UNIVERSITY OF MARYLAND
COLLEGE OF INFORMATION STUDIES

Information and technology for good

UNIVERSITY OF MARYLAND EXTENSION

Executive Summary

10/17/2022

Digital Literacy in Maryland:

Programming Landscape, and Barriers and Opportunities to Program Implementation

Alison Harding, Jane Behre, Mega Subramaniam, Jinhee Kim, Purva Mundlye
University of Maryland

Correspondence can be addressed to the authors at techextension@umd.edu

Purpose of Report

This report summarizes the preliminary analysis of the Stakeholder Needs Assessment Survey data that was conducted by the University of Maryland researchers from April through July of 2022. A total of 196 stakeholders at a local, state, and national level responded to the survey. For the purposes of this study, a stakeholder was defined broadly as anyone working in the field of digital literacy and inclusion in the state of Maryland. In the recruitment email sent to potential respondents via email, the term “digital literacy and inclusion” was presented as the following: *“For the purposes of this project, we are casting a very wide net regarding what is considered digital literacy and inclusion work. This work can take the form of formal and informal classes and workshops on digital skills, one-on-one assistance in signing up for government resources that are now fully housed online, providing access to devices or broadband, or any of the multitude of other ways in which people are being assisted in navigating the digital world.”*

This report begins to address the following study goals:

- Map the landscape of available digital literacy programming in the state of Maryland; and
- Determine the digital literacy needs that Marylanders have and the perceived barriers that contribute to why they are not being served.

This study confirms that there is a wide range of programming being implemented across the state of Maryland directed at both specific demographics/user groups and at the residents of Maryland more generally.

Specific user groups brought up most frequently in the stakeholder survey include youth, seniors, and adults in need of job training. Community computer labs, device lending,

one-on-one basic computer skills instruction were commonly mentioned programming and can be found offered by stakeholders in communities across the state. Of the 59 respondents who answered the question about offerings in multiple languages, 22 respondents stated that they did offer courses in other languages. The languages mentioned, in order of frequency from greatest to least, were English, Spanish, Chinese, Mandarin, French, Korean, Arabic, Pashto, Amharic, and ASL (American Sign Language).

Methodology

The data reported in this executive summary was collected from a survey distributed via Qualtrics. The survey was directly emailed to a database of stakeholders developed by the research team through publicly available information collected from websites of state and local governments, public libraries, non-profit organizations, community colleges, and for-profit corporations. Additional respondents were added to the study through snowball sampling, where the research team requested that respondents further the reach of the survey by passing it along within their own professional networks. The survey contained both open ended and closed ended questions. The survey, which received IRB approval from the University of Maryland, was distributed via Qualtrics beginning April 26, 2022 and closed on July 25, 2022.

Responses to closed ended questions were analyzed using descriptive statistics. Responses to open ended questions were analyzed using a thematic analysis approach. Qualitative coding was undertaken by three members of the research team using the software Dedoose. A subset of the surveys were coded by all three researchers and codes were discussed until consensus was reached. A second subset of surveys were then coded by all three researchers to confirm consensus. The remaining surveys were split among the researchers to code individually, and any questions were raised in weekly meetings to confirm continued agreement in code usage.

Existing and Potential Programming/Services

This section highlights the findings related to existing and aspirational digital literacy programs/services in the state of Maryland.

- What is the landscape of programming and services?
    - Content and modality of digital literacy instruction
        - Respondents mentioned four major types of programming content: Hardware, Software, Internet, Safety
        - When discussing more formal class-style settings (e.g. a course taught to a group by a librarian, as opposed to a self-guided online course from a partner such as LinkedIn Learning), most often respondents refer to a general “basic computer skills” course

