



1-7-2007

Demystifying Millennial Students: Fact or Fiction

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Recommended Citation

Demystifying Millennial Students: Fact or Fiction (with Hazel Cameron), Hawaii International Conference on Education, Proceedings (2007)

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Introduction

In order to teach effectively, educators need to understand the generation of students they are trying to reach. This paper will examine the Millennial generation, those individuals born around 1980. We will review the era they grew up in, the population's characteristics, learning styles, attitudes, values, lifestyles and the implications this knowledge has for educators. We believe that by understanding the Millennials we can design programs, courses and learning environments better suited to these students. We offer some examples of what has worked for us as librarians at Western Washington University and from our review of the literature.

Millennials Defined

Neil Howe and William Strauss in *Millennials Rising (2000)*, define Millennials as people born from about 1982-2002. The exact starting date for the cohort varies slightly in other articles. The *Millennials Americans under Age 25* gives 1977 as the start date (Millennials, 2001). They became known as the Millennials because they are the first generation to reach adulthood in the new millennium. A number of different names have been given to this generation as shown in Figure 1. The large number of names could be said to be in keeping with the high degree of individualism characterized by this generation. "You can't name a generation like ours as easily...because we aren't as easy to typecast as the boomers or Gen X... our lives seem to be so much more diverse than (those) of our predecessors!" (Martin, 2005)

Figure 1: Other Names for Millennials

Source: Gardner, 2005, Elsner, 2005 and others

| | |
|---------------------|-------------------------------|
| Boomer Babies | Generation.com |
| Boomlet | Generation Next |
| Bridgers | Generation Text |
| Byte Block | Generation Wired |
| Civic Generation | Internet Generation |
| Cyberkids | Microwave Generation |
| Digital Generation, | Nintendo Generation |
| Don't Label Us | Net Generation |
| Echo Boom | NGen |
| Echo Boomers | Net Gen |
| Gamers | Newmils (UK) |
| Generation 2000 | Nexters |
| Generation WWW | Non Nuclear Family Generation |
| Generation XX | Sunshine Generation (Canada) |
| Generation Y | Thumbsters |
| Generation Why | Wannabees |

Demographics

Population

The Millennial generation is the largest cohort group in history as shown in Figure 2. Larger than the Baby Boom generation, today they represent twenty-five percent of the U.S. population. In the next decade the percentage will increase to forty percent. And like the Boomers, their sheer numbers mean they will be a major influence on American culture.

The Millennial population has more females than males. There has been a fourteen percent rise in the number of females in the U.S. population from 1990-2000 compared to a seven percent increase in males.

What impact do these statistics have on education? In Washington State the legislature has mandated enrollment increases at the state universities to handle the

demand. With the number of applicants increasing, qualified students are being turned away due to lack of space. Campuses need more classrooms, labs, computer facilities, residence halls, dining places and parking. We (Hazel Cameron and Leza Madsen) are faculty members at Western Washington University in Bellingham where all facets of the campus are involved in planning to meet the changing needs and demands of Millennial students.

Figure 2: Chart of Generations

Source: (Strauss, 1991)

| Name of Generation | Birth years | Age in 2005 | Comments |
|---------------------------|--------------------|--------------------|--------------------------------------|
| Progressive | 1843-1859 | 145+ | not alive |
| Missionary | 1860-1882 | 123+ | not alive |
| Lost | 1883-1900 | 104-121 | only a few survivors |
| G.I. | 1901-1924 | 79-103 | |
| Silent | 1925-1942 | 62-79 | |
| Boom | 1943-1960 | 44-61 | 28% of population |
| Thirteenth (Gen X) | 1961-1981 | 23-43 | 16% of population |
| Millennial | 1982- | 14-22 | 34% of population (about 76 million) |

We have seen an increase in the size of our library orientations and instruction sessions on our campus. Hazel Cameron, librarian for the College of Business and Economics (CBE), provides information literacy classes to CBE. Many classes exceed the largest lab in the library. Leza Madsen, Librarian for Psychology, Dance and several

programs in the school of education, provides integrated instruction for those departments. In her Psychology 301 class, which has 125 students, she must repeat the two-hour classes four or five times each quarter.

