CONNECT Minnesota®

Digital Literacy:
A Critical Skill for All Minnesotans

July 2013

The ability to effectively use a computer, basic software programs, and the Internet are essential. These skills, commonly referred to as digital literacy, include the ability to find, understand, evaluate, create, and communicate digital information.[1]

It is vital to ensure all Minnesotans have digital literacy skills in order to access educational opportunities, be prepared for the continued transition to an e-commerce and e-government environment, and be competitive in today's employment market. Over the next 10 years, it's estimated that 80% of jobs will require digital literacy skills, yet recent reports show that approximately 66 million Americans do not possess basic digital literacy skills.[2,3] In Minnesota, public, non-profit, and private sector leaders recognize that our future economic development will in large part hinge on having a workforce ready to participate and compete in a twenty-first century economy; and if a significant portion of the population lacks digital literacy skills our state may face a competitive disadvantage.

There are many national and local efforts underway to ensure everyone has the opportunity to access digital literacy training. Connect2Compete is a national program that offers digital literacy training, discounts on broadband service, and low-cost computers.[4] In Minnesota, significant efforts have been underway in providing digital literacy training through libraries and community centers. The 2009 American Recovery and Reinvestment Act provided funding for organizations to provide sustainable broadband adoption programs that included digital literacy training; the Blandin Foundation's Minnesota Intelligent Rural Communities (MIRC) Digital Literacy training programs are an example here in Minnesota.[5] In 2013, the Minnesota Governor's Task Force on Broadband, in conjunction with Connect Minnesota, created whybroadband.org to provide a digital literacy training resource. Another available resource to Minnesotans is Connected Nation's Every Citizen Online (ECO) program that offers free training of computer and Internet skills through the Connect Minnesota website.[6]

The 2012 Connect Minnesota Residential Technology Assessment focused on barriers to home broadband service in Minnesota. While there are a number of reasons the 22% of non-adopters cite for not having home broadband service, one of the main reasons many Minnesotans do not subscribe to home broadband service is because they do not feel they have the skills necessary to effectively use broadband.

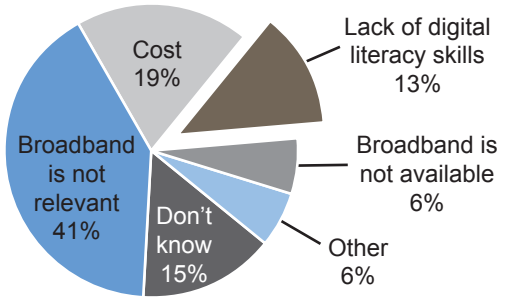
Among the findings from this survey:

- More than **one in ten non-adopters** in Minnesota (**13%**) cite a lack of digital literacy skills as their main reason for not adopting home broadband.
- Those citing digital literacy as a main barrier includes **approximately 15,000** adult Minnesotans who say that broadband and the Internet are too complicated, **50,000** who say that they do not know what broadband is or anything about it, **25,000** who cite fears about online security and their ability to avoid online fraud or identity theft, and **23,000** who do not feel comfortable using a computer.
- The median age of those citing digital literacy as the main barrier to home broadband adoption is **60 years of age** and the median household income is **$38,100**