        - One-on-one instruction and technology help hours are commonly mentioned in relation to the extreme low end of the digital literacy continuum (how to use your device, how to sign up for an email address, etc.)
        - More often, these classes or instruction points are addressed to a specific population (e.g. seniors, K-12, students working towards GEDs, etc.)
        - Respondents mentioned instruction in the following modalities: Online asynchronous, in-person registered, in-person drop in
    - Partnerships with existing organizations that have/offer digital literacy programs/resources, such as:
        - NorthStar: courses on computer and technology
        - LinkedIn Learning: courses on various career-related topics
        - Various higher education institutions in Maryland: programming for local residents focused on a wide range of skill building (particularly in workforce development)
        - Senior Planet: programming for seniors, generally in retirement/assisted living/etc.
        - WorkSource: programming related to enhancing potential worker's job skills
    - Device lending/gifting
        - Frequently in the form of a hotspot or a bundled hotspot and Chromebook (or similar)
        - This is independent of the counties that have Chromebook lending in the K-12 school systems
        - Organizations implementing device gifting programs are represented by both non-profit organizations and county government agencies, though they are rare
    - Publicly accessible computer labs
        - Limited mostly to public library systems, though it is a goal of several non-profits to offer computer labs independent of the library system
- What are outlier/innovative programs?
    - Mobile Programming

Mobile programming has a wide range of definitions. In this report, we define mobile programming as a vehicle designed, equipped, and operated to extend and facilitate access to those people who do not have reasonable access to services including devices, wifi access, and educational programming.[1]

- Only four respondents mentioned currently existing mobile programming - all were offered by libraries and are valued in both urban and rural settings
- Mobile programming vehicles are described as providing free public wifi, books, "*STEM or mobile maker van*", etc.

- Device Lending
  - An innovative approach to device lending was presented by a respondent: *"a loaner laptop program that allows residents access to either a one-time, 30-day loan or earn ownership of the device through volunteerism -- all at no cost"*

- What are the aspirational programs and services?
  - Programs to help people pay for internet
    - Respondents brought up the need for more work towards programs aimed at assisting Marylanders with paying for the internet. One respondent stated: *"Further collaboration of government, business, nonprofit, and community organizations to help income-constrained households participate in the Affordable Connectivity Program and Maryland Emergency Broadband Benefit Subsidy Program."*
  - Target populations
    - While many respondents mentioned programming for specific populations, marginalized populations, unstably housed populations, rural/isolated seniors, and immigrants were most often addressed when respondents were asked about which populations that they would like to offer programs for
    - Programs directed towards non-native English speakers were brought up when respondents were asked about programming they would like to see happen in their community

[1] Definition adapted from work by Payne and Kenneally (2000).

Underserved Communities

The following figures show the responses to questions regarding communities that are not utilizing digital literacy services and are marginalized by the digital divide. Respondents provided additional information on barriers to participation beyond the pre populated choices in the survey.