The WWU library also needs more study space, more computers, more book stacks, more everything. Western is expanding the distance education course offerings as another way to accommodate more students. We have extended campuses and offer classes throughout the Puget Sound area from Bellingham, near the Canadian Border to Bremerton, a distance of about 120 miles. Other Washington state universities have also created extended campuses. Washington's community colleges cannot handle the overflow because they are also experiencing increased demands for their programs. Fall semester 2006, the state's largest campus, Seattle's University of Washington, has assigned four students to dorm rooms designed for only two students. The state has approved planning funds for a new four-year university in Everett thirty miles north of Seattle. Along with the increase in students, come increased costs.

Ethnic Diversity

The Millennials are the most diverse population in U.S. history. One in three is not Caucasian, one in five has immigrant parents, and one in ten has at least one parent who is not a U.S. citizen (Manuel, 2002). Thirty-four percent are black, Hispanic, Asian or Native American (Greenfield, 2006). From the 1980's on, daily interaction with other cultures and ethnicities has been the norm rather than the exception for this cohort.

Economics

Millennials are the richest generation in U.S. history. They grew up in an era of the largest financial boom in U.S. history. Researchers estimate Millennials will control

\$600 billion a year in spending power and will continue to be the richest generation in history (Anderson, 2000).

Most come from families with only one or two children, therefore they have received more individual attention than children in previous generations. They have been catered to with material goods, have more disposable income than previous generations and thus have been labeled “special”.

They have been described as the most wanted children in history. While the 1970’s saw the widespread use of birth control pills and abortion, the 80’s saw an increase in sperm banks, fertility clinics, adoptions, and test tube babies. Today childbearing years are being pushed beyond any previous limits. The number of teen pregnancies and abortions is down.

Profile of the Millennial Era

The 1980’s and 1990’s were characterized by rapid technological change; the rise of interactive technology with the ability to access information in a non-linear manner; and a move from text-based to visual and graphically enhanced information.

Rapid technological change

The 1980’s and 1990’s were dubbed the “Information Age” or “Knowledge Age”, so-called because of the rapid rise in technology, especially in the dissemination and control of information and new modes of communication. In the late 1990’s computers and media began to converge. A single device could transmit voice, data and video. Combined with unprecedented economic prosperity this meant that the new technologies became common household commodities. Millennials grew up with hand-held video games, camcorders, iPods, computers, cell phones and instant messaging

devices. “Consequently they identify with their (automated) gadgets as a key part of who they are (Prensky, 2001).

More techno-savvy than their parents, most Millennials have used online and electronic information far more than they have used print. From an early age they learned to search computerized catalogs, databases and the Internet. Many articles in professional library journals report that students consistently choose electronic materials over print, including books, serials and newspapers.

At WWU, professors often create assignments that require students to use print resources and limit the number of Internet sources they can use on a particular research assignment so that they will consult some print resources. In Hazel’s Cameron’s Information Literacy class (Library 125), she gave half the class an assignment using a print encyclopedia and the other half an electronic encyclopedia. Those using the online encyclopedia had no problem identifying different aspects of subjects discussed. They were able to gather all the relevant material together. Those using the paper-based encyclopedia often did not consult the index so went to only one place in the encyclopedia. As a result, they failed to find all the relevant material on their topics since it was in more than one volume.

Rise of Interactive Technologies

The Internet and handheld video games promote interactivity. Communication is two-way, as opposed to print's one-way capability. A computer fosters creativity through features such as hypertext links, web surfing, instant messaging and chatting.

Millennials have adjusted to the rapid streaming of information by skimming or picking and choosing bits and pieces of information, as a result, they may view information at a superficial level, rather than delving deeper into their topics. They may move about in a seemingly random fashion, favoring speed and convenience. No one student needs to follow the same path to discover the same information. This sharply contrasts to linear access in a print-based environment.

Change from Text to Image Environments

The Millennial generation grew up in a visual learning environment. They spent more time watching TV, playing video games and using graphical computer interfaces than previous generations. Games and videos were often designed for teaching. Millennials experienced learning as fun, entertaining and something that was a social activity (Tapscott, 1998).

