

Response to National Broadband Research Agenda Request for Comment

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Our Background

Digital Promise and the Barbara Bush Foundation for Family Literacy are partnering to help raise the national conversation around the literacy needs of children and the adults in their lives.

The Barbara Bush Foundation believes all children deserve an equal opportunity to achieve. Many of our nation's youngest children come from disadvantaged families and suffer even greater challenges to building their future success. Millions of parents face a gap in education, lacking basic reading and writing skills to help their children in school. We advocate for the most basic of educational skills for both child and parent: the ability to read and write. Our major focus for adults is the Adult Literacy XPRIZE under way. This initiative is engaging more than 80 mobile application developers from around the globe in creating self-learning applications for adults. The results of this \$7 million competition over the next two years will produce groundbreaking research on how adults learn, using technology. Data will be open-sourced for use by researchers around the world and is expected to change how we understand, communicate about, and approach adult learning for decades to come.

Digital Promise's Adult Learning initiative is focused on improving digital learning opportunities for underserved adults, many of whom are the parents of children in equal need. We connect entrepreneurs, educators, and researchers to advance the development and use of educational technology that expands career pathways and improves the quality of life for these learners and, as a result, their families. Our work includes spotlighting model technology practices in use with adult learners and providing key research and resources to anchor the development and integration of highly effective education technology. We also create and support partnerships between adult education programs and developers to pilot technology with adult learners to help create powerful ed-tech for these underserved learners and to help developers understand the potential of this untapped market.

The Problem: Reaching Low-Skilled Adult Learners

The numbers are staggering -- an estimated 36 million adults lack the basic literacy, numeracy, and job skills necessary to find well-paying jobs and navigate public and social systems. What's more, the number of education programs that serve these adults is woefully low. According to Tyton Partners' 2015 [Learning for Life: The Opportunity for Technology to Transform Adult Education](#) report, our federal- and state-funded programs have the capacity to serve only about four million of those 36 million.

Technology has the potential to be a powerful tool for improving access to learning opportunities for adult learners. Mobile access can support adults who cannot attend education programs because of geography or whose busy lives keep them from in-person classes. Feedback loops, translation technologies, social networks of peers and experts, adaptive problem sets,

accessibility features, and more can combine to advance the opportunity to develop basic and job skills. Technology can help create personalized pathways for learners with special needs and mixed profiles. And it can open up a world of digital information and resources that form the gateway to today's job market.

Despite all of this promise, the adoption and use of technology for and by adult learners is nascent. Framing aspects of the National Broadband Research Agenda to study the issues of adoption and use by this population is one critical step to realizing the full potential of technology for these underserved adult learners and, as a result, their families.

We have two recommendations for shaping the National Broadband Research Agenda to include low-skilled adult learners and their families, a traditionally underserved population group in equity of access as well as a population that traditionally has underutilized available broadband technology.

Our Recommendations

Recommendation #1

This addresses two specific questions on the RFC:

- Section A: Broadband Technology, Question 3. What specific technology research proposals can support federal efforts to foster the access and adoption of broadband technology across rural areas, and other unserved and underserved segments, such as population groups that have traditionally under-utilized broadband technology (e.g., seniors, low-income families, persons with disabilities)?
- Section B: Broadband Access and Adoption, Question 9. What specific research and data are needed to understand how rural residents and other population groups that have traditionally under-utilized broadband technology (e.g., seniors, low-income families, persons with disabilities) can better adopt and use broadband?

Increasing access to broadband technology to low-income adults and families is a critical need, and many adult education programs are doing innovative things to help make access equitable. For example, libraries in Rhode Island check out wireless access points just as they check out books.

But access does not necessarily equate to use, as Pew Research Center's 2016 [*Digital Readiness Gaps*](#) report explains. So a critical aspect of the National Broadband Research Agenda needs to be understanding the motivating factors for low-income, low-skilled adults to want and need to engage in available broadband technology. Adult education programs can provide a wealth of knowledge about use and motivation through interviews with program administrators and educators. These programs can also provide access to adult learners to survey, as they work with community-based organizations across a region to meet adult learners where they are.

Possible research questions are:

- What are motivators for low-income, low-skilled adults to want/need to engage in powerful use of technology?
 - Possible considerations: social, economic, educational, personal

- What kinds of programs can provide the necessary motivation for the meaningful adoption of broadband?
 - Possible considerations: Workforce development, literacy education, English language learning, personal use, entertainment
- What does access really look like for low-income, low-skilled, rural and urban, and immigrant populations?
 - Devices: What types of devices do they own?
 - Data Plans: What types of data plans do they participate in? Do they understand the access differences among plans?
 - Use: How/for what do they use their device?
- What is the minimal level of digital literacy needed for low-income, low-skilled adults to engage in powerful use of digital resources available on broadband? What would digital literacy programs look like that could teach these skills?
 - Possible considerations: delivery method (mobile, blended, in-person), outcomes (credentials, job placement, job upskilling)

Recommendation #2

This address this specific question on the RFC:

- Section C: Socioeconomic Impacts, Question 11. What specific research proposals, and associated methodologies, regarding the socioeconomic impact of broadband should be prioritized?

Research has shown that improved education levels have powerful socioeconomic impacts on families and communities (Digital Promise, 2016, [Adult Learner Landscape](#)):

- Increased Lifetime Earning: A high school diploma leads to an average earnings increase of \$10,000 per year.
- Business Opportunities: 5.2 million jobs are unfilled due to a lack of qualified workers, while 8 million Americans are unemployed.
- Generational Impact: A mother's reading ability is the greatest predictor of her child's future academic success.
- Better Health: Increased education correlates to better health for adults and their children.
- Prepare for the Future: To succeed in the global economy, America needs more workers with technical skills.

Despite this research, adult education and family literacy programs remain woefully underfunded. Therefore, a second critical aspect of the National Broadband Research Agenda should be studying the impact of access to and use of broadband by low-skilled adults on their community's economic performance and on their families' well-being.

This is a complex research area that will require a time-intensive methodology of community-based case study and interviews to establish a baseline understanding of the available types of technology use for learning and whether and how they are used in a community. From this, a broader survey can be developed to expand the participant population.

It is because the protocols are so time-intensive that little research has been done in this area. However, the socioeconomic impact of filling this gap in the research would be sweeping, from

improving family literacy to upskilling America's workforce to empowering adults and their families all over the country.