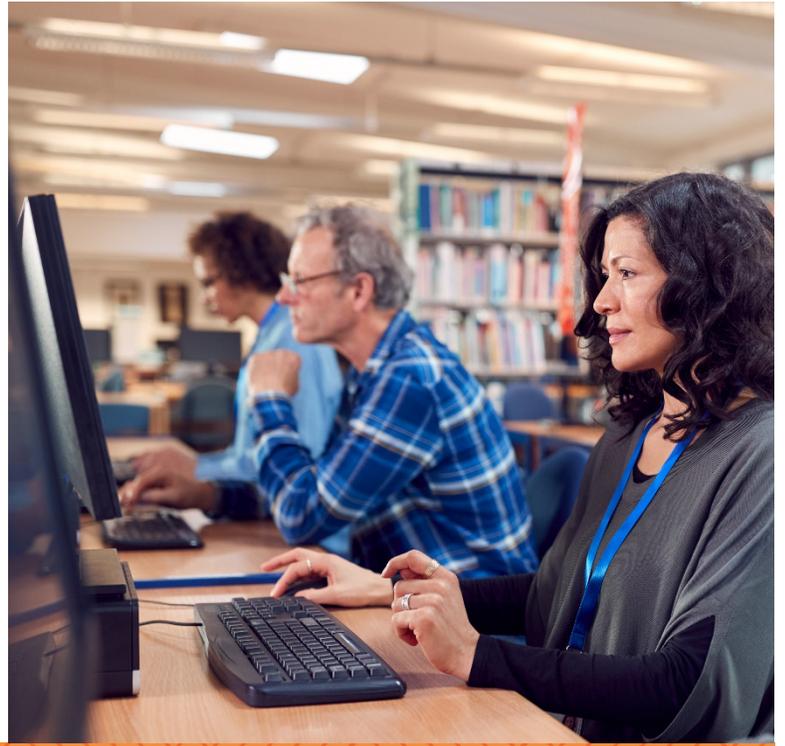


Methods Report

*Results from the 2022
MELSA Technology and
Digital Services Survey*



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Introduction and methods

In spring 2022, the Metropolitan Library Service Agency (MELSA) contracted with Wilder Research to conduct a survey of adults in the Twin Cities seven-county metropolitan area to learn more about technology and digital service needs and availability at local public libraries. The eight member library systems that are part of MELSA advised Wilder Research on the development of the survey instrument and data collection methods. A similar survey was conducted in 2015, and that version of the survey was significantly modified for the 2022 survey.

Survey instrument

Wilder Research designed the survey instrument with feedback from representatives from MELSA member libraries. The survey instrument was four pages in length and included 17 questions. A paper and web version of the survey were provided to participants. The web version was programmed into Voxco's Acuity, a web-based survey platform. Participants were mailed a paper version of the survey and were also provided the option to take the survey in English, Spanish, Hmong, or Somali on the web. See the Appendix for the complete survey instrument in English.

Sample

Address-based sampling was used to ensure all households in the seven-county Twin Cities metropolitan area were included in the sampling frame regardless of their phone status. The sample was purchased from Marketing Systems Group. Figure 1 shows the number of sampled addresses, number of completed surveys, response rate, and margin of error (both nominal and weighted) for each of the eight regions.

1. Survey sample and response rate

Area	Population of area	Number of addresses sampled	Number of completed surveys	Response rate ²	Nominal margin of error	Margin of error with weighting
Anoka County	363,887	2,434	354	15%	5.2%	10.7%
Carver County	106,922	1,800	343	19%	5.3%	10.6%
Dakota County	439,882	2,834	458	16%	4.6%	8.6%
Hennepin County	1,281,565	6,045	857	14%	3.3%	5.3%
Ramsey County ¹	240,825	1,800	342	19%	5.3%	9.5%
City of Saint Paul	311,527	2,159	306	14%	5.6%	11.2%
Scott County	150,928	1,800	261	15%	6.1%	11.2%
Washington County	267,568	1,928	309	16%	5.6%	10.7%
Total	3,163,104	20,800	3,230	16%	1.7%	3.2%

¹Excluding the City of Saint Paul. ²Calculated based on American Association for Public Opinion Research response rate.

