



Digital Inclusion **Outcomes-Based Evaluation**

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Digital Inclusion Outcomes-Based Evaluation

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Executive Summary

This report describes the challenges facing community-based organizations and other key stakeholders in using outcomes-based evaluation to measure the success of their digital inclusion programs and offers recommendations toward addressing these shared barriers. The authors of this report held three half-day workshops with practitioners, funders, policymakers, and other key digital inclusion stakeholders in three U.S. cities to understand their outcomes-based evaluation challenges and listen to their recommendations. The workshops identified the core needs of the digital inclusion field:

- 1. Shared vocabulary.** One of the most pressing issues that emerged from the workshops is the lack of shared vocabulary across the field to define “digital inclusion” and “outcomes-based evaluation.” While most workshop participants articulated what these terms mean to their own work, it was more difficult for them to say how these terms are being implemented across the field.
- 2. Outcomes-based evaluation tools & implementation support.** Workshop participants expressed their concern with not knowing where to find and how to use the tools needed to conduct outcomes-based evaluation of digital inclusion programs. Many participants also indicated that staff within organizations would need training to take advantage of the most appropriate, and culturally-relevant, outcomes-based evaluation tools in ways that reflect the specific needs and aspirations of their communities.
- 3. Need for common indicators.** Participants explained they lacked access to common indicators, the measures programs select as markers for their success. Participants in our workshops often expressed concerns about what and how to measure these changes in ways that were also meaningful to the communities they serve.
- 4. Time and resources.** While most participants understood the value of outcomes-based evaluation, particularly how it could help them show the impact of their digital inclusion initiatives, few could dedicate the time and resources to support this work.

In addition to describing these constraints in further detail, this report includes recommendations provided by the workshop participants to address these outcomes-based evaluation barriers.

This report reviews existing outcomes-based evaluation tools for digital inclusion stakeholders and offers additional frameworks that could be used by practitioners and funders. To significantly increase the impact of digital inclusion programs, the field also must dedicate resources to professional development in outcomes-based evaluation and seek greater financial support for implementation across the field. This report offers definitions, digital inclusion activities, and a logic model which are intended to both recognize existing frameworks and contribute additional materials that can be useful to a diverse group of stakeholders.

Introduction

What is Outcomes-Based Evaluation?

In recent years, government agencies, private foundations, and community-based organizations have increasingly sought to understand how programs that promote digital inclusion lead to social and economic outcomes for individuals, programs, and communities. This push to measure outcomes has been driven in part by a larger trend to ensure that dollars are being used efficiently to improve lives rather than simply to deliver services.

According to the U.S. Institute of Museum and Library Services (IMLS),¹ outcomes-based evaluation is the measurement of results: achievements or changes in skill, knowledge, attitude, behavior, condition, or life status for program participants. Outcomes-based evaluation 1) identifies observations that can credibly demonstrate change or desirable conditions, 2) systematically collects information about these indicators, and 3) uses that information to show the extent to which a program achieved its goals. In outcomes-based evaluation, a program is a series of services or activities that lead towards observable, intended changes for participants. Generally speaking, outcomes-based evaluation provides a way for programs that promote digital inclusion to understand the impact of the services provided.

Outcomes can be understood at various levels, including: individual, client-focused outcomes; program and system-level outcomes; and broader family or community outcomes.² In the field of digital inclusion, an individual, client-focused outcome might be an older adult feeling more connected to her family members or a young adult gaining new job readiness skills as a result of their participation in digital literacy training programs. Whereas, a broader family or community outcome might be understood as increased civic engagement and participation in democratic processes or more collaboration between community-based organizations and other local entities, including local government.

Outcomes-based evaluation is used to communicate the “theory of change”³ underlying a digital inclusion program as well as how a program’s activities can lead to broader outcomes at the individual, program, and community levels.

This type of evaluation can be helpful for both funders of digital inclusion programs, policymakers, and for the organizations that offer digital inclusion programs. Outcomes-based evaluation can be useful in the program planning and implementation phases, as well as for measuring program outcomes over time. Therefore, this methodology is often iterative and requires organizations to engage in a continuous process of data gathering and analysis.