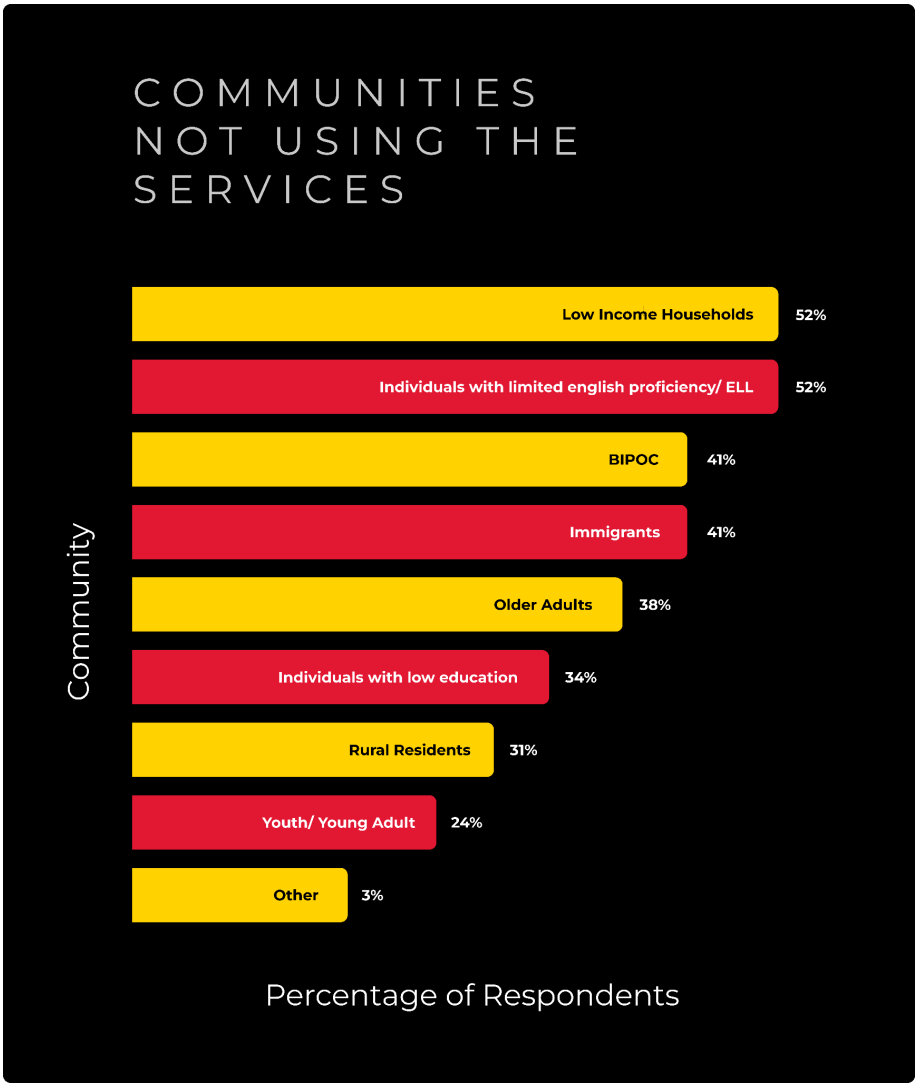

Figure 1: Responses to the question "Which communities are not utilizing the services that you offer?"[2][3]

[2] In Figure 1, for clarity of data representation, the following categories from the original survey were combined: Youth and Young Adult, Individuals with limited English proficiency and English Language Learners, and Low income household and Low income residents of Baltimore City.
[3] Respondents could check all answers that applied.