Participant demographics

Figure 2 describes unweighted demographic data for all survey respondents and provides the weighted percentage as a comparison.

2. Demographics of MELSA survey respondents

Characteristics	N	Percent	Weighted percentage
All respondents	3,230	100%	100%
Library user status			
Users	2,114	66%	62%
Non-users	1,096	34%	38%
Gender			
Man/male	940	30%	46%
Women/female	2,143	69%	53%
Non-binary	16	1%	1%
Age			
18-34	327	10%	28%
35-44	477	15%	18%
45-54	430	14%	17%
55-64	635	20%	18%
65+	1,292	41%	19%
Race/ethnicity			
All people of color	292	10%	17%
Asian American or Asian alone	87	3%	5%
Black, African American, or African alone	75	2%	5%
Latino/a or Hispanic alone	40	1%	3%
Multiple racial/ethnic identities	57	2%	2%
White (non-Hispanic) alone	2,727	90%	83%
Highest level of education			
High school diploma/GED or less	485	16%	45%
Two-year degree (associate or vocational-technical)	523	17%	10%
Bachelor's degree or higher	2,075	67%	45%
Household type			
Single adult, no children	879	28%	29%
2+ adults, no children	1,473	47%	39%
Single adult, 1+ children	90	3%	5%
2+ adults, 1+ children	674	22%	27%

Note. Totals may not equal 100% due to rounding. The total Ns in each category do not total 3,230 due to missing responses.

2. Demographics of MELSA survey respondents (continued)

Characteristics	N	Percent	Weighted percentage
Household poverty status^a			
Less than 200% of Federal Poverty Line	256	11%	17%
200% of the Federal Poverty Line or above	2,163	89%	83%
Employment status			
Employed (full time or part time)	1,697	54%	67%
Unemployed	118	4%	7%
Unable to work, student, or retired	1,345	43%	26%

Note. Totals may not equal 100% due to rounding. The total Ns in each category do not total 3,230 due to missing responses.

^a Poverty levels have been approximated based on number of household occupants and the following income categories, which were constructed to align closely with the 200% of federal poverty line at different household sizes: less than \$26,000; \$26,000 to under \$35,000; \$35,000 to under \$44,000; \$44,000 to under \$53,000; \$53,000 to under \$62,000; \$62,000 to under \$71,000; \$71,000 to under \$80,000; \$80,000 to under \$90,000; \$90,000 to under \$100,000; \$100,000 and over. In 2021, 200% of the federal poverty line is \$53,000 for a family of four.

Data collection

Wilder Research used a “modified Dillman” method of survey mailing as follows: An initial survey packet that included a cover letter, the survey instrument, and a postage-paid return envelope was mailed on April 14, 2022, to 20,800 sampled households. No incentive was offered to respondents.

Approximately one week after the first survey packets were mailed (April 14), a postcard was sent to all sampled households, reminding those who had not yet returned a survey to do so, and thanking those who had already responded.

On May 1, two weeks after the reminder postcards were mailed, another full survey packet was sent to all households that still had not returned the survey. The remaining completed surveys were received over the next 2-3 weeks, with the final date for the receipt of surveys being June 1, 2022. The targeted number of completed surveys was 3,120, for a response rate of ~15%. The actual number of completed surveys was 3,230 surveys for a final response rate of 16%.

Adults were randomly selected from within the sampled households using the “most recently birthday” method (asking the adult who most recently had a birthday to fill out the one survey for that household) to ensure gender and age balance in survey respondents.

Data cleaning

All completed paper surveys were scanned by Adapt Inc., then proofed and coded by trained Wilder staff. Paper survey data were entered into data analysis software by Wilder staff. Data from the completed paper surveys was then combined with data collected via web survey to create the full dataset. Wilder's research analyst used SPSS to create an analyzable data file and performed quality tests, including, but not limited to, ensuring proper skip patterns were followed throughout the survey, ensuring only one completed survey was included per household, and assessing the logical consistency of responses within surveys.

