



The Always-Connected Generation

We define a generation by experiences that characterize its era. We characterize the Silent Generation, defined by the Great Depression and World War II, by conformity and work ethic. The baby boomers, who grew up in the era after the war, rebelled against conformity with noisy, anti-establishment protests. The Generation X era, marked by the drop in fertility following the introduction of the birth control pill, is characterized by entrepreneurial pragmatism.

The Pew Internet and American Life project characterizes the millennials—the first generation to come of age in the new millennium—as the first “always-connected” generation. Significant aspects of culture are changing as a result. In 1950, almost all households subscribed to a daily newspaper, and many subscribed to more than one. The rise of blogs and other Internet news sources occurred concomitantly with a precipitous decline in readership of printed newspapers. Many communities are losing their local newspapers as the field of journalism struggles to redefine itself.

A changing world where all students are connected all the time has substantial educational implications. The very definition of education could change in ways that are as significant as parallel changes occurring in journalism and other professions.

The New Millennium

At the beginning of the millennium, the U.S. Department of Education underwrote a National Technology Leadership Summit (NTLS). Leaders from educational associations that included ISTE, the Society for Information Technology and Teacher Education (SITE), and peer teacher educator content associations in science, mathematics, language arts, and social studies met to explore the coming decade.

The NTLS outcomes published in *L&L* (see May 2002, “Grand Challenges: Preparing for the Technological Tipping Point,” page 6) made a watershed prediction that by 2010, most students would have a portable wireless device. NTLS leaders observed, “When students have access 24 hours a day, seven days a week, the opportunity will exist to re-examine and enhance school curricula. The grand challenge will be to realize the educational potential by the time this new era arrives.”

A current Pew Foundation study reports that more than 80% of millennials sleep with a cell phone by the bed “poised to disgorge texts, phone calls, e-mails, songs, news, videos, games, and wake-up jingles.” The prevalence of portable wireless communication devices has dramatically affected communication and collaboration patterns. Texting has become the preferred channel of communication between teens and their friends. The Pew Foundation reports that a typical teen sends 50 text messages per day, or 1,500 text messages per month. These changes have affected nearly every aspect of millennials’ lives outside school.

New cell phone operating systems have altered perspectives on the very nature of mobile communication. Google purchased Android in 2005 to establish a cell phone operating system that could support mobile Web browsing and search, and that is serving as the basis for tablet and slate devices. In 2007, Apple achieved a paradigm shift when it offered the iPhone, whose operating system (iOS) became the foundation of other portable wireless devices such as the iPod touch and the iPad.

New location-aware devices make previously unforeseen interactions possible in always-connected social networks. A modern-day land rush is producing waves of creativity as programmers develop applications to take advantage of new technological capabilities.

WHAT MAKES YOUR GENERATION UNIQUE?

	Millennial	Gen X	Boomer	Silent
1	Tech Use (24%)	Tech Use (12%)	Work Ethic (17%)	World War II (14%)
2	Pop Culture (11%)	Work Ethic (11%)	Respectful (14%)	Smarter (13%)
3	Tolerant (7%)	Traditional (7%)	Morals (8%)	Honest (12%)
4	Smarter (6%)	Smarter (6%)	Baby Boomer (6%)	Work Ethic (10%)
5	Clothes (5%)	Respectful (5%)	Smarter (5%)	Morals (10%)

Pew Research Center, Millennials, February 2010.

One application, SoundPaper, suggests the potential. It allows students to record instruction as they take notes. Afterward, tapping a note will play back the corresponding audio.

These portable devices have become multimedia recording tools and pocket-sized Internet-connected computers. The iPhone, for example, can record and edit high-definition video and wirelessly upload it to YouTube. According to Pew researchers, these devices are helping to bridge the digital divide by providing Internet access to less privileged students. Students use smartphones and related handheld devices and tablets to coordinate schedules and face-to-face gatherings; share stories, images, and video; browse the Web; and participate in social networks.

Capitalizing on Trends

Despite advance knowledge of societal trends, schools have generally not anticipated or capitalized on this educational potential. Pew reports that most schools treat these devices as a disruptive force that educators must manage and exclude from the school and the classroom. In this area, schools are immovable objects in a societal stream flowing around them.

The beginning of this decade may offer another opportunity to consider societal trends, with the goal of examining educational policies that could capitalize on them. For example, current forecasts predict that by the end

of the next decade, secondary schools will offer up to half of all courses in virtual formats. For the most part, teacher education programs are not yet preparing preservice teachers to teach in this environment successfully.

To some extent, this may represent generational differences. Nearly 25% of millennials list technology use as the top factor that makes their generation unique, whereas this does not appear in the top five responses cited by the Baby Boomer Generation (see “What Makes Your Generation Unique?”).

Differences in life priorities and patterns of social use are reflected in the way that one generation prepares the next for teaching roles. Although millennials use technology to develop social connections and interactions—for example, the majority have posted social profiles—this use of technology does not directly translate into effective instructional use. In contrast, the boomers and Gen-X instructors who staff teacher preparation programs have deep expertise in content and pedagogy but are less experienced in social uses of technology.

Moore’s law—the doubling of technological capacity every 18 months—has yielded increasingly powerful and accessible technologies that are changing society in dramatic ways, so much so that the current generation chiefly identifies itself through the lens of this change. Effective virtual schools will capitalize on the always-connected social networks established by millennials.

Teacher Preparation

Teacher preparation programs and teacher educator professional associations have a responsibility to develop policies and standards for effective preparation of teachers in this area and to develop a knowledge base to establish best practices and inform policy and practice through effective research. This will require careful thought about the ways technology, pedagogy, and content knowledge (TPACK) intersect.

Millennials have direct experience with the first element of TPACK inherent in the context of social networks linked to the always-connected fabric of their daily lives. Teachers and teacher educators from prior generations—boomers and Gen-Xers—have a deep knowledge of pedagogy and content. Collaboration across generations can realize the full educational potential.

Resources

- “Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies” by the U.S. Department of Education, Office of Planning, Evaluation, and Policy Development: www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf
- “Millennials” by Paul Taylor and Scott Keeter of the Pew Internet & American Life Project: <http://pewresearch.org/millennials>
- “Teens and Mobile Phones” by Amanda Lenhart, Rich Ling, Scott Campbell, and Kristen Purcell of the Pew Internet & American Life Project: www.pewinternet.org/Reports/2010/Teens-and-Mobile-Phones.aspx



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