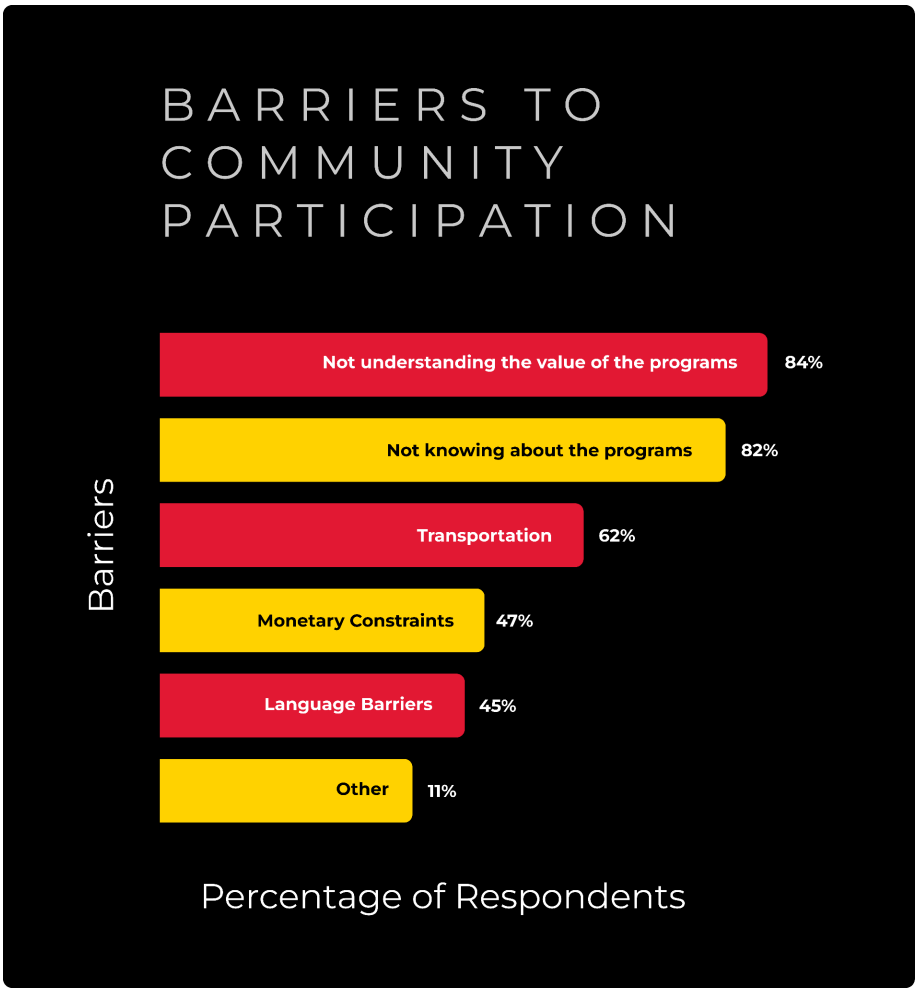

Figure 2: Responses to the question "What are the barriers to participation in current or future programs that your community members might face?"[4][5]

Community members are seen as being unaware of the value of the digital literacy programming being offered. This needs to be further explored through additional research and user studies in order to understand what best practices in community outreach can be implemented by organizations. This barrier also opens up the question if and whether the current offerings of digital literacy programs are meeting the needs of communities and potentially invalidates the notion of building services and programs *for* communities, instead of of building services and programs *with* communities. The third most common barrier mentioned was transportation issues, a challenge that appears to be statewide (urban, suburban, and rural). Perceived barriers that were suggested via the "Other" choice included: time away from work/school/childcare and a lack of skills/confidence to sign up or participate.

[4] Note that the answer referred to in this figure as "Transportation" was referred to as "Travel Problems" in the original survey, terminology has been changed for clarity.
[5] Respondents could check all answers that applied.

Opportunities to Implementation

This section highlights the findings related to the opportunities to scale, continue, and expand digital literacy services and goals, which primarily brought attention to the importance of partnerships between organizations.

- Partnerships: Type of Organizations
    - Government and educational organizations were some of the most salient partners found in the data, including partnerships with county governments, public school districts, and libraries.
    - Local non-profits were another popular area for partnerships. Partnership organizations include (but are not limited to): Senior Planet Montgomery, Baltimore Digital Equity Coalition, and the Garrett County Community Action Committee.
    - Other types of partnerships discussed in the data include corporate partnerships (e.g. Comcast), partnerships with multi state non-profits (e.g. Internet Access Support Program), and partnerships with statewide non-profits.
- Partnerships: Function of Organizations
    - The data suggests that one of the most common types of partnerships amongst our participants are partnerships with organizations whose function is primarily dedicated towards the needs of seniors. Examples of these organizations include Senior Planet from AARP and Cyber Senior classes from the University of Maryland Extension 4-H.
    - Another commonly cited function of these partner organizations was offering classes with a facilitator or a teacher (versus a self-paced course). Examples of this type of organization include public libraries and Senior Planet. That said, there were other partner organizations that offered self-paced courses, such as NorthStar Digital Literacy and LinkedIn Learning.
    - Paying for Internet and/or devices was another key function of many of these organizations. Examples of this type of organization include MoCoNet, Montgomery Connects, the Project UP Initiative, and Maryland Affordable Connectivity Programs.
    - Other functions of partner organizations included providing grant and funding opportunities (e.g. France-Merrick Foundation) and organizations that help to coordinate partnerships with other organizations (e.g. Western Maryland IT Center of Excellence)

Challenges to Implementation

This section highlights the ways in which respondents felt their work faced barriers to being implemented or expanded upon.