Problem Statement

At the end of 2016, 73% of U.S. adults had access to high-speed broadband Internet service at home.⁴ As studies of the digital divide have shown over the past twenty years, lower-income and less-educated Americans are disproportionately impacted by this divide. At the same time, the consequences of the home broadband digital divide have recently become far more dire. Employers, educational institutions, government entities, and even entertainment companies expect all Americans to be online. While most Americans understand the value and importance of high-speed Internet, its high-cost continues to keep broadband out of reach particularly for many low-income households.

The institutions most active in promoting digital inclusion are often small, community-based organizations, such as libraries, schools, and other non-profits. Capturing the insight and expertise of these organizations and their work is critical. Standing in the way of recording and sharing this expertise is a lack of shared terms, a framework, and resources that can connect the on-the-ground insights of practitioners with the broader, social concepts that policymakers and funders increasingly use to evaluate interventions.

Research Overview

Recent scholarly research on digital inclusion programs, particularly those taking place within public libraries in the U.S., have noted that more research is needed around outcomes-based evaluation.⁵ In addition, the U.S. Government Accountability Office has indicated programs that promote digital inclusion and broadband adoption, particularly federally-funded programs, should include outcome-oriented goals and performance indicators.⁶ This report begins with the following questions:

- What are the shared challenges facing a broad and diverse group of digital inclusion stakeholders in their efforts to develop outcomes-based evaluation frameworks?
- What other solutions, tools, and strategies could be developed to assist digital inclusion organizations, funders, and policymakers in developing outcomes-based evaluation frameworks?

In 2016, we held three half-day workshops with digital inclusion practitioners, their partners, funders, and other key stakeholders interested in the topic of digital inclusion and outcomes-based evaluation. The workshops took place at the Net Inclusion Summit (Kansas City), Alliance for Community Media Conference (Boston), and with organizations associated with the Community Technology Empowerment Project hosted at the St. Paul Neighborhood Network, a community media center in Minnesota. Angela Siefer led the workshops while Colin Rhinesmith led the research efforts.

Challenges

The workshops identified the core needs of digital inclusion organizations and other stakeholders: (1) shared vocabulary, (2) outcomes-based evaluation tools and implementation support, (3) common indicators, and (4) time and resources needed to conduct outcomes-based evaluation. In this section, we review each of these challenges in greater detail. Then we turn to what our workshop participants recommended as possible solutions to their outcomes-based evaluation challenges, as well as recommendations from the authors regarding next steps toward addressing these shared barriers.

The Need for a Shared Vocabulary

During the first workshop at the Net Inclusion Summit in Kansas City in May 2016, workshop participants, including those who have been working on digital inclusion for many years,⁷ realized that there is no shared vocabulary in the field for understanding the terms “digital inclusion” and “outcomes-based evaluation.”

While workshop participants had their own ideas of what digital inclusion and outcomes-based evaluation meant to them in their own work, it was difficult to discuss digital inclusion and outcomes-based evaluation without a shared understanding of these terms.

As one workshop participant in Kansas City explained,

What do we mean by “theory of change” and what is an “outcome”? Something somebody might think is an outcome, another person might think is an output. So it’s even hard internally to have that conversation and to establish the semantics and taxonomy necessary to move forward. Then to carry that conversation into the community presents a whole other set of gnarly challenges to even sell the value proposition of even having a theory of change in the first place.

Workshop participants explained that digital inclusion programs often focus only on measuring outputs, such as numbers of computers distributed to low-income families, numbers of individuals who received tech support, and numbers of people who received digital literacy training. These are all examples of outputs, not outcomes. Proving causation of outcomes, we learned from the workshop participants, is, in fact, a significant challenge. As another participant in Kansas City explained,

Outcomes-based evaluation is really hard in this space because being digitally included and digitally savvy is part of so many things. And it can be hard to trace that line. I struggle with what would be the key indicators that would truly align with digital inclusion or digital exclusion with outcomes in health, civic engagement, education, etc. Because when you are connected it is so pervasive. It’s very hard to come up with measures.

To further add to this complexity, workshop participants explained that “digital equity” was often used interchangeably with “digital inclusion.” Organizations’ digital inclusion activities are often as varied as the organizations themselves. For example, during the workshop at the Alliance for Community Media Conference in Boston, one participant explained, “Our work is often not defined as digital inclusion work.” Many public, educational, and government access television stations, or community media centers, provide individuals and groups with access to computers and the Internet along with digital and media literacy training -- much like public libraries. But these groups often do not define themselves as having digital inclusion programs and thus are not recognized by others (including local governments) as having digital inclusion programs.

