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**The Net Generation Goes to College**

**Tech-savvy 'Millennials' have lots of gadgets, like to multitask, and expect to control what, when, and how they learn. Should colleges cater to them?**

By SCOTT CARLSON

Change your teaching style. Make blogs, iPods, and video games part of your pedagogy. And learn to accept divided attention spans. A new generation of students has arrived -- and sorry, but they might not want to hear you lecture for an hour.

That is the message of Richard T. Sweeney, university librarian at the New Jersey Institute of Technology, who has been hitting the lecture circuit lately with his vision of how today's college students, sometimes called the "Net Generation" or "the Millennials," will soon alter the way professors teach, the way classrooms are constructed, and the way colleges deliver degrees.

Born between roughly 1980 and 1994, the Millennials have already been pegged and defined by academics, trend spotters, and futurists: They are smart but impatient. They expect results immediately. They carry an arsenal of electronic devices -- the more portable the better. Raised amid a barrage of information, they are able to juggle a conversation on Instant Messenger, a Web-surfing session, and an iTunes playlist while reading *Twelfth Night* for homework. Whether or not they are absorbing the fine points of the play is a matter of debate.

Most important, Mr. Sweeney and other observers say, Millennials expect to be able to choose what kind of education they buy, and what, where, and how they learn. To meet the demands of these new students, they say, colleges must rethink how they operate. Imagine classrooms that incorporate more videos and video games, classes that meet electronically to fit students' schedules, students who choose to learn from each other rather than a professor, and courseware, search engines, and library databases that are animated, image-based, and interactive.

"Higher education was built for us" -- the baby boomers and previous generations -- "under an industrial-age model," Mr. Sweeney says. "That's not what they're about."

**Not So Different?**

Not everyone agrees that Millennials are so different from their predecessors, or that, even if they are different, educational techniques should change accordingly.

Michael Gorman, dean of library services at California State University at Fresno and president of the American Library Association, doesn't believe in generalizing about generations. Over and over, he says, educators have had notions about the need for colleges to change drastically to accommodate new crops

of students. "This sort of end-of-history approach is dubious to me," he says, "this idea that we have reached a watershed and we have to throw everything aside and come in with new approaches."

He points to a recent article in *Educause Review*, about generational differences, in which a Millennial says, "If higher education listened to me, faculty and administrators would understand that students today cannot be dedicated just to learning." The comment sounds "self-absorbed" and "inane," Mr. Gorman says, and educators should not have to pander to such views.

Naomi S. Baron, a linguistics professor at American University, says she too feels pressure to meet the demands of Millennials: "It is very common to hear people say, Here's the Millennial or the digital generation, and we have to figure out how they learn. Poppycock. We get to mold how they learn."

Administrators push professors to use technology in the classroom because they believe that is what today's students want, says Ms. Baron. And faculty members feel pressured to shorten lectures, increase group-discussion time, and ignore the "multitasking" student who is e-mailing his friends in the back of the room -- all to attract and satisfy a generation that doesn't have the discipline of its predecessors.

"We think that the students will come if we teach in a way that meets the expectations we have of what the students want," she says. "At some point, what we are doing is killing higher education."

### Control of Learning

To get to Mr. Sweeney's office in the library at the New Jersey Institute of Technology, one passes by tables of students huddled together working on homework assignments, with laptops and electronic gadgets spread out and plugged into walls and ears. Just outside his office sits a bank of public computers, where students check e-mail, chat on Instant Messenger, use a math program, write a paper, or play the online game World of Warcraft, often doing several at the same time.

Seeing such students in action was what made Mr. Sweeney decide several years ago that student life was changing.

He was walking through the library one afternoon when he noticed a student watching a video of a lecture given by a popular professor of mathematics. Mr. Sweeney assumed that the student was in the professor's course, but the student bashfully told Mr. Sweeney that he was in another professor's class. "He reluctantly went on to describe," the library director says, "that he could learn the material better from this professor on this video."

It was then, Mr. Sweeney says, that he had the first inkling that students these days are more apt to take control of their learning and choose unconventional, technological methods to learn better. He talked with the director of distance education and learned that the largest percentage of distance-education students at the institute were students already on the campus.

Soon he noticed more and more students gathered in groups at tables in the library, passing around information on their laptops, pulling information off the Internet, and learning together.

"In some cases, they weren't going to class," he says. "This was their class. They elected to work in a group and skip a particular class, which worried me."