As more information became electronic, more visuals were used. A shift occurred--- visuals not only complemented text, but often became the focal point, with the text complementary (Gross, 2003). Textual material is often presented as snippets, abstracts, or links that are clicked in order to read the full material. The immersion of Millennials into a graphical world meant that they developed sharper visual skills than their parents, who were more text-based.

It has often been falsely assumed that Millennials do not read, or that reading has decreased dramatically. In fact, in the past three years bookstores have reported increases of twenty to seventy-five percent in book sales to Millennial consumers. Books purchased by people under twenty five have jumped almost ten percent over the past four years and over one third of them list reading as their favorite pastime (Bhatia, 2001).

The assumption that students did not read was prevalent when Hazel Cameron became Western's librarian for College of Business and Economics in 2001. At that time no money was allocated in the budget to buy accounting books. The accounting faculty perceived that students did not read accounting books; they only read their textbooks and journal articles. Hazel Cameron wanted to ensure that this was true, so in 2002 she did an assessment of the accounting collection. One of the variables she examined was library circulation statistics which had been kept since 1995. Non-circulating items were not included in the observations. Findings indicated that forty percent of accounting books had circulated. Books are well used in this discipline, despite the fact that the library collection is aging. Her research indicates that this collection will be used more in the future, not less.

Figure 3: Accounting Collection Circulation Statistics

Source: Hazel Cameron

| Imprint Dates | # times circulated | Total Items | % |
|----------------------|-------------------------------|------------------------|----------|
| 1994 or earlier | 352 | 908 | 0.387665 |
| 1995 – 1999 | 25 | 39 | 0.641026 |
| 2000 to 2002 | 2 | 8 | 0.25 |
| Totals | 379 | 955 | 0.396859 |

The Millennial Lifestyles

The Millennial lifestyle was characterized by affluence and busyness. Children's lives were highly structured and they moved from one activity to the next. Their hours were filled with school, sports, and social activities, with very little "down-time." Multitasking was adopted as a necessity. New electronic devices were readily adopted as a necessity to keep track of busy schedules.

Affluence

With plenty of disposable income this generation can purchase computers, laptops, cell phones, iPods, and other technology. In his article, *Born with the Chip* (Abram, 2004) details the social impact of a generation that has never known a time without personal computers, cell phones, or the Internet. The NetGen are brand-conscious. The popularity of \$100 sport shoes or designer handbags has been well documented in the media.

Highly Structured

Seventy-five percent of the Millennials had working moms and twenty-five percent lived in single parent households (*Generation Y and the Future of Public Libraries*, 2001). These children were not latchkey kids like Generation X. Millennial parents had their children highly scheduled. Whether it was sports, clubs, classes, volunteering or working, one hallmark of their childhood and youth was goal-setting. A parent, teacher or mentor may have imposed the goals, but the results were the same: Today's Millennials are driven and busier than previous generations. The term "play date" appeared as parents even scheduled playtime for their children. Getting into the right nursery school, private school and college, has been the natural progression for many of them.

In consideration of their heavily booked calendars, classes, work schedules and meal services must be more flexible and library hours extended. Students expect to find service opportunities, clubs, campus organizations and activities as well.

WWU librarians have found that we may have to offer shorter instruction sessions or library credit classes and workshops due to students' heavy schedules. Recently we have re-evaluated our discipline-related workshops. Numbers have been steadily falling off and there have been indications that many students cannot attend the classes because they have no openings in their busy schedules.

Fast-paced Lifestyle

Technologies developed in the 1980's and 1990's allowed information and communications to move at a much faster speed. Millennials adjusted by processing information faster. Millennials often juggle text-messaging, surf the web, listen to music on their iPods, and read their homework at the same time. They have well-developed multitasking skills as they “seamlessly mix learning, communicating and playing” (Meister, 2006).

Another researcher states,

“...their capacity for parallel processing is increased which involves a more diversified form of concentration — probably less intense, and less centered on a single aspect” (Gross, 2003).

Dividing their attention into small fragments has had significant implications on the way NetGens learn. Researchers have shown the “quality of one's output and depth of thought deteriorates as one attends to ever more tasks” (Wallis, 2006). Most educators find that Millennials have short attention spans and have a hard time concentrating on one thing. They must be kept busy. Meyer's calls this, “habitual multitasking”, a state experienced when “people lose the skill and the will to maintain concentration and they get mental antsiness” (Wallis, 2006). They want immediate results. They become frustrated when things are delivered too slowly. As one student stated: “We want everything to be easy, and we want it now.... We have no patience” (Abram, 2004).