Workshops participants also noted that outcomes-based evaluation, with its focus on measuring positive outcomes, may lack a sense of urgency to convince others why digital inclusion is so important. For example, as one workshop participant in Kansas City explained,

All of our logic models are framed positively, which is: if we do this, then this thing will happen. But there's a larger issue, and maybe a more persuasive way to frame it is this: if we're not doing this, then what's going to happen?

The same participant went on to explain that “while it's important to focus on the positive outcomes of digital inclusion work, perhaps it's even more important to focus on demonstrating the cost of digital exclusion.”

Workshop participants also agreed that having a shared vocabulary is critically important to attracting investments from other sectors that may not see digital inclusion as the focus of their work, but could realize how digital inclusion advances the broader social and economic outcomes they support.

The Need for Outcomes-Based Evaluation Tools and Implementation Support

Workshop participants articulated the difficulties they face accessing outcomes-based evaluation tools and frameworks – and finding the financial resources needed to dedicate time to these efforts. For example, one challenge is evaluating the skills clients have entering a program in order to measure the proficiencies gained through participation. In addition, it can be difficult to track program outcomes over time. There were also several conversations about the need to standardize program evaluation in different regions of the U.S. for comparison. One common theme was the need to develop a set of tools -- based on a standard set of frameworks -- that many organizations could use.

While some workshop participants explained they had no problem tracking all kinds of things during their programs, it was, however, much more difficult for them to track “what happens after they leave.” The issue is as much about resources as the lack of an outcomes-based evaluation tool: it is expensive to keep track of program participants after they leave a program. Workshop participants agreed, if they are going to be tasked with conducting outcomes-based evaluation, then they need shared evaluation tools with baseline measures and indicators of success.

In addition, workshop participants highlighted the ways in which programs that promote digital inclusion can produce other outcomes that were not listed as goals in their proposals, and which can make outcomes-based evaluation difficult. A digital inclusion program that includes computer distribution, low-cost Internet service, and digital literacy training, which targets parents of school-age children in order to increase the parent's engagement in their child's education might have the un-intended outcome of supporting the parents' education, because now the parent can take online classes. In another program, a community member may participate in a class at a community media center to learn how to record video to be more civically engaged but, in the process, can be guided in learning how to set-up an email address for the first time, which ultimately ends up helping the community member secure a job. Knowing how to measure these unintended outcomes can create additional challenges for under-resourced community-based organizations as well as for funders interested in measuring specific outcomes tied to grants.

The Need for Common Indicators

In all three workshops, participants explained they lacked access to common indicators, the measures programs select as markers for their success. In outcomes-based evaluation, indicators often focus on changes in “participant attitudes, knowledge, skills, intentions, and/or behaviors thought to result from [a program’s] activities.”⁸ Participants in our workshops often expressed concerns about what and how to measure these changes in ways that were also meaningful to the communities they serve. For example, one workshop participant suggested it would be helpful to have an evaluation tool that allows community members to describe their own goals and allow them to measure their own progress toward these goals over time, while also reporting this progress to organizations. Organizations with various missions doing digital inclusion work could benefit from such a tool to help show their boards and funders how and why digital inclusion work contributes to their missions.

Establishing common indicators across diverse stakeholders in unique communities across the country is incredibly difficult. Digital inclusion stakeholders can include:⁹

- Local city, county, and tribal governments;
- Public agencies (including libraries, schools, economic development agencies, agencies with community centers, recreation departments, public housing departments);
- Non-profit community-based organizations (such as those that serve low-income and homeless populations, people with disabilities, or people from specific ethnic cultures. In addition, non-profits serve those who are in need of housing, job training, and childcare);
- Community foundations;
- Businesses; and
- Local residents.

Multiple agencies and organizations that are providing digital inclusion programming may also not be working together or even know of each other’s efforts let alone what indicators they are using to measure the success of their programs. These stakeholders may well have different ideas of what success looks like. How to reconcile these differences within a specific community -- let alone across the entire field -- poses significant challenges.

In order for digital inclusion programs to carefully define common indicators, they must first identify their common need for the indicators. First, they must self-identify as digital inclusion programs and develop relationships. Libraries are well known for providing digital literacy training and public access to the Internet. However, the digital inclusion work of community-based organizations is less known.

