
Getting down to business: Millennials at school and work

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Meet the Millennials

The [18-year-olds](#) who entered college in 2005 have been raised in a world where digital cameras have always existed, movies have always been available on pay-per-view, voicemail has always routed their phone calls, Bill Gates has always been a billionaire, and TV has always blurred the distinction between news and entertainment. They are part of the Millennial generation—born since the early 1980s in the United States and a bit later in other countries—and they're growing up in technology's fast lanes.

Their parents have nurtured and pushed Millennials from their first moments, engaging their infants with Baby Einstein toys and piping Mozart into the womb. Average is not OK. Baby Boomer and Gen X parents are demanding more of their children than their own parents asked of them, expecting good grades and behavior along with greater accountability. They are obsessed with safety. And their unprecedented levels of parental protectiveness do not abate as their children move through elementary and high school to college and the workplace.

Millennials, characterized by their emphasis on teamwork, achievement and respect for authority, relish the challenges their parents have set for them. As they head into adulthood, today's young people are likely to find the world's frenetic pace energizing rather than overwhelming. They have a confidence about the future that is unparalleled, according to educators, sociologists and kids.

These young people are [digital natives](#), fluent in new media. They create blogs and vlogs; they text message, instant message, Google their research papers, download music files, personalize their ringtones and web pages. Their educators struggle to incorporate new technology into the classroom; on the whole, schools have not kept pace with students' interests and expertise. As the leading edge of the generation enters the workforce, their employers sometimes struggle to understand and take full advantage of their unique talents. To become relevant and essential to their lives, HP must understand how Millennials are reshaping education and how they will affect the business world.

This report explores:

- Demands modern education places on Millennials
- Expectations Millennials and their families have of education
- How Millennials view work in relation to the rest of their lives
- Opportunities for HP to help young people succeed in school and work as they transition to adult life

Today's students think differently

Today's students—K through college—live, breathe and shape their identities through technology. But their schools are slow to use these technologies to engage them in learning.¹ According to Marc Prensky, who coined the term digital native, "Today's students are no longer the people our educational system was designed to teach."²

Millennials, raised to believe they can achieve anything, demonstrate an uncanny ability to accomplish several things at once. Pushed by parents and teachers to excel, focused on personal goals and craving social affiliations, technology enables their success on all fronts. And there's evidence their near-constant immersion in digital media may not only suit their generational profile, it may actually have changed how their brains developed physiologically. [Recent research](#) suggests that brains can be trained through practice to multitask—parallel-process information while engaged in several simultaneous activities. It is likely that today's students, who've spent their entire lives surrounded by all the tools and toys of the digital age, now think and approach information in ways fundamentally different from earlier generations. Prensky sees schools lagging behind, still tied to an antiquated system that rewards staying on task and on pace with others above individualized education plans.³

Findings from a [BellSouth Foundation](#) program confirm a disconnect between educators' efforts and students' experiences. The foundation granted funds to 50 school districts to improve teachers' technology integration skills.

Despite progress, the efforts weren't enough to change the educational experience for most students. According to one researcher, "You had teachers saying 'we have gained more technology and are using it more'" while students felt they used technology as an "add-on" to the learning experience, seldom integral to the outcome of assignments.⁴ For example, the teachers substituted PowerPoint presentations for overhead projectors, without changing the nature of the lessons. Their attitudes toward access to technology were also at odds with students' attitudes. Young people felt access should be unrestricted and integrated into the school day, while teachers tended to view technology use as a privilege.

➔ Further thinking:

- What could HP learn from students about the design and delivery of the learning experience?
- By what means could HP help educators develop awareness and confidence around technology integration?
- How could HP help create a platform for the continuous sharing of best practices in teaching?

Today's students work differently

Parents and society have put pressure on Millennials, and kids internalize these expectations.⁵ Their lives have always been packed with structured activities. Schools, pushed to raise test scores, are placing extra burdens on kids. Advanced placement courses, which many Millennials take, are more demanding than regular high school classes.⁶ Students rate [education as their greatest personal concern](#). They anxiously prepare for college-entrance tests and devote countless hours, mostly online, to the college search.⁷ They want financial security. They set career goals. They maintain extensive social networks. They embrace [volunteerism](#) to make the world better. They also say they do not get enough sleep.