Weighting and analysis

Survey data are weighted to produce reliable estimates of population parameters. Weighting also compensates for practical limitations of a sample survey, such as differences in the likelihood of various populations responding to the survey and not reaching certain populations for a variety of reasons (e.g., due to housing status). By taking advantage of demographic information about the target population, weighting can reduce the variability of survey estimates.

The data were weighted against the U.S. Census Bureau's 2020 Population Estimates. Given the sample size and the demographic composition of the adult population of the Twin Cities seven-county metropolitan area, weights were constructed using an iterative proportional fitting routine, also known as "raking." The variables used include geography, education level, age, and gender. Survey data for these demographic questions include missing values. All such missing values were first imputed using a hot-deck procedure before the construction of the survey weights. The weights were then put through a series of quality control checks to detect extreme outliers and to prevent any computational or procedural errors.

Limitations

A smaller proportion of survey respondents are young (age 18-34), male, and with a lower education level (i.e., high school diploma/GED or less) compared with the actual population. Weighting improves this, but does not completely remedy the issue. Smaller regions, such as Anoka County, are affected by these proportional issues to a greater degree than larger regions.

Talking points about the study methods

To assist the representatives from MELSA and the eight member libraries in communicating with their stakeholders about this study, the following talking points can be used to help explain the study methods:

- This is a mailed survey with a web option. Each sampled household received up to three mailings. No incentive was offered.
- The survey was sent to a random sample of households in the Twin Cities seven-county metropolitan area. All households had an equal chance of being sampled.
- The response rate for this survey was 16% and is what is expected for mailed surveys with a web option without an incentive offered for participation.
- The survey data are adjusted with post-stratification and design weighting, which are statistical techniques commonly used to correct for nonresponse bias (whereby certain types of people are more or less likely to respond to surveys).
- These methods ultimately produced a sample that is statistically representative of the adult population for each region in the eight member regional library system.
- It is important to be aware of the limitations of the data. A smaller proportion of survey respondents are young (age 18-34), male, and with a lower education level (i.e., high school diploma/GED or less) compared with the actual population. While weighting results in a sample representative of the adult population, it does not completely remedy the issue. Smaller regions, such as Anoka County are affected by these proportional issues to a greater degree than larger regions.

Be cautious with data interpretation as some variables may be confounding. For example, when looking at differences between White (non-Hispanic) respondents and all respondents of color, keep in mind that a higher percentage of survey respondents of color reported a poverty status of below 200% of the Federal Poverty Line. Similarly, respondents living in households with children versus households without children are younger. Differences between these demographic groups could be attributed to differences in the poverty status distribution of respondents rather than race or due to age rather than household type, for instance.

Appendix

Survey instrument

Library Technology and Digital Services Survey

1. In the past 12 months, how often have you used your local library (either in-person or online)?
- Every day or most days
 - At least once a week
 - About 1-3 times a month
 - Less than once a month
 - I haven't used my local library in the past 12 months

2. What type of internet connection (WiFi) do you have at home?

I have an internet connection and it meets my needs. ➔ **GO TO QUESTION 3**

- I have an internet connection, but it is slow or unreliable. ➔
- None, I do not have an internet connection at home. ➔
- Unsure ➔

2a. How do you access the internet? **(SELECT ALL THAT APPLY)**

- None, I do not access the internet
- From work or school
- From the library
- From a senior or community center
- From a coffee shop or restaurant
- From someone else's home (friend or relative)
- From my cell phone
- Some other way, please specify:

3. How satisfied are you with the following technology and digital services provided by your local library?

	Very satisfied	Satisfied	Dissatisfied	Very Dissatisfied	Not applicable: Have not used
a. Computers	<input type="radio"/>				
b. Internet access (WiFi)	<input type="radio"/>				
c. Printers	<input type="radio"/>				
d. eCollection (eBooks, eAudiobooks, eMagazines)	<input type="radio"/>				
e. Online research tools (library databases)	<input type="radio"/>				
f. Technology support from staff	<input type="radio"/>				

4. Some libraries offer these additional technology and digital services. Which of these services would you use if they were available at the library? **(SELECT ALL THAT APPLY).**