Millennial Characteristics

Researchers Frand, Howe and Strauss (2000, 2002) have identified a number of Millennial personality characteristics, values and attitudes, which influence their behavior. These include a remarkable tolerance for diversity, a preference for personalization, high expectations in school and work, and a desire for collaboration and connectedness. They also they place a high value on education and learning.

Diversity

Millennials, as a rule, are highly tolerant of differences, whether due to ethnicity, body piercing, tattoos, or green hair. This tolerance has been explained by the high degree of diversity within their generation. Data from the Higher Education Research shows interracial interaction among college freshmen at an all time high. In fact, it may be said they take diversity for granted.

Personalization

Millennials favor choice and they want to feel in control of their own destinies. The world in which they find themselves has offered a multitude of choices in products and services (Sweeney, 2005). Their parents have involved them in many decisions. Millennials value individualism, independence and demand services that cater to them. Because of their tremendous buying power, marketers and producers have created products especially for them and marketed directly to them. As a consequence, Millennials have come to expect customization and personalization. They want products

and services that are specific to their own needs and do not feel pressured to conform to the crowd. “If other Millennials liked a different type of jean, they did not feel the need to conform but wanted what they wanted and how they wanted it” (Sweeney, 2005).

High expectations

Millennial students are confident and optimistic with high expectations. Self-confidence was instilled in them from the time they were young. They also watched a large number of TV shows; videos and video games that portrayed a “hero generation” and many feel they have great abilities (Generation Y, 2001).

Their self-confidence is corroborated in a 2004 study conducted by professors Richard Ghiselli and Joseph La Lopa of Purdue's Hospitality, Tourism and Management Department. Their study explored the differences between students' job expectations and the realities of being a restaurant manager. Students surveyed said they expected to work 50.8 hours a week and earn between \$35,000 and \$37,900 at their first management jobs following college graduation. By comparison, managers actually work an average of 57.3 hours each week and earn between \$35,000 and \$37,900 - but only after working in the industry for nearly eight years. They also said they believed they should be promoted after working at a job for 12 months, while real managers indicated that it would take more than three years to become a full general manager of a restaurant (Allen, 2005).

Millennials have a preference for group activity. Their work style is highly collaborative and team-oriented and they often learn from their peers. Generation Y often grew up in single-parent households where they were the only child or had only one or two other siblings. Often both parents worked. In addition, many of their structured

activities brought them into daily contact with peers with whom they formed strong bonds and eventually they came to rely on their peers.

Communication technology has enhanced our ability to collaborate and connect. NetGens are frequently described as the most connected generation. Students communicate electronically with places geographically remote. The availability of inexpensive services such as SKYPE, YouTube, MySpace, Facebook and others, makes distance inconsequential. They stay in touch constantly using land phones, cell phones, beepers, personal digital assistants (PDAs), e-mail, Internet, instant messages (IM) and fax. Currently the cell phone is the device of choice. But even a cell phone is not just a phone--- it's a game player, a camera, TV, and it may have Internet access. Even when they are not physically with their friends or family, they are incredibly connected via text message or cell phone. As Internet "natives" the Millennials spend an average of 13 hours a week at computers. In one survey, when asked, they said they could live without TV but *not* without their computers. Their connectedness is more often virtual, and less in person. There is evidence that even though a student may be "connected", he or she may still be asocial---talking on a phone, but not to the people around them.

Along with the many positive aspects of connectedness come new challenges for educators. How do you communicate with a student wearing an iPod or MP3 player, talking on a cell phone or text messaging while you are lecturing? Connectedness has helped foster a closer relationship with their parents than the Boomer generation.

The new relatively new term “helicopter parents” is one familiar to many teachers. We frequently observe parents highly involved in the daily lives of their kids even after they come to college. In fact,

“The Millennial Generation...shows the smallest gap with the values of older generations than any teens has shown since the history of polling” (Kleinfeld, 2004). They often put family commitments above that of work or others.