Contrary to the suspicions of many parents, young people are not using technology chiefly as a means to "zone out"; Millennials most often use new media to do homework, access information and connect with others.⁸ And a recent Kaiser Family Foundation survey found that students who use technology the most also spend more time with family, friends and other activities.⁹ Millennials' busy lives may explain the need to do many things at once.

"It's the way we've all come to be raised," says one New Jersey high school senior. She's a member of the National Honor Society, student leader of the local Amnesty International chapter and president of her school's International Thespian Society. "There's a lot of work we're expected to do. You have to multitask to get everything done."¹⁰ Like other Millennials, she couldn't accomplish all she does without technology. That's particularly evident when it comes to homework. On a typical school night she sits in the glow of the computer monitor before her, books scattered about. She's working on two Word documents and has four websites open. She checks her school e-mail account, then her Bloglines news aggregator for an independent study assignment. She quickly transitions from this to respond to group members on instant messenger who have attached PowerPoint slides for an upcoming class presentation.

The Kaiser Family Foundation report, which surveyed more than 2,000 third- through twelfth-grade students, found that almost "one-third of young people say they either talk on the phone, instant message, watch TV, listen to music, or surf the web for fun most of the time they're doing homework."¹¹ Homework is just one island in their stream of online activities. This doesn't mean online technologies are mere conveniences when it comes to completing assignments. Students without ready Internet access for schoolwork are greatly disadvantaged: "The Internet is, like, your local library times a thousand."¹²

This generation of students wants to work together. And digital media are indispensable for work in groups, whether or not that's the teacher's intention. Young people regard input from their social network as relevant to almost any endeavor and legitimate in nearly all situations. When you have a math whiz on your buddy list, trigonometry help is only one instant message away. Spanish homework becomes bearable when your compadres can ping you with improvised electronic flashcards. Rather than fight a losing battle to demand strictly individual effort, some schools are tapping into Millennials' strengths. Participation in challenging competitions such as Model United Nations,

Constitution Team and Destination Imagination tournaments reflect today's students' penchant for teamwork and desire for success and achievement.

Constant feedback is another feature of Millennial life, expected not only from friends and family but teachers and coaches as well. Schools typically maintain web pages where teachers upload scores and comments on homework, tests and classroom participation, often daily. Students and parents intently track progress, and a low mark often triggers a stream of e-mail.

➔ Further thinking:

- How could HP offer technology that helps students organize and simplify their lives?
- What could HP do to help low-income students gain computers, online access and technological savvy?

Millennials reshape college

The leading edge of the Millennial generation is college age, but today's hovering "helicopter parents"¹³ aren't ready to relinquish the controls. Family calling plans allow parents such frequent contact with their young adults that *Psychology Today* magazine terms cellphones "[the eternal umbilicus](#)." Accustomed to involvement in every step of their child's education, parents don't hesitate to get university officials on the phone as well. "There's this new generation of [over-involved parents](#) who are flooding campus orientation, meddling in registrations and interfering in students' dealings with professors, administrators and roommates," says one college dean. In response to their concerns, institutions are improving campus security and providing special parents' associations, listservs and e-mail newsletters.¹⁴

As a group, Millennials appear to be thriving at college, despite being overscheduled and under a lot of pressure to succeed. Generational experts Neil Howe and William Strauss say these students like to be sheltered and trust authority figures to take care of them. They're focused on grades and performance, savvy in technology, more interested in math and science than the humanities. To attract Millennials and engage them in their programs, they advise college administrators to assign more group projects and make more use of technology in the classroom.¹⁵ Increased collaboration and technology use can go too far, though—colleges, along with high schools and middle schools, report increased [cheating](#), enabled by text messaging within the exam room and essays readily available on the Internet. Students don't see this activity as a moral breach. "They live by the philosophy that 'cheating is OK if you do not get caught,'"¹⁶ which suggests the extent to which the era of ubiquitous information has shaped their point of view.

➔ Further thinking:

- How could HP assist families to access information and stay in touch with their students while respecting young people's privacy and growing independence?
- In what ways could HP help colleges and universities create campus environments that are both social and secure?
- How could HP develop portable, flexible technology that serves students' recreational and educational needs?

