Chapter 48

American Digital Divides:
Generation, Education, Gender, and Ethnicity in American Digital Divides

Susan Carol Losh
Florida State University, USA

ABSTRACT

Through increasing access to knowledge and facilitating widespread discourse, information and communication technology (ICT) is believed to hold the potential to level many societal barriers. Using national probability samples of United States adults from 1983 to 2006, I examine how gender, ethnicity, and education interacted with generation to influence computer ownership and Internet use. Narrower digital divides in more recent generations can mean greater future digital equality through cohort replacement. However, although gender is now of far less consequence than previously in ICT access and use, significant divides, especially in PC ownership and selected Internet uses have widened by ethnicity and education over five birth cohorts. On the other hand, results from earlier research interpreted as "aging effects" are most likely generational influences instead. Implications of these findings are discussed.

INTRODUCTION

Within only a few decades of its public inception, information and communication technology (ICT) has become indispensable to most Americans. By 2006, about 80% of U.S. adults were at least minimally involved with computers, cell phones or the Internet (Horrigan, 2007). By late 2006,

over 75% of Americans at least age 12 had gone online, most at home (Center for the Digital Future, 2007). Kennedy, Smith, Wells and Wellman (2008) found that 52% of U.S. households had broadband connections and 77% had a resident go online.

Online users are positive about ICT: 41% of men and 35% of women in 2002 felt it would be "very hard" to "give up the Internet" (Fallows, 2005). Seventy percent of 2006 workers said the Web increased their productivity (Center for the

Digital Future, 2007). Nevertheless, a significant minority of Americans totally abstains from ICT, a minority differentially distributed across ethnicity, age, degree level and other variables; ICT access and use also often vary along these dimensions. "Digital divides" refer to gaps in ICT access and use across individuals and groups who occupy different societal situses.

Even in the early days, national governments, academics and commerce centers recognized the potential of ICT to create a more equitable society. Digital technology can generate greater demand for skilled workers and thus potentially create more opportunities for previously disenfranchised groups who possess digital skills (e.g., DiMaggio, Hargittai, Celeste & Shafer, 2004). Certainly the United States, with its history of gender, ethnic, and social class divisions, ideology of equality, and technological development, provides an appealing test case to track computer and Internet gaps across generations.

In this study, I focus on how generation, combined with education, gender and ethnicity affects U.S. computer ownership, and selected Internet uses, examining how generational effects contrast with those of age or life cycle stage. Age is often considered a predictor for ICT, but generation, especially over a period of several years, typically is not. This study will show that the generational construct provides valuable information about digital divides and that earlier research using only the variable "age" can mislead. Using the General Social Survey and the NSF Surveys of Public Understanding of Science and Technology I track five generations of U.S. adults over periods ranging from one to 28 years. Many scholars, executives (e.g., Gates, 2005), and government agencies emphasize the need for Americans to be "technically adept"; with their educational focus, they seem to pin their hopes on "the next generation" growing up.

Examining education, gender and ethnicity across generations may show whether the advantages of ICT are diffusing, or which, if any, groups

lag behind. Cohort analyses are more informative than studying ICT use across time (which tells us where we have been) or by age (which in a single period provides a snapshot of the present). Generational changes provide data for the future as recent cohorts replace earlier ones. If aging effects are small or nonexistent, then cohort effects can suggest relative permanence in ICT skills and use across the life cycle. *Thus I juxtapose adult developmental issues versus cohort socialization experiences*.

When data from just one time point are analyzed, age and cohort are inevitably confounded because earlier generations are simultaneously older adults. Nearly all "one shot" surveys find that senior adults use ICT the least. Meanwhile young adults are said to "omnivorously devour" ICT, (e.g., Horrigan, 2007). These studies cannot disentangle whether something causal about aging processes occurs, whether youthful enthusiasm promotes ICT use, or whether more recent cohorts simply have acclimated more to ICTs.[1]

Confusing aging with generation effects can have substantial consequences. Age and generational issues are more complex than simply tracking ICT use across time as many studies do. If divides converge, or even vanish, in recent birth cohorts, this implies the benefits of digital technology are now more evenly spread throughout society, possibly generating greater overall future equality as cohort replacement occurs. If "new adults", regardless of gender, ethnicity or educational level, have similar digital skills, employers who hire or advance women or minorities will acquire valuable workers; better quality employment among these groups thus can create more social equality.

Some employers may hesitate to hire or promote older workers because they fear "seniors" lack digital skills, and may be neither interested in—nor able to—acquire them. Due to age stereotypes older workers themselves may feel unable to learn such skills. However, if birth cohort is more implicated in ICT use than age, future supervi-

Related Content

Perusing E-Readiness and Digital Divide: From a Critical View

Mohammad Reza Hanafizadeh, Payam Hanafizadehand Abbas Saghaei (2013). *Digital Literacy: Concepts, Methodologies, Tools, and Applications (pp. 313-346).*

www.irma-international.org/chapter/perusing-readiness-digital-divide/68458

Bridging the Age-Based Digital Divide

Amy Antonioand David Tuffley (2018). *Information and Technology Literacy: Concepts, Methodologies, Tools, and Applications (pp. 1098-1111).*

www.irma-international.org/chapter/bridging-the-age-based-digital-divide/188991

What Makes Students to Participate in Online Collaborative Settings Through Second Life?: Students' Views and Perspectives Based on Adult Participation Theories

Nikolaos Pellas (2014). *International Journal of Digital Literacy and Digital Competence (pp. 21-44).*

www.irma-international.org/article/what-makes-students-to-participate-in-online-collaborative-settings-through-second-life/111087

The Use of Digital Texts as an Alternative Method of Determining Functional ICT Literacy Levels

Ilias Karasavvidisand Sevasti Theodosiou (2014). *International Journal of Digital Literacy and Digital Competence (pp. 19-32).*

www.irma-international.org/article/the-use-of-digital-texts-as-an-alternative-method-of-determining-functional-ict-literacy-levels/123375

The Impact of Territorial and Relational Belonging on Member Retention in Social Networking Sites

Vess Johnson, Sherry Ryanand Angelina I. T. Kiser (2016). *International Journal of Digital Literacy and Digital Competence (pp. 38-59).*

www.irma-international.org/article/the-impact-of-territorial-and-relational-belonging-on-member-retention-in-social-networking-sites/167860