Change in problem solving skills

Millennials have grown up with hand-held video games. Games allowed them to develop skills based on trial and error. If the first time failed, they would merely revise their strategy and try again. This furthered their exploration, discovery, and investigative skills. Jon Beck and Mitchell Wade (2004) point out that gamers can learn by making mistakes and there are no long-term penalties for doing so. Discovery skills often do not equip the Millennial with the accuracy skills needed in today’s world where errors are time consuming and affect the bottom line. One executive reported:

We hear complaints from midlevel managers (typically boomers) that their new employees (typically the Millennials or gamers) seem to solve problems by successive approximation: "I'm having to review work product from my team three and four times. It's as if making the PowerPoint is so easy, they just throw something together that looks good but they have not really thought it through. And they think that's normal. So I find the problems; they fix them; I find more. Repeat until deadline. They don't understand that by the time I see something, it ought to be as right as they can make it." (McCarthy, 2005, Allen 2005)

However, discovery and exploration skills mean that Millennials are more willing to try new things. They learn from experience that they must take risks to succeed. In today's world of rapid technological change, this generation seems better prepared to succeed. They will be the entrepreneurs of tomorrow. One observer stated:

"I really believe there is a substantial difference in people under age 25 versus those over 30 " ... I see it in their ability to navigate and explore and innovate.... is so dramatic it's unbelievable" (McCarthy, 2005).

Education and Learning

Millennials value education and learning. They believe it is cool to be smart. Three out of four college freshman project they will earn a graduate degree (Coomes, 2004). They spend more time doing homework and less time watching TV than previous generations and are goal-oriented and driven to succeed at school. Some push themselves by enrolling in university courses early and taking advanced placement exams. Parents can afford extra tutoring to ensure their children's success.

. A recent trend, which appears to be distributed throughout the U.S., is that females now outnumber males enrolled in colleges today. This can, in part, be explained by the fact that the Millennial population has more females than males.

They are smart – they average fourteen IQ points higher than their grandparents and seven points higher than their parents (McGaugh, 2005). One reason for their higher scores may in part be due to the fact that the brain changes as a result of changes in behavior such as gaming and the acquisition of a large number of new skills (Sweeney, 2005).

It is not surprising that Millennials want to control their education. They see themselves as education consumers who "want to learn only what they have to learn in a

style that is best for them” (Sweeney, 2005). As one writer stated, “They want what they want when they want it.” If we (colleges, libraries, etc.) do not have a good selection of materials in many formats, laptops, high speed Internet, they won’t come. They will go elsewhere. Perhaps this explains why we have ten Starbucks coffee stands on our campus---last year one opened in the library.

Along with their affluence, or perhaps because of it, Millennials are the most educated generation in history. Students want their education to be relevant. They want skills that are transferable to the workplace (Sweeney, 2005). This is one of the factors attributed to the sharp rise in the numbers of applications to technical schools and universities and colleges. About 1.5 million students now attend for-profit educational institutions in the country (Hemingway, 2003).

Librarians must prove the relevance of our services, classes and workshops. We often stress to students that library instruction sessions can save them time in the future if they become more efficient researchers. Students unanimously rate the classes highly after they have taken them. Some student comments from our class feedback forms say, “I wish I had taken this class earlier in my academic career,” or “This was really a valuable class, everyone should be required to take it.” The challenge is getting them into the class in the first place. We must focus on marketing our classes to show them how they will benefit.

Implications for Education

The new generation of students requires new approaches to teaching. Methods that address multiple kinds of intelligence are needed. Educators must create

collaborative, learner-centered models of education and focus on active engagement and 24/7 models of delivery for classes and student services.

Collaborative Learner-Centered Models

Millennials enjoy learning from each other and they want to share in making decisions that affect them. The research shows that they favor collaboration and collaborative learning environments. In response, instructors need to become more like consultants and guide the learning process rather than lecture for the entire time. As one author put it, we need to change from “sage on the stage” to a “guide on the side” (King 1993). Where lectures are necessary, they should be short with collaboration time built in. Ideally, learning should take part in groups or clusters which allows students time to share and learn from one another. Assessment could include peer comments. A collaborative model parallels students’ existing relationships, recognizes and encourages peer learning and provides variety. It seems ideally suited to Millennials’ short attention span.