But he was looking at it from his own perspective, he acknowledges. From their perspective, he says, the behavior was simply "practical": how to learn the material as fast as possible, with the least hassle. "The technology was a huge enabler for them to be able to do the things they do differently," he says.

Mr. Sweeney then embarked on research about the generation, reading what other scholars and commentators had to say about the newly dubbed Millennials.

### **The Millennial Man**

Now he can often be seen at library conferences and other academic meetings talking about what he has learned. At some appearances, he performs what he calls a "without-a-net act," in which he specifies the various characteristics of Millennials, then brings in a group of students from a local college, whom he has never met, and asks them questions to see how closely they match the stereotypes.

Harold B. Shill III, a professor of public administration at Pennsylvania State University at Harrisburg, saw Mr. Sweeney's presentation at the annual American Library Association conference last year. The student focus group, Mr. Shill reports, "confirmed 100 percent" Mr. Sweeney's description of the generation.

"I had a feeling that the Millennials were different," the Penn State professor says. "This brought the differences into sharp focus for me."

Sitting in his office, its walls covered with pictures of his six children (two of whom are Millennials), Mr. Sweeney ticks off some of those differences:

"They have **no brand loyalty**," he says. They "accept as their right" the ability to make choices and customize the things they choose.

**They are more educated than their parents and expect to make more money.** "Many more have changed majors and expect to change jobs and careers," Mr. Sweeney says. But they often wait until they are already well into a major or a career track before they decide to make a change, he adds.

Playing with **gizmos and digital technology is second nature to them.** "They like **portability**, and they are frustrated by technology that tethers them to a specific location," he says. Studies show that Millennials don't read as much as previous generations did. **They prefer video, audio, and interactive media.**

They **multitask.** "They are much more likely to mix work and play than we are," he says, "playing a game or chatting while they are doing an assignment."

"In grade school, they were pushed to collaboration," which explains the popularity of group study in college today, Mr. Sweeney says. **"The collaboration,"** he adds, "is both **in-person and virtual.**"

Moreover, "they want to learn, but they want to learn only what they have to learn, and they want to learn it in a style that is best for them," he says. Often they prefer to **learn by doing.**

Marc Prensky, a video-game designer and futurist whom Mr. Sweeney cites in conversation and in articles, would take these notions further. The Millennials, or **"digital natives,"** as he prefers to call them, feel hemmed in by an educational system that continually looks to history, that does not take young people seriously, and that squelches creativity, a key characteristic of Millennials.

"What we're really losing is the sense of why kids need an education," Mr. Prensky says. "The things that have traditionally been done -- you know, reflection and thinking and all that stuff -- are in some ways too slow for the future. ... Is there a way to do those things faster?"

### **A 'Cultural Shift'**

Mr. Sweeney does not advocate throwing out books or getting rid of professors and leaving students to teach themselves in college. Not at all, he says.

But professors should try to understand that Millennials consume and learn from a wide variety of media, often simultaneously, he says. And, like the math student who he saw studying from a video in the library, they will take new avenues to get what they want out of education.

He says students would prefer to see online course-management systems, like WebCT and Blackboard, operate faster and be more interactive, presenting things in video or audio formats. Imagine systems that "learn" how you learn, he says, and adapt to your style.

Students want library databases to become more collaborative, he says. Two or more people might be able to search a database together, simultaneously, from different computers. Databases might be searchable by image rather than only by text.

He tells a story, relayed from a professor he knows but declines to name, to illustrate the gap between the old mind-set and the new: The professor was teaching in a computer lab and saw one of his students sending e-mail messages to someone during the lecture. The professor told him to pay attention.

"I'm listening," the student said.

"Well, I would like you to turn and look at me," the professor said.

"Why?" said the student. "I have an A in your course, and I can repeat back what you said."

That is a "cultural shift," Mr. Sweeney says. "To the professor it was rudeness. To the student, it was, Why shouldn't I do it in a way that works for me?"

### **Millennials and 'Me'**

To Naomi Baron, the American University linguistics professor, that anecdote is a sign less of a cultural shift than of a growing problem. To her mind, among many students today, there is far too much focus on "me."

Everyone today, it seems, is some kind of information broadcaster, she says -- a blogger, or someone who maintains a Web site or puts out a podcast. Fewer and fewer people know how to sit and listen. She says she and other professors have found that they can lecture for only 10 or 15 minutes before they have to break for a group discussion or an opportunity for the students to talk.