Digital inclusion programs often include partnerships between libraries and other community-based organizations. Each partner organization might have its own theory of change and thus separate outcomes. In addition, participants noted the importance of clarifying “community impact” versus “individual impact” and how these varying approaches add to the complexity of measuring outcomes.

Workshop participants also noted that digital inclusion is a moving target: evolving personal goals puts individuals on a continuum of learning. And the technology itself is always changing.

The Need for Time and Resources

Many digital inclusion organizations do not have the time and money needed to develop outcomes-based evaluation frameworks.¹⁰ As a relatively-new social service, many digital inclusion programs are still scrambling for funding.¹¹ When funding for day-to-day operations is scarce, allocating funds for evaluation is not as high a priority. In addition, workshop participants highlighted the ways in which programs that promote digital inclusion can produce outcomes that are not listed as goals in proposals. This can make outcomes-based evaluation difficult. Knowing how to measure unintended outcomes can create additional challenges for under-resourced community-based organizations as well as for funders interested in measuring specific outcomes tied to grants.

Participants in our workshops realized the need for outcomes-based evaluation, but most told us they lacked the organizational capacity to develop and conduct outcomes-based evaluation on their own. For example, participants in our workshop at the Alliance for Community Media Conference noted that few people in their organizations had experience with outcomes-based evaluation.

A challenge for all organizations is being able to collect personal data -- phone numbers, postal addresses and email addresses -- while also maintaining the privacy of community members. Libraries, in particular, are hesitant to collect personal data.¹²

In addition to privacy concerns, some workshop participants said organizations need more tangible, thoughtful ways to capture and measure success. The community technology practitioners in the Twin Cities argued that outcomes-based evaluation must be rooted in a shared understanding at the community-level of how to define success. However, it can take time and resources to support the development of shared indicators and an inclusive understanding of what success looks like in a particular community.

Next Steps: Toward a Shared Solution

Recommendations for the Field

Workshop participants provided a number of recommendations for the field based on outcomes-based evaluation challenges they faced:

- 1. Develop shared definitions, indicators, and data elements.** Academic researchers, policymakers, and practitioners should work together to create shared definitions, indicators, and data elements to help digital inclusion organizations access and use common measures. An overriding theory of change is also needed to move the field forward. National resources, pulled together to support the development and sharing of indicators and localized data elements, should assist organizations in developing outcomes-based evaluation frameworks.
- 2. Engage other stakeholders in digital inclusion.** The National Digital Inclusion Alliance (NDIA) should engage corporate and governmental agencies that rely upon online interaction with clients/constituents as a way to help fund the development of shared outcomes-based evaluation tools and resources. For example, utility companies, which benefit from online bill pay, could support digital inclusion efforts and fund the development of online outcomes-based evaluation resources.
- 3. Create a robust online tool and resource.** Academic researchers, policymakers, and practitioners should also work together to develop a shared, online set of outcomes-based evaluation best practices, which would be valuable particularly if submissions come from a large group of stakeholders. Tools should allow community members to define what success looks like for them, allowing organizations to measure digital inclusion in meaningful ways that reflect the needs and strengths of their communities. However, additional research is needed to understand specific needs of a diverse group of stakeholders to develop an online tool or resource that can benefit the field.

Based on the research presented in this report, the authors also recommend the following:

- 1. Develop training materials for staff.** Academic researchers and practitioners should work together to create a shared online resource that could assist front-line staff with outcomes-based evaluation training materials.
- 2. Fund organizations and outside researchers to conduct outcomes-based evaluation.** Policymakers and private foundations can play an important role in helping organizations gain access to financial resources to both integrate processes supporting outcomes-based evaluation, as well as to hire outside researchers to conduct outcomes-based evaluation projects.
- 3. Engage more stakeholders in developing an outcomes-based evaluation tool.** In addition to NDIA, additional stakeholders (universities, technology companies, and private foundations) should develop, or help to fund the development of, a shared outcomes-based evaluation tool.
- 4. Add your voice.** Join the call to fund and cooperatively develop a shared, comprehensive, and impactful online solution to the outcomes-based evaluation needs facing the field.