Promising approaches to learning

Millennials thrive on customized learning experiences that provide room for self-discovery and self-expression. They expect frequent feedback and the opportunity to communicate and collaborate on assignments.¹⁷ They want education, in the classroom or online, that prepares them not only for college, but also for today's jobs.¹⁸ Although barriers—attitudinal, institutional, political and financial—to systematic change remain common, education is evolving. The overall pace of change is not keeping up with tech-savvy students, but there are bright spots and lots of room for opportunity. Some educators are finding exciting ways to engage their students through formats kids love, such as podcasts, gaming systems and cellphones.

One sixth-grade teacher's instructional process illustrates how crucial advanced technology has become to everyday learning at her school in Kansas. For a lesson on Aesop's fables, she downloaded stories from a free online site and used the ebookstudio program to format it for students' handhelds. She then synched her Palm to her desktop and beamed the fables to the kids, who used their styluses to scroll through. "Hmmm," said one 12-year-old girl, ready to demonstrate her confidence and creativity with the new tools. "I think I can animate the files." Next came an exercise with the "clickers," handheld remotes the teacher uses to gauge students' progress. As students took a quiz to instantly test their understanding of Greek mythology, the teacher used a wireless whiteboard to write up the day's homework. The day's assignments were projected onto the screen and onto her desktop.¹⁹

A small but growing number of schools are converts to such tech tools, spiking educational sales of PDAs, laptops, interactive smartboards, MP3 players, digital cameras, video and sound systems, and handheld remote control clickers.²⁰ A new generation of educational software makes the devices worthwhile. Teachers comfortable with the technology are enthusiastically training their peers, and using online chat rooms and blogs to spread the gospel. Although some parents and outside experts are skeptical of investing in technology at the expense of other educational priorities, it's hard to find students who want less rather than more new media in the classroom.

A tide of new technology use may bring a corresponding sea change to the role of the teacher. Interactive tools can make for better teaching, but as the BellSouth study points out, teachers need to be willing to construct lesson plans that integrate technology from the ground up. And they need to learn from their students' feedback. More than ever, active participation is the common denominator in successful learning. Some educators predict new learning media will bring an end to the centuries-old "sage on the stage" model of teaching. A new paradigm casts the teacher as "guide at the side," using technology to engage students' evolving minds.

The links below highlight further stories of successful educational innovation.

- [Third-graders produce a weekly 20- to 30-minute podcast](#), complete with scripts, editing and background music (*New York Times*, August 8, 2005)
- Students in [foreign language classes in seven countries talk with one another](#) via computers and headsets using the free VoIP service Skype (*New York Times*, August 8, 2005)
- [Business schools use voice-animated spreadsheets](#) that allow accounting and statistics students to make sense of complicated course work (*BusinessWeek*, December, 2005)
- [Faculty use wikis](#), websites to which students can add and edit content and maintain blogs, to extend the classroom experience (*BusinessWeek*, December, 2005)
- [Kindergartners make bar graphs](#) with interactive white boards; chemistry teachers hook boards to probes; educators rave (*New York Times*, December 8, 2004)
- [Online tutors in India help American children](#) complete their English homework (*International Herald Tribune*, September 8, 2004)
- [Students and teachers use Groove collaboratively on tablet PCs](#) to solve math problems from the classroom or home (*New York Times*, September 9, 2004)
- [Anonymous clickers foster better classroom participation](#) as they're used to gather opinions and gauge comprehension (*Boston Globe*, May 8, 2005)
- [Students take to Moodle](#), a learning management system that allows teachers to link documents and offer online activities, and students to IM (ahistoryteacher.com, November 23, 2005)
- [Course-casting lets students skip classes](#) and download lectures on their iPods (*Newsweek*, November 28, 2005)
- [Students using intelligent tutoring systems outperform](#) peers, using programs that resemble video games (*New York Times*, September 16, 2004)

➤ Further thinking:

- How could HP partner with schools to use technology to advance education?
- By what means could HP address the growing demand for technologically charged learning experiences?