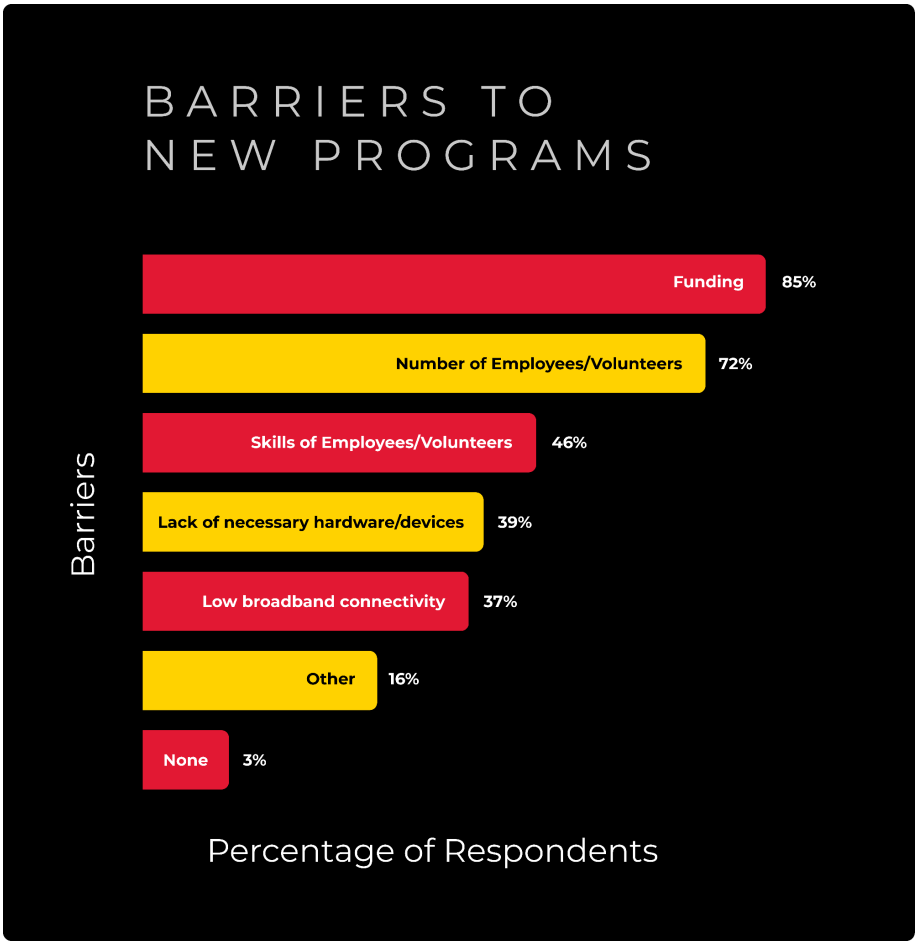

Figure 3: Responses to the question "Are there barriers that are preventing your organization from presenting new programs?"[6]

[6] Respondents could check all answers that applied.