Existing Tools and Frameworks

The following reports and tools could be built upon to meet the specific outcomes-based evaluation needs of digital inclusion organizations, local governments, funders, and other key stakeholders:

a) **IMLS Building Digital Communities: A Framework for Action:** The U.S. Institute of Museum and Library Services, along with the Technology & Social Change Group at the University of Washington Information School and the International City/County Management Association, worked with hundreds of community members and experts to identify action steps and a framework for digital communities. IMLS presents a detailed plan that communities can use to promote digital inclusion. **IMLS also provides an important list of the broader social and economic outcomes that digital inclusion organizations and other stakeholders can use in developing their outcomes-based evaluation frameworks.** The report provides a framework for community-wide planning for digital inclusion and lays out three sets of access, adoption, and application principles. These include:

- a. **Access: availability, affordability, design for inclusion, and public access;**
- b. **Adoption: relevance, digital literacy, and consumer safety; and**
- c. **Application: education and workforce development, education, health care, public safety and emergency management, civic engagement, and social connections.**

These three areas not only provide a roadmap for the types of activities and services that individual organizations and their citywide and regional partners should consider, but also an outcomes-based evaluation framework that can be used to measure impact. The bibliography contains a very expansive list of assessment models, indicator systems, local and international policy initiatives on digital inclusion, and reasons for non-adoption.

- b) **Project Outcome:** Moving away from general frameworks and closer to specific tools that can be used by organizations, the Public Library Association's Project Outcome is an online evaluation tool, which currently focuses on libraries and offers resources and tools to plan surveys and analyze data at libraries. Project Outcome offers tools to assist organizations in collecting data and measuring the impact of their programs that serve, for example, childhood literacy, digital and technological training, and workforce development. **Project Outcome offers a free toolkit currently designed to assist public libraries**, but could also be adapted by other types of organizations interested in tools and frameworks to measure the success of their programs.
- c) **Impact Survey:** Researchers at the University of Washington (UW) Information School have created **an online survey tool designed specifically for public libraries** that want to better understand their communities and how people use their public technology resources and services. Impact Survey¹³ is a subscription service that is staffed by researchers at the UW that can work with public libraries and other organizations to develop specific surveys, aggregate data, and produce reports that can be used to show the impact of digital inclusion programs. **The researchers also have developed an indicators database** that digital inclusion organizations and other stakeholders can use in their outcomes-based evaluation efforts.
- d) **Open Technology Institute**¹⁴: EveryoneOn¹⁵ worked with OTI to develop an evaluation framework for its program and tailored the rubric to emphasize outcomes-oriented indicators related to meaningful broadband adoption.¹⁶ The framework developed by OTI takes into account contextual and historical social factors impacting digital choices. Metrics designed to understand meaningful broadband adoption

measure not only progress towards achieving broader subscription rates among traditionally underserved and demographically-likely non-adopters, but also a more holistic picture of comfort with digital tools and the availability, effectiveness, and impact of support and training resources. **The evaluation framework provides guidelines for best practices** with regard to ethical data collection, management, and protection as well as informed consent for user participation in evaluation and research.¹⁷

Definitions, Digital Inclusion Activities, and Digital Equity Logic Model

In this section, we suggest definitions, activities, and a logic model¹⁸ which we believe the entire digital equity field should adopt.

NDIA Definitions

Recognizing the need to address the lack of shared vocabulary, the NDIA¹⁹ developed the following definitions of digital equity and digital inclusion. Essentially, “digital equity” is the goal – and “digital inclusion” is the strategy to reach the goal. Digital inclusion practitioners, funders, policymakers,²⁰ and other stakeholders are incorporating these definitions in their work.

- **Digital Equity** is a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy. Digital Equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services.
- **Digital Inclusion** refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of information and communication technologies (ICTs). This includes five elements: 1) affordable, robust broadband internet service; 2) internet-enabled devices that meet the needs of the user; 3) access to digital literacy training; 4) quality technical support; and 5) applications and online content designed to enable and encourage self-sufficiency, participation, and collaboration. Digital inclusion must evolve as technology advances. Digital inclusion requires intentional strategies and investments to reduce and eliminate historical, institutional, and structural barriers to access and use technology.

Digital Inclusion Activities

In a study of eight digital inclusion organizations, Colin Rhinesmith identified four essential activities that are necessary to help low-income individuals and families adopt broadband in ways that are most appropriate to their personal needs and contexts:²¹

1. **Providing low-cost broadband.** Cost continues to be a major barrier to broadband adoption. Digital inclusion organizations are helping their constituents sign-up for existing low-cost offers from ISPs and, when needed, they are developing their own creative solutions, including building mesh wireless networks. To help offset the cost of broadband, many digital inclusion organizations are also serving as low-cost resellers.