Millennials join the workforce, their way

The oldest Millennials are graduating from college and embarking on their careers. Their arrival promises to transform the world of work just as it is forcing changes to education, bringing an emphasis on work/life balance, compensation based more on performance than seniority, and an end to command-and-control business management.

As the huge generation of Baby Boomers reaches retirement age in the next few years, employers will scramble to recruit young people to fill workforce shortages. But the new employees won't be stepping into the same workplace. To attract and retain Millennials, organizations will need to reflect their new workers' distinctive generational traits. Successful companies are likely to become more agile, flat, flexible organizations. They'll adapt to young workers who feel entitled to personalized opportunities and support, impatient with institutional formalities. Teamwork will cross functional and geographical boundaries. Savvy employers will leverage the extraordinary cumulative digital experiences of their future leaders—thousands of hours spent with videogames, e-mails, IMs, cellphones and TV. Following the lead of Jack Welch before he left GE, they'll promote "reverse mentoring" programs, where new hires tutor top management in the use of innovative technologies.

Young people will bring new ways of connecting with clients and business associates: Why waste time spelling out sentences formally in an e-mail? IM and text messages are quicker and looser. Why suffer through slow training sessions, when targeted podcasts could deliver relevant information as needed? When teamwork brings synergy and builds morale, why confine your efforts to what it says in your job description? Must meetings involve travel? Global employees can use video chatting for face-to-face time, using a PC headset, webcam and free software, double-clicking contacts from a buddy list. In an age of online social networking sites, why be bound by established channels? Sites such as Myspace and Facebook provide the model for sales and other business communications. Successful organizations will adapt to resemble their young workers, who are better at absorbing information and making decisions quickly than any previous generation.

A strong, results-oriented work ethic is characteristic of Millennials: they are confident, optimistic, practical and inclusive. They come to work with a great will to succeed at a point when their lives are fueled by youthful energy. These young workers want to dig in and make big contributions. But unlike Boomers, they're not slaves to their workload. They want the flexibility to work from various locations, and they insist on leaving room for a full life on the outside. They may move fluidly between work and play, but they have an internal scale that registers when life tips out of balance. According to the director of Michigan State University's Collegiate Research Institute, "Boomer managers have to understand that [Millennials are] going to give you really hard work for 40 to 45 hours a week. They're going to draw a line and they're going to say enough is enough."²¹

Millennials will arrive with high expectations, new perspectives and unprecedented connections with their peers, say Howe and other experts. Employers must be ready to accommodate Millennials' nontraditional work style to fully harness their talents. Young workers communicate casually, but excel at organization. Collaboration is their lifeblood. They're used to being valued and praised. They want their contributions to have meaning, but can feel lost and discouraged without constant feedback. They want to be inspired by the vision and reputation of their employers, but their greatest allegiance is to their personal ambitions.²²

Along with these shifting demographic and generational patterns, the pace of technological change and path of economic globalization are forces that will create new attitudes toward work.²³ Millennials are transitioning to a workforce transformed by the intense competition of the new global economy. In the age of overseas outsourcing of jobs, the old loyalty-for-security bargain that had been the basis of the corporate social contract has been retired. Many Millennials now see corporate loyalty as a market transaction—a bond that will last as long as it clearly benefits both the employee and company.

One summary of Millennial perspectives comes from the authors of *Got Game*, concerned with the impact of video gaming on behaviors in the workplace. They argue that young people glean valuable strategies from their media-intense pastimes; they offer this take on Millennials' transformative approach to work:²⁴

- **If you get there first, you win.** Competition is a mainstay of the virtual gamespace. Young gamers—like good senior executives—aren't looking for comfort and safety; they're after the thrill of victory.
- **Trial and error is the best strategy, and the fastest way to learn.** If you're playing *EverQuest*, you can't explore the terrain by studying the manual. Young gamers have learned to forge into new situations, taking risks that promise to pay off.
- **Elders don't understand even the basics of this new world.** What good are management-initiative buzzwords such as cross-functional cooperation and 360 feedback when managers aren't comfortable with blogs, wikis and RTS (real-time strategy)?
- **There's a limited set of tools—but some combination will work.** Pragmatism and optimism define the Millennial approach. They trust that open communication, access to information and creative problem-solving will overcome all obstacles.

