

Wolfson, T. & Crowell, J. (December, 2013). *Developing a techno-social infrastructure to address digital inequality: Best practices for broadband training programs*. (Unpublished research report to the New Jersey Office of Information Technology.) Trenton, NJ: New Jersey Office of Information Technology.

Executive Summary

Scholarship across a range of disciplines explores the social, cultural, economic, geographic factors and systemic structures that impact different groups' access to Information and Communication Technologies (ICTs), as well as their interest in, and skills with, applying this technology in their daily lives. The scholarship and broadband training programs discussed in this larger report can, and hopefully will, be used by State and local officials and community organizations and leaders alike to carefully plan for the development of successful broadband adoption programs. The question, "What makes a successful broadband adoption program?" can be answered, in part, by looking not only to scholarship, but also to past and current examples of adoption programs. The following themes have been discussed at length and in different ways throughout this literature review are highlighted in bulleted format here.

- **Shifting the focus from "Digital Divide" to "Digital Inequality."** Policy makers and community organizers need to raise awareness about the digital divide and to advance a larger public understanding that the digital divide goes far beyond the issue of access¹. Digital exclusion or "digital inequality" is directly associated with social and economic exclusion in society². Promoting an understanding of the breadth and depth of the digital divide, as well as promoting an understanding of the very real ways that individuals,

¹ Organisation for Economic Cooperation and Development, 2011; Hawkins & Oblinger, 2006; Gurstein, 2003; Smith, 2011; Educational Testing Service, 2007; van Dijk, 2005; Pew Internet & American Life Project, 2006; Jackson, et al., 2008; Holt & Jamison, 2009; Stevenson, 2009; Shayd, 2011.

² Clark & Demont-Heinrich, 2004; Eubanks, 2011; Kvasny & Keil, 2006; National Telecommunications and Information Administration, 2010; Gunkel (2003); Jansen, 2010; Powell, et al., 2005; Warschauer & Matuchniak, 2010;

communities, and larger society can benefit from increased connectivity and intentional and focused use of the Internet for specific purposes can generate buy-in from a larger public which may currently understand the digital divide primarily in terms of access.

- **Community Broadband Program Design.** Many successful broadband adoption programs are unique public/private partnerships that provide training, education, and that expand access based on community input of what is needed³. Community involvement in the development of broadband adoptions programs should be encouraged and supported⁴. Community media projects that are funded through a combination of private dollars and local government revenue, and that are spearheaded by, and developed from, intensive community input and involvement is a key component of successful broadband adoption programs⁵. Often technological training is seen as abstracted from these concerns, but a community design or “embedded” approach lifts up the importance of broadband adoption by connecting technology to other critical needs⁶. By embedding programs within established organizations, broadband infrastructure can support important other activities, furthering community. Additionally, projects that leverage existing infrastructures as well as projects that have clearly stated goals, and that have devised tools to measure progress towards these goals are equally important when considering the keys to successful broadband adoption⁷.
- **Digital Training and “Deep Adoption.”** Developing educational programs that train individuals to be comfortable with ICTs should form an important part of any broadband adoption program. Among individuals and communities that do not have broadband connections in their homes, a lack of digital literacy skills was cited, after cost, by individuals as the secondary reason for their non-adoption of high-speed Internet in their

³ Net Literacy, 2011; ConnectKentucky, 2011; Walsh, et al., 2006; Fan, et al., 2006; Comcast Corp., 2010.

⁴ Shayd, 2011; Shaffer, 2011; Hauge & Prieger, 2010.

⁵ Forlano, et al., 2011.

⁶ Wolfson & Crowell, 2013.

⁷ Gillertt, et al., 2006; Tapia & Ortiz, 2010; City of Lompac, 2011; Austin Wireless City, 2010; Warren, 2007.

homes⁸. Educating individuals on the many practical and life-enhancing ways that high speed Internet use can be of benefit should form a central component of any broadband adoption program⁹. While we agree that an accessible, reliable, and affordable high-speed Internet connection is a necessity in our increasingly information-based society, education in how and why to use the Internet is perhaps just as important. However, programs should also foster skills in media creation and production, as education focused on people’s creative and political ambitions can create new forms of “deep adoption” for civic engagement.

- **Establishing a *techno-social* broadband infrastructure.** While a broadband infrastructure has a clear technological basis, it is also, importantly, a *social* infrastructure. We believe it is useful to highlight the social aspect of technological programs because throughout our field research, one of the most compelling aspects of the programs studied were the relationships that developed, both online and offline¹⁰. These social relationships not only play a pivotal role in organizing and powering the broadband infrastructure itself, but are also brought to life by face-to-face training programs, computer assistants, local leaders and program facilitators. For many of the urban poor served through broadband training programs, the issue of trust is particularly significant, as daily life often means navigating complex access to social services. Digital educators who are either members of the community or have a positive relationship with the community can often leverage both online and offline resources—while offering respect and emotional support—and are thus best equipped to meet participants’ digital needs.

⁸ Horrigan, 2010; Digital Impact Group, 2009.

⁹ Warschauer & Matuchniak, 2010.

¹⁰ Wolfson & Crowell (2013).