2. **Connecting digital literacy training with relevant content and services.** Many digital inclusion organizations have developed innovative digital literacy training strategies to assist those who do not feel the Internet is relevant to them as well as those who already understand the importance of the Internet to their everyday lives. Many organizations also provide mobile digital literacy training in which they go outside their physical walls to reach people in places that are convenient to them.
3. **Making low-cost computers available.** Low-cost or free computers are often just as important as having access to low-cost or free Internet options, particularly for people in low-income communities. Digital inclusion organizations have embraced this reality by refurbishing older computers and making them available to low-income people for free or at a reduced cost. Some digital inclusion organizations also provide ongoing technical support to residents who need the social and technical assistance to keep their computers up and running—and connected online—over time.
4. **Operating public access computing centers.** Many digital inclusion organizations also maintain public access computing facilities that allow residents to access technology in places in which they feel comfortable and supported. These spaces also complement the digital literacy classes that are often offered in the same location.

Some digital inclusion programs provide the fifth element identified by the NDIA definition, “applications and online content designed to enable and encourage self-sufficiency, participation and collaboration.”

These activities should be considered a shared framework for organizations to use in their outcomes-based evaluation efforts.

Digital Equity Logic Model

Outcomes-based evaluation often includes a logic model, as an evaluation and communication tool, to help organizations show funders the “theory of change” underlying their work. Logic models are not only useful for communicating the goals of their programs to funders, but they also provide organizations with a method for evaluating and adjusting their work to make sure their efforts are achieving intended goals.

A program logic model is an example of a “theory of change,” or a picture of how an organization does its work to achieve specific social and economic outcomes. In other words, a logic model presents a visualization of both the theory and assumptions underlying a digital inclusion program. A logic model links outcomes (both short- and long-term) with program activities/processes and the theoretical assumptions/principles of the program.

The authors of this report join others who have argued that *digital inclusion organizations should connect their digital inclusion activities to broader social policy goals*. This perspective assumes that the activities of digital inclusion organizations are often aligned with, and in support of, other community development goals, such as promoting economic and workforce development, education, health care, public safety, civic engagement, and social connections.²²

Charles Naumer, for example, introduced the concept of a “situated logic model” to recognize that digital inclusion “is often embedded within other programs and processes.”²³ Therefore, it’s important for a digital inclusion organization to begin thinking about how its goals support broader social policies. Most digital inclusion organizations already partner with other local groups and agencies whose goals may be a good place to begin developing a situated logic model.

Naumer recognized that this process doesn't come without its challenges because it can be difficult for digital inclusion organizations to make connections between their work and relevant policy issues.²⁴ However, from the observations of, and interviews with, the organizations in this study, most organizations already identified their work as being aligned with the goals of other social service and city agencies. As Wanda Davis, the executive director of the Ashbury Senior Computer Community Center in Cleveland, Ohio explained:

Digital inclusion activities not only create increased literacy outcomes for individuals but also for entire neighborhoods and communities. When the digital inclusion structure encourages lifelong learning and the students become the teachers, we are building both digital equity and community.

