



Adult Education Pays... For Bridging the Digital Divide

Results from the Programme for the International Assessment of Adult Competencies' (PIAAC) [sic] Survey of Adult Skills were announced in October 2013. On November 13, 2013, the Organization for Economic Cooperation and Development (OECD) released *Time for the US to Reskill? What the [PIAAC] Survey of Adult Skills Says*.ⁱ PIAAC surveyed approximately 5,000 adults ages 16 to 65 in the USA and 23 other participating countries. The survey assessed literacy, numeracy, and problem-solving skills in technology-rich environments.ⁱⁱ

Time for the US to Reskill? discussed “a new domain designed to assess some skills with modern information and communication technology ‘problem solving in technology-rich environments’” (PSTRE) and described the U.S. results as “a little worse than the cross-country average”.ⁱⁱⁱ

OECD’s *Skilled for Life?* report on PIAAC defines PSTRE as “the ability to use digital technology, communication tools and networks to acquire and evaluate information, communicate with others and perform practical tasks.”^{iv}

The U.S. PIAAC report added, “The problem solving in technology-rich environments assessment focuses on the abilities to solve problems for personal, work and civic purposes by setting up appropriate goals, and accessing and making use of information through computers.”^v

Referring to PIAAC, OECD stated, “Technological changes, particularly the increasing presence of information and communication technologies in all areas of life, have led to a growing demand for higher-level cognitive skills that involve understanding, interpreting, analysing [sic] and communicating complex information.”^{vi}

Throughout the 2000’s, “there has been an extensive discussion about *digital divide*, the divide between people who have access to technology, computers and the Internet and those that do not.” A digital divide also exists “within individual societies, between those with easy access to digital media and an abundance of information, and those who do not know how and where to find information, and furthermore, do not understand the value of information and how it can help them in their day-to-day lives”.^{vii}

PIAAC findings indicate that “in most countries, significant shares of adults have trouble using digital technology, communication tools and networks to acquire and evaluate information, communicate with others and perform practical tasks. Across participating countries, from 7% to 27% of adults report having no experience in using computers or lack the most elementary computer skills, such as the ability to use a mouse.”^{viii}



In the decade spanning 1999 to 2009, “the number of Internet subscriptions in OECD countries nearly tripled, and the number of mobile phone subscriptions more than tripled.” In most OECD nations, “over 70% of households have access to computers and the Internet in their homes.”^{ix}

However, in the USA, “the social inequalities [related to the digital divide] experienced by vulnerable and underserved populations in the United States have remained, or worsened, since the economic downturn of 2008.” Approximately one-third of the population “does not regularly use information and communication technologies (ICT).” Because in general they can neither access nor afford computers at home, “44% of people in households below the federal poverty line... use library computers to access the Internet.”^x

Even with recent increases in home computer and Internet users, and “diminishing disparities between the [digital] ‘haves’ and ‘have nots,’ the demographics of the underserved populations have remained fairly consistent; those least likely to have adopted home broadband Internet” include

- low-income adults
- African American, Latino American, and Native American adults
- older adults
- adults with less education and
- persons with disabilities

In addition, “access to broadband in rural areas also remains lower than in urban areas.”^{xi}

“Improving adult digital and ICT literacy levels is fundamental in terms of bridging the digital divide,” wrote Jimoyannis and Gravani. “Increasing ICT usage by both young people and adults is considered as a critical factor in reducing inequalities and ensuring people’s inclusion in the social, economic and political life of their communities and societies, so that they have an influence over their own life chances.”^{xii}

Increasingly, “digital literacy is not just about using the computer and the growing interest about the Internet and mobile technologies. Undoubtedly, ICT training can motivate people to develop literacy, numeracy and language skills.”^{xiii}

Digital literacy learning models showing promise to benefit adult learners already exist. A new research-based, “self-paced and tutor-facilitated digital literacy learning model for underserved and vulnerable populations... utilizes a web-based learning platform called the Learner Web” in many U.S. Broadband Technologies Opportunities Program (BTOP) sites.^{xiv}

The National Center for Higher Education Management Systems, referring to worker productivity in its state-by-state description of adult learning, offered, “American workers are among the most productive in the world. In the past, in the manufacturing sector, this [productivity] was because of highly capitalized technology. In the future, it will be because technology is applied to an information-intensive service economy.”^{xv}

ⁱ http://www.oecd-ilibrary.org/education/time-for-the-u-s-to-reskill_9789264204904-en

ⁱⁱ <http://www.oecd.org/site/piaac/publications.htm>

ⁱⁱⁱ *Time for the US to Reskill?*, p. 11 http://www.oecd-ilibrary.org/education/time-for-the-u-s-to-reskill_9789264204904-en

^{iv} OECD, 2013, p. 4, http://www.oecd.org/site/piaac/SkillsOutlook_2013_ebook.pdf

^v *Time for the US to Reskill?*, p. 17.

^{vi} http://www.oecd-ilibrary.org/education/literacy-numeracy-and-problem-solving-in-technology-rich-environments_9789264128859-en

^{vii} Jimoyannis & Gravani, 2010, *International Journal of Digital Literacy and Digital Competence*, <http://www.igi-global.com/article/digital-literacy-lifelong-learning-programme/39062>

^{viii} OECD, 2013, pp. 9-10, http://www.oecd.org/site/piaac/SkillsOutlook_2013_ebook.pdf

^{ix} *Ibid.*, p. 10.

^x Pendell, Withers, Castek, & Reder, 2013, *Internet Reference Services Quarterly*, 18, pp.105, 107, and 118.

^{xi} *Ibid.*, p. 107.

^{xii} Jimoyannis & Gravani, 2010, *International Journal of Digital Literacy and Digital Competence*, <http://www.igi-global.com/article/digital-literacy-lifelong-learning-programme/39062>

^{xiii} *Ibid.*

^{xiv} Pendell, Withers, Castek, & Reder, 2013, *Internet Reference Services Quarterly*, 18, p. 106.

^{xv} NCHEMS, 2008, p. 18, <http://www.nchems.org/pubs/docs/Adult%20Learning%20in%20Focus.pdf>