Many teachers now provide opportunities for students to work in teams or groups. Last spring we co-taught a course in grant writing. Three instructors delivered content via lectures and guest lecturers; we employed BlackBoard, to post our PowerPoint presentations and lectures, which we recorded. We linked the recordings to the class web page so that students could listen to missed classes or review class sessions. The first week of class we suggested students form small groups to work together throughout the quarter. They teamed up on their projects and research. Students communicated with one other through the chat and threaded discussions. They posted their draft grant proposals to the site. Each group gave a presentation. They evaluated each other’s work and

provided feedback. In recognition of the fact that individual contributions vary, we asked each student to assign a grade to each member of their group. The instructors also assigned a grade. The final course grade factored in the student-assigned grades. The use of multiple lecturers, BlackBoard, pod casting, distance delivery and group presentations, resulted in extremely positive student feedback.

Redesign Learning Spaces

We need to create flexible learning zones where noise and group activity is acceptable and desirable, along with spaces for quiet study. Western Washington University has responded to this change by creating more communal spaces within the library. In Western's main library there is a sky bridge connecting our two separate library buildings. Casual, comfortable chairs are available. Inevitably by the end of the day the chairs have been pushed together. Students sit in groups on the floor. Study carrels are being removed in favor of group seating. The number of soundproof study rooms in the library is being increased.

Many articles on planning campus spaces indicate that dorms are being designed to incorporate social "hubs" even in laundry rooms, halls and bathrooms. The spaces are being designed to encourage and facilitate "sociability".

Universities need to provide state-of-the-art technology to meet students' demands. A large number of computers are required to deal with the increasing use of electronic information. Budgets for full-text databases and e-books are outpacing book budgets. More journals are being purchased in electronic format. Equipment purchases require additional space and funds. Campus computers must be upgraded regularly, although most budgets have not ensured the replacement of equipment. Students expect

wireless networks to accommodate their laptops. (If Starbucks can provide them, why can't universities?)

At Western a student technology fee was instituted to upgrade equipment and provide funds to build a student technology center with color scanners, video editing equipment, computers, and assistants on duty to help students with their projects. The fund was also used to purchase laptop computers which are checked out at the library and other places on campus.

Interactive Learning

Millennials prefer interactive learning situations. According to Prensky (2001), "...we now see much less tolerance in the workplace among the game generations for passive situations such as lectures, corporate classrooms, and even traditional meetings." Educators should use some of the technologies students are using. It is beneficial to capitalize on their use of new technology to form new and different ways of interacting with and dealing with our students. Millennials have developed technical skills as creators of web content, and many are experts at the use of pod casts, graphics, video and gaming. Instructors could post course notes with web links so students can explore relevant resources, they could develop web pages containing class materials, and they could create webographies, use pod casts and other visual media to deliver course content. Teachers could also set up discussion boards, chat, or email and take advantage of other networking opportunities to encourage their students to collaborate with one another. More wired classrooms and learning centers will be needed.

Educators should also incorporate elements of discovery in their classes --- Millennials like to be first-person learners involved in real life situations. We should place more emphasis and provide opportunities for service learning. It might also be possible to develop simulation technology or games for part of the content to enhance the “edutainment” or play aspect of learning.

In Hazel Cameron’s Information Literacy class Library 125, the students played a variation of the popular TV reality show, *Survivor*. The class was divided into teams or tribes. Questions were flashed on the projection screen. Teams had to wait for the go signal and use the online catalog to answer the questions using “best practices” for searching. They were asked to stand up when they had the answer and share how they found it. The winning team of each round got an idol (a small chocolate), which gave them immunity. When a team lost more than two rounds, it had to vote off a team member who was banished to “Outcast Island”. Those with an idol were protected from being banished. One out of every five questions was a redemption question that could be answered by any team member or individual on Outcast Island. If someone on Outcast Island answered correctly they were restored to their team. Student response was overwhelmingly positive.

Student Services 24/7

Millennials want services available -- on demand anywhere, anytime, 24/7. They do not want to attend all their class lectures during scheduled hours if they believe they could learn the material online at any time. They want courses designed to meet their convenience, not the convenience of their instructors. They want maximum flexibility