ORGANIZATIONS' OR COMMUNITIES' PLANNED WORK			ORGANIZATIONS' OR COMMUNITIES' INTENDED RESULTS		
RESOURCES	ACTIVITIES	OUTPUTS	SHORT-TERM OUTCOMES	MID- TO LONG-TERM OUTCOMES	IMPACTS
In order to accomplish our set of activities we will need the following:	In order to address our problem or asset we will accomplish the following activities:	We expect that once we have accomplished these activities they will produce the following evidence or service delivery:	We expect that if accomplished these activities will lead to the following change in knowledge, awareness, skills at the individual and family level:	We expect that if accomplished these activities will lead to the following changes in actions, behaviors, and policies at the community level:	We expect that if accomplished these activities will lead to the following changes:
Options for affordable, robust internet service	Help individuals gain access to affordable, robust broadband internet service	# of affordable, robust broadband internet connections	Increased access to affordable, robust broadband internet connections	More jobs, local businesses, and increased wages	Full participation in our society, democracy and economy, which is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services.
Ability to facilitate access to internet-enabled devices that meet the needs of the user	Help individuals gain access to internet-enabled devices that meet the needs of the user	# of internet-enabled devices that meet the needs of the user	Increased access to internet-enabled devices that meet the needs of the user	Higher levels of educational attainment	
Digital literacy training materials	Help individuals gain access to digital literacy training	# of people with access to digital literacy training	Improved digital literacy capacity to become confident, safe, secure, and self-directed learners	Increased access to healthcare and wellness	
Public computing centers	Help individuals gain access to quality technical support	# of people with quality technical support	Improved access to quality technical support	Improved public safety and emergency services	
Ability to facilitate or provide access to quality technical support	Help individuals gain access to applications and online content designed to enable and encourage self-sufficiency, participation and collaboration	# of applications and online content designed to enable and encourage self-sufficiency, participation and collaboration	Improved access and use of applications and online content designed to enable and encourage safety, self-sufficiency, participation and collaboration	More robust civic engagement activity	
Support from and collaboration with local government and/or community partners	Help individuals gain access to applications and online content designed to enable and encourage self-sufficiency, participation and collaboration	# of applications and online content designed to enable and encourage self-sufficiency, participation and collaboration	Increased access and use of applications and online content designed to enable and encourage safety, self-sufficiency, participation and collaboration	Increased levels of social connections, social capital and collaboration	
				More inclusive for people with disabilities	

The logic model²⁵ on page 13 emphasizes the non-technology goals included in the definition of digital equity. The theory of change behind this model begins with the definitions of digital inclusion and the activities required to promote digital equity. However, as the model moves farther to the right, the focus is less on the technology outcomes and more on the social and economic benefits of digital inclusion activities. We believe this framework is most useful to practitioners, funders, and policymakers who need a digital equity framework upon which to assess their work, investments, and impacts.

Conclusion

Digital inclusion outcomes-based evaluation is an emerging field that continues to develop and expand primarily through grassroots efforts. Challenges are understandable, but not insurmountable. To strengthen the impact of local programs, the field needs resources dedicated to the creation of a shared, online, collaboratively developed outcomes-based evaluation tool created explicitly to promote digital equity. In addition, digital inclusion programs need professional development and financial support to implement outcomes-based evaluation in meaningful ways that reflect the needs, strengths, and aspirations of local communities. An outcomes-based evaluation tool for digital inclusion programs should recognize and make the most of local digital inclusion programmatic knowledge and on-the-ground experience.

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- 11 For example, see Siefer, Angela. "Innovators in Digital Inclusion: Ashbury Senior Community Computer Center" Benton Foundation (December 12, 2016) <https://www.benton.org/blog/innovators-digital-inclusion-ashbury-senior-community-computer-center>
- 12 American Library Association. "An Interpretation of the Library Bill of Rights." <http://www.ala.org/advocacy/intfreedom/librarybill/interpretations/privacy> accessed April 10, 2017.
- 13 Found online at <https://impactsurvey.org>
- 14 The Open Technology Institute (OTI) at New America is committed to freedom and social justice in the digital age. To achieve these goals, it intervenes in traditional policy debates, builds technology, and deploys tools with communities. See <https://www.newamerica.org/oti/>
- 15 EveryoneOn is a national nonprofit working to eliminate the digital divide by making high-speed, low-cost Internet service and computers, and free digital literacy courses accessible to all unconnected Americans. See <http://everyoneon.org/>
- 16 Broadband adoption is typically understood as having access to a home broadband connection.
- 17 Found online at <https://www.newamerica.org/oti/policy-papers/oti-and-everyoneon/>.
- 18 "A systematic and visual way to present and share your understanding of the relationships among the resources you have to operate your program, the activities you plan, and the changes or results you hope to achieve." (Kellogg at p.1)
- 19 National Digital Inclusion Alliance. <http://www.digitalinclusionalliance.org/definitions/>
- 20 Federal Communications Commission. Strategies and Recommendations for Promoting Digital Inclusion. (January 11, 2017) https://apps.fcc.gov/edocs_public/attachmatch/DOC-342993A1.pdf
- 21 [Rhinesmith]
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- 23 Charles M. Naumer (2009), "The Situated Logic Model: A Method for Measuring Impact." In Crandall, M., & K. E. Fisher (Eds.). Digital inclusion: Measuring the impact of information and community technology. Medford, N.J.: Published on behalf of the American Society for Information Science and Technology by Information Today.
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Notes



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