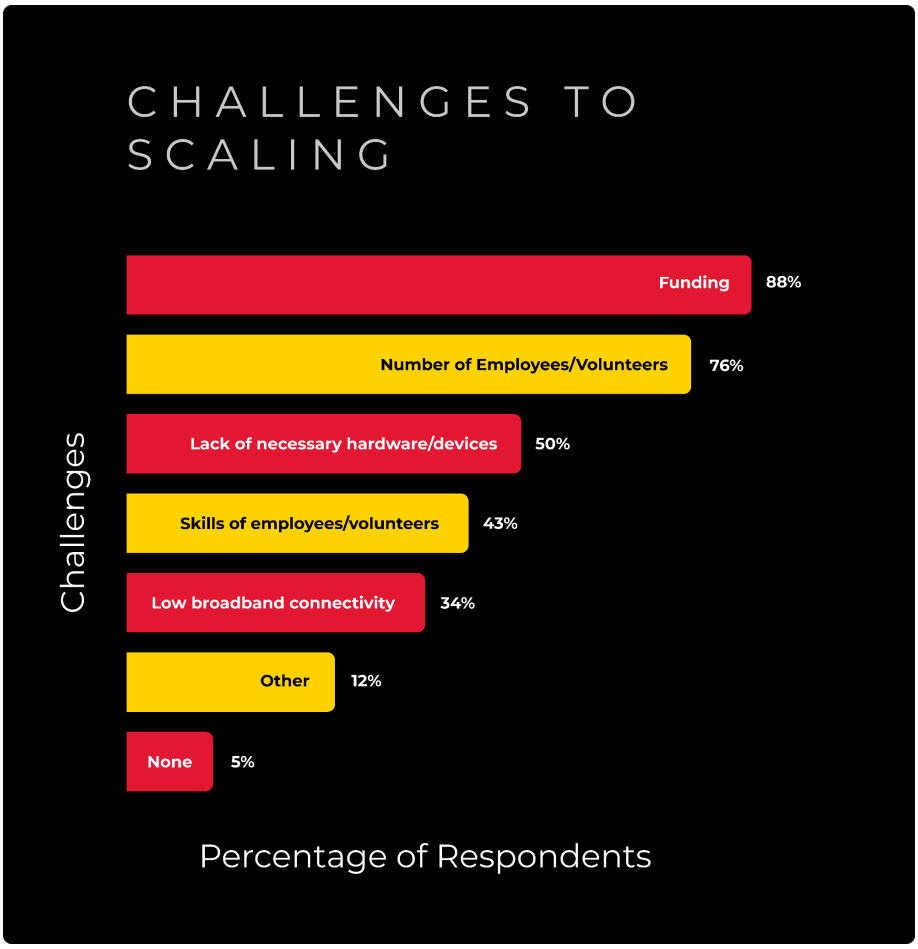

Figure 4: Responses to the question "If you were to scale up the implementation of these programs, what challenges would your organization face?"[7]

As seen in these visualizations above, the major barrier to both scalability and implementation of new programming is funding. Number of skilled employees and the lack of hardware/devices, both of which are commonly chosen responses, can be viewed as an extension of the funding issue. Respondents most often referenced governmental buy-in and process challenges when they chose the option 'Other.' Other answers included a lack of time, no existing partner organization, and the inability to sustain programs after funding ends.

Conclusion

As shown in this summary, stakeholders in Maryland are already working on bringing digital literacy programming to residents of Maryland. These programs are directed at both specific demographics/user groups and at the residents of Maryland more generally. Despite all of the work being done across the state, there are still challenges and barriers to be overcome to reach more Marylanders and specific populations that are currently underserved. The results

[7] Respondents could check all answers that applied.

support the research team's prior understanding of the topic and populations and is in line with current academic research results (See: Horrigan 2021; Sallet 2020).

UMD's research team's next steps include determining how best to overcome barriers to participation in digital literacy programming, specifically with underserved populations that were identified through this stakeholder needs assessments. We hope to explore the possibility of developing a website that serves as a repository of statewide digital literacy programs, curriculum, and services, opening a Digital Navigators[8] hotline, and other initiatives that will ensure that all Marylanders will have access to the digital literacy skills that they need.

Acknowledgements

Funding for this project was provided by the State of Maryland with the American Rescue Plan (ARP) - State and Local Fiscal Recovery Fund (SLFRF). Additional thanks to Kelsy Hernandez, Mark DeMorra, Imani Thibou, and Jared Chi-Lok Lai for their contributions to the implementation of the stakeholder needs assessment and the formatting of this report.

Suggested citation:
Harding, A., Behre, J., Subramaniam, M., Kim, J., and Mundlye, P. (2022). *Digital literacy in Maryland: Programming landscape, and barriers and opportunities to program implementation.* College Park, MD: University of Maryland.

[8] See the National Digital Inclusion Alliance web page for further information regarding the Digital Navigator model.

References cited:

Horrigan, John B. 2021. “Disconnected in Maryland.” The Abell Report. The Abell Foundation. https://abell.org/publications/disconnected-maryland.

Payne, Christine, and Adele Kenneally. 2000. “Mobile Library Services: Australian Trends.” *Australasian Public Libraries and Information Services* 13 (2): 63–71.

Sallet, Jonathan. 2020. “Broadband for America Now.” Benton Institute for Broadband & Society. https://www.benton.org/publications/broadband-america-now.