- Tablets
- WiFi Hotspots
- Scanners
- Fax machine
- Docking station for connecting a laptop to other hardware (monitor, keyboard, or power supply)
- Charging ports
- Video conference rooms
- Don't know/not sure
- Other, please specify:

5. In the past 12 months, did you go online (use the internet) at the library or somewhere else, to do any of the following? **(SELECT ALL THAT APPLY)**

	Yes, at the library	Yes, from somewhere else	Did not do this online
a. Make a reservation for a public service (class, event, campground, picnic pavilion, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Access government information and services (Register for or check status on: public housing, health insurance, Medicare, unemployment, passport, Social Security. Search for office hours, locations, election information.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Make a payment for taxes or fees (property tax, license fees/renewals etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Do homework, take a class, or complete other education-related tasks (access the parent portal, research college or vocational school options, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Search or apply for a job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Work or conduct work-related business (freelance, contract work, full-time/part-time job, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Other: shop, bank, find health information, look things up, entertainment, connect with friends and family, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. In the last 6 months, how often have you used the library for remote work or distance learning?

- Every day or most days
- At least once a week
- About 1-3 times a month
- Less than once a month
- I haven't used the library for remote work or distance learning in the last 6 months.

7. What support would help you work remotely or participate in distance learning? **(SELECT ALL THAT APPLY)**

- Nothing, I do not work remotely or participate in distance learning.
- Nothing, all my needs for remote work and distance learning are met.
- High-speed internet connection
- Available space with audio/video conferencing software
- Private work space
- Free or low-cost printing, faxing, and scanning
- Technical support
- Other, please specify:

8. Do you need help with any of the following computer skills or activities?

	Yes	Maybe	No
a. Using a computer (desktop, laptop), smartphone, or tablet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Using email	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Staying safe and protecting privacy online	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Downloading eBooks, eAudiobooks, eMagazines or music	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Using video conferencing platforms (Zoom, Google Hangouts, Skype, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Printing, scanning, or faxing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Searching and applying for jobs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Starting or growing a business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Finding health or wellness information and resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Finding legal information and resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Accessing government services (applying for a government program, paying taxes or government fees, contacting government officials)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. Creating multimedia (3D printing, editing photos, video, or audio files, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. Conducting research as part of work or schoolwork	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n. Other, please specify: <div style="border: 1px solid black; height: 20px; width: 500px; margin-top: 5px;"></div>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Please add any additional comments or feedback you have about library technology or digital services.

Lastly, we have a few questions about you and your household. We want to be sure that we include all kinds of people and households in this study. This information will be used to ensure that the survey data represents the population. Remember, your responses are confidential.

10. What is your home zip code?

11. What is your gender?

Man/male

Non-binary

Woman/female

Prefer to self-describe:

Prefer not to answer

12. How do you identify your race/ethnicity? **(SELECT ALL THAT APPLY)**

- American Indian, Native American, or Alaska Native
- Asian American or Asian
- Black, African American, or African
- Latino/a or Hispanic
- White or Caucasian
- Another race/ethnicity not on this list
- Prefer not to answer

13. What is the highest level of education you have completed?

- Less than high school
- High school graduate or GED
- Two-year degree (associate or vocational-technical)
- Four-year degree (bachelor's degree)
- Postgraduate or professional degree
- Prefer not to answer

14. Which of the following best describes your current employment status? **(SELECT ALL THAT APPLY)**

- Employed full time
- Employed part time
- Unemployed
- Unable to work
- Student
- Retired

15. What is your age?

- 18-24 years
- 25-34 years
- 35-44 years
- 45-54 years
- 55-64 years
- 65 years or older

16. INCLUDING YOURSELF, how many adults and children live in your household?

Number of adults age 18 or older

Number of children under age 18

17. What was your total (gross, taxable) household income in 2021 from all earners and all sources?

- \$0-25,999
- \$26,000-34,999
- \$35,000-43,999
- \$44,000-52,999
- \$53,000-61,999
- \$62,000-70,999
- \$71,000-79,999
- \$80,000-89,999
- \$90,000-99,999
- \$100,000 and over
- Prefer not to answer

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