Faculty members who used to be considered teachers par excellence for their engaging lectures are now described by students as "sooo boring," she says. In her own course evaluations, she hears one persistent complaint: She didn't give the students enough time to talk, despite the fact that she now schedules 50 percent of class time for group discussion. "That isn't enough? I guess not."

But professors themselves are partly to blame, she argues. "Education, for better or worse, used to be founded on the premise that the person at the front had something to share. Now we have all become group facilitators. We are these 'guides on the sides' who get the small-group discussions going."

"Students have a very short attention span," she says, "in part because of the media that we as teachers and parents have encouraged them to spend their time with, and in part because we haven't taught them to have longer attention spans."

The Millennials, she says, are products not just of a constant information barrage, but also of an educational system that has **lost its ability to impart skills**. It is concerned more with buoying a student's feelings than teaching anything useful.

"We have told them, We want to hear what you have to say, **your opinion matters, nothing you can say is wrong -- we can only just sort of add to it,**" Ms. Baron says. "There is a growing assumption that what matters is how you express yourself, not whether anyone can understand what you have expressed."

And so, she says, the Millennials might be whizzes on communication devices, but their communication skills -- both in writing and in person -- have a long way to go.

Colleges are dogged by the feeling that they have to "play catch-up with their students" when it comes to technology, she adds. "We have these new technologies coming down the pike, and we're told, Use them! Nobody has thought through which ones work and which ones don't."

For example, at American University, PowerPoint is popular among professors. Many post their PowerPoint slides and notes online after a class session. But for her part, Ms. Baron isn't sure that students like PowerPoint. More troubling, she says, is that students are downloading the slides and notes and skipping the classes.

"There is this larger sense of control that students have," she says, along with "a different sense of who is running the communications show as well as who is running the educational show."

Overwhelmingly, she worries that as colleges cater to a generation that wants to move faster, professors and administrators are **giving up on a core lesson: teaching students how to think on their own, how to be contemplative.**

"We are not teaching students, Sit by yourselves, take a walk by yourselves and think -- think through a problem," Ms. Baron says. "I don't mind group work, and I assign some group problems. You can learn from each other. But some of this you have to learn to do on your own, and it takes quiet."

### **Finding a Balance**

Stefannie A. Miller, a 21-year-old senior at Case Western Reserve University, fits squarely within the Millennial generation. Some of the assumptions about her generation ring true, she says. She has seen many of her classmates create their own majors and shift their career paths. As she considers a career in science journalism, she values her extracurricular experience -- as an editor for the college paper and other publications -- nearly as highly as her course work.

But she bristles at other assumptions -- both good and bad -- that people make about her and her peers.

"We're looked at as the **attention-deficit-disorder generation,**" she says. "If you don't have some pretty pictures or some interesting digital format, we won't pay attention." But such technology is a "hook" for people who aren't going to study anyway, she says.

### **The 'Challenging' Job Market**

From her point of view, the traits of Millennials have a source: the pressure to succeed that she and her peers have felt for years. From ninth grade on, "you're made aware of how challenging the job market there is going to be," she says.

So if Millennials are caught working on a paper during a lecture, it's because they have to maximize what they get done in a given time. If they are seen constantly chatting on phones and computers, it's because the importance of networking among friends and acquaintances has been ground into them. If they balk at learning subjects that seem "unnecessary," it's because there are so many other things to do.

"I don't think it's laziness, in that people aren't willing to put in the time," Ms. Miller says. "It's just that they don't have enough."

Mark Turner, dean of the College of Arts and Sciences at Case Western, can see that students there are under pressure -- to ready themselves for a competitive environment in the work force, to prepare themselves for job descriptions that don't yet exist, and to adapt when a chosen career ceases to exist.

"The world is moving very quickly, and things change in professions now very quickly," he says.

Naturally, technology will play a role in the world, and Case Western students, like those anywhere, are adept with computers and gadgets, Mr. Turner says. "They don't find it at all surprising to put a Webcam on a coffeepot so they can see when the coffee should be refreshed," he says.

But the dean is skeptical about whether students prefer digital media over traditional media. "We find that they like multimedia -- they want text, video, and sound," he says.

In a way, he observes, that has always been the case: If you go to a lecture, you see the instructor, you hear voices in the classroom, you read what he or she writes on the board -- it's already a multisensory experience.

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