According to the young people and business professionals surveyed, the term "boss" has a negative connotation—in gaming, you have to beat the "level bosses" to advance further in the game. What's a better term? Echoing the paradigm shift affecting the role of teachers and the self-directed nature of digital natives, the authors suggest "strategy guide." This example illustrates the kind of work environment Millennials thrive in—one in which teamwork and problem solving trump hierarchy and following orders.

➔ Further thinking:

- What products and services can HP offer businesses to address the priorities, needs and interests of young people in their workforce?
- How can HP make its own workplace attractive to Millennials?
- In what ways can HP leverage young employees' ease with technology to mentor older generations within the company?
- How can HP learn from digital natives in the workplace about new ways of connecting with customers?

The upshot

Millennials have grown up using technology in the same way they learned to walk—by doing. They're fearless experimenters, craving technology that makes learning and work fun. Ambitious school assignments, important educational decisions and workplace tasks are all folded into the flow of their active days. This generation of confident young people is ready to express their talents through positive contributions; they expect recognition and reward as their due. HP has opportunities to become a meaningful and engaging presence in their lives by supporting their success at school and work. HP needs to help Millennials:

- Organize activities, assignments and other elements of their busy schedules
- Access information and rich media content with portable, versatile, affordable devices
- Collaborate with peers to share and build innovative learning and workplace experiences
- Strengthen skills and engage in lifelong learning
- Harness new technology and new behavioral capabilities to be productive at school and work

For more information on Millennials, go to the Brand Innovation Lab [website](#).

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- ¹ [Generation M: Media in the Lives of 8- to 18-Year-Olds](#), Kaiser Family Foundation report, 3/2005
- ² [Digital Natives, Digital Immigrants](#)
- ³ [Ibid.](#)
- ⁴ ["Teacher Perception of Tech Integration Differs from that of Their Students,"](#) *Education Technology News*, 3/26/2003
- ⁵ Neil Howe and William Strauss, *Millennials Rising*, 2000
- ⁶ ["The Two Faces of A.P.,"](#) *New York Times*, 1/8/2006
- ⁷ ["The Campus Reality Tour,"](#) *New York Times*, 1/8/2006
- ⁸ [JupiterResearch report](#), 2004
- ⁹ [Generation M: Media in the Lives of 8- to 18-Year-Olds](#), Kaiser Family Foundation report, 3/2005
- ¹⁰ ["Overscheduled—and Dealing With It,"](#) *Philadelphia Inquirer*, 5/3/2004
- ¹¹ [Generation M: Media in the Lives of 8- to 18-Year-Olds](#), Kaiser Family Foundation report, 3/2005
- ¹² *Teens and Technology*, Pew Internet & American Life Project, 7/2005
- ¹³ ["Off to college—for parent and child,"](#) *Philadelphia Inquirer*, 1/24/ 2004
- ¹⁴ ["Parents of 'Millennials' tag along to college,"](#) Cox News Service, 11/23/2004
- ¹⁵ ["A New Take on What Today's Students Want from Education,"](#) *Chronicle of Higher Education*, 1/31/2003
- ¹⁶ ["Focused on achievement and raised on technology, babies of boomers are ready to make their impact,"](#) *Milwaukee Journal-Sentinel*, 6/4/2005
- ¹⁷ [The Growing Technology Gap Between Schools and Students: Findings from the BellSouth Foundation Power to Teach Program](#)
- ¹⁸ [CBS News Poll: Youth in Sync with Adults](#), 12/12/05
- ¹⁹ ["Gradeschoolers learning on handhelds,"](#) *USA Today*, 12/11/2005
- ²⁰ [Ibid.](#)
- ²¹ ["With different work values, generations X, Y wait for boomers to move aside,"](#) *Detroit Free Press*, 1/14/2005
- ²² ["Outlook on the Workplace: How is the Game Played Now?"](#) *New York Times*, 12/15/2005
- ²³ *The 21st Century at Work: Forces Shaping the Future Workforce and Workplace in the United States*, RAND Corporation, 2004
- ²⁴ John C. Beck and Mitchell Wade, *Got Game: How the Gamer Generation is Reshaping Business Forever*, 2004