Main Barriers to Home Broadband Adoption

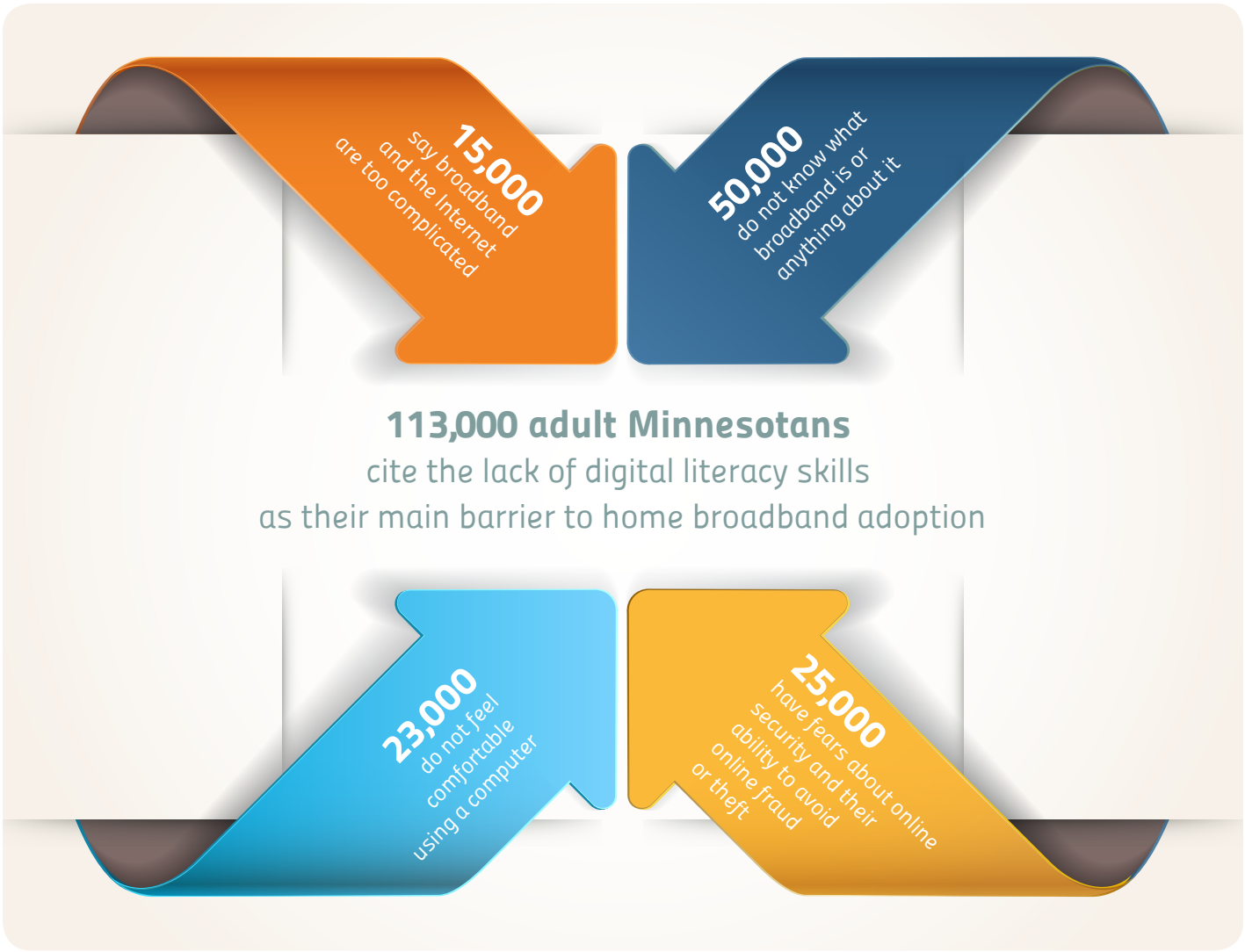
The 2012 Residential Technology Assessment from Connect Minnesota shows that approximately 904,000 adult Minnesotans do not subscribe to home broadband service. Minnesotans without home broadband service most often cite a lack of relevance, or the belief that home broadband service is not beneficial or useful to them, and cost as the top two reasons for not adopting the service. However, more than one in ten non-adopters in Minnesota (13%) cite a lack of digital literacy skills as their main reason for not adopting home broadband, which makes it the third most-cited reason for not having home broadband in Minnesota (Figure 1).

Figure 1.
Main Barriers to Home Broadband Adoption



1 Office for Information Technology Policy (January, 2013), "Digital Literacy, Libraries, and Public Policy", http://www.districtdispatch.org/wp-content/uploads/2013/01/2012_OITP_digilitreport_1_22_13.pdf
2 Federal Communications Commission (February 19, 2013), http://www.fcc.gov/blog/connect2compete-and-hud-team-expand-digital-literacy-across-us
3 Federal Communications Commission (July 23, 2013), http://www.fcc.gov/blog/fcc-chairman-announces-jobs-focused-digital-literacy-partnership-between-connect2compete-and-28
4 Connect to Compete, http://www.connect2compete.org/
5 National Telecommunications and Information Agency, http://www2.ntia.doc.gov/minnesota
6 Connect Minnesota, Every Citizen Online http://www.connectmn.org/every-community-online

This represents approximately 113,000 Minnesotans who feel they lack the necessary digital literacy skills to make adoption of home broadband service a priority. This includes 15,000 adult Minnesotans who say that broadband and the Internet are too complicated, 50,000 who say that they do not know what broadband is or anything about it, 25,000 who cite fears about online security and their ability to avoid online fraud or identity theft, and 23,000 who do not feel comfortable using a computer.



The median age of those citing digital literacy as the main barrier to home broadband adoption is 60 (Table 1). This is much higher than the median age of the state's adult population of 46. Non-adopters citing digital literacy as their main barrier have a median household income of $38,100, which is lower compared to the state median household income of $58,476. Therefore, our research indicates older Minnesotans as well as those with lower annual incomes are most likely to lack digital literacy skills.

Table 1.
Median Age and Income of Non-adopters Who Lack Digital Literacy Skills

	Statewide[7]	Digital Literacy
Median Age	46	60
Median Household Income	$58,476	$38,100

7 American Community Survey 2011 5 year estimate, Median Household Income, http://factfinder2.census.gov/

Conclusion

Digital literacy is taking on increased importance in the twenty-first century where using a computer, being proficient with common software programs, and accessing and utilizing the Internet is becoming less of a choice and more of a necessity. Those without digital literacy skills are at a disadvantage, as they will be unable to compete in the job market, will not have access to online education opportunities, will be shut out of certain marketplaces, and will not be able to access an increasing number of public and private sector services. The decision on whether or not to adopt technology is always a personal choice, but a barrier to adopting technology based on lack of skills is one that can be eliminated with proper training.

As seen in this report, a lack of digital literacy skills is one of the top three cited barriers to home broadband adoption in Minnesota. In Minnesota, thirteen percent (13%) of the 904,000 adults not subscribing to home broadband service cite a lack of digital literacy skills as their main barrier to home broadband adoption. The lack of digital literacy skills most often affects Minnesota's older workforce, as well as those who currently earn below-average incomes. Programs designed to teach digital literacy skills should be designed to focus on these demographic groups.

CONNECT Minnesota®

Methodology

Between October 2 and October 25, 2012, Connect Minnesota conducted a random digit dial telephone survey of 1,201 adult heads of households across the state. Of the 1,201 respondents randomly contacted statewide, 201 were contacted on their cellular phones and 1,000 were contacted via landline telephone. Once the respondent agreed to participate, these surveys took approximately eleven (11) minutes to complete and were designed to measure technology adoption and usage.

Multiple attempts were made to each working telephone number on different days of the week and at different times of the day to increase the likelihood of contacting a potential respondent. To ensure a representative sample, quotas were set by age, gender, and county of residence (rural or non-rural), and the results were weighted to coincide with 2010 United States Census population figures. Random sampling, with the inclusion of quotas to reduce bias, was chosen as the most efficient and cost effective method of identifying respondents.

For the purpose of setting quotas and weighting, "rural" respondents are defined as living in a county that is not a part of a Metropolitan Statistical Area (MSA), as designated by the United States Office of Management and Budget. Surveys were conducted by Thoroughbred Research Group in English. Based on the effective sample size, the margin of error = ± 3.2% at a 95% level of confidence for the statewide survey. As with any survey, question wording and the practical challenges of data collection may introduce an element of error or bias that is not reflected in this margin of error.

Rim weighting was applied to correct for minor variations and to ensure that the sample matches the most recent U.S. Census estimates of the state's population by age, gender, and urban/rural classification. Weighting and research consultation were provided by Lucidity Research, LLC. Survey results were subsequently peer reviewed for accuracy by experts in survey design and statistics at University of Minnesota, Crookston.

This residential survey was conducted as part of the State Broadband Initiative (SBI) grant program, funded by the National Telecommunications and Information Administration (NTIA). The SBI grant program was created by the Broadband Data Improvement Act (BDIA), unanimously passed by Congress in 2008 and funded by the American Recovery and Reinvestment Act (ARRA) in 2009.

To learn more about Connect Minnesota and its programs please visit http://www.connectmn.org/ or e-mail us at info@connectmn.org.

Definitions

Technology Adoption Definition

1. Broadband adopters are defined as respondents who answered "yes" when asked "Do you subscribe to the Internet at home?" and answered "broadband or high speed Internet service" when asked "Which of the following describe the type of Internet service you have at home?"
2. Broadband Non-Adopters are defined as respondents who answered "no" when asked "Do you subscribe to the Internet at home?" or answered "dial-up" or "don't know refused to "Which of the following describe the type of Internet service you have at home?"

Rural Definition

The U.S. Census Bureau uses an urban-rural classification based on Metropolitan Statistical Areas (MSAs), which are designated by the United States Office of Management and Budget to collect, tabulate, and publish federal statistics. Metropolitan statistical areas contain a core urban area with a population of 50,000 or more. Each MSA also includes one or more counties that have a high degree of social and economic interaction with the urban core (further information on definitions for MSAs can be found at: www.census.gov/population/www/estimates/00-32997.pdf). When classifying urban, suburban, and rural counties, we follow the Census Bureau definition whereby counties are categorized as "urban" if they contain the core city of an MSA. "Suburban" counties are MSA counties that do not contain a core city, and "rural" counties include all remaining counties that are not part of an MSA.

APPENDIX A:

2012 Connect Minnesota Residential Technology Assessment

	n=
Total	1,201
Non-Adopters of Home Broadband Service	280
Digital Literacy as a Main Barrier to Home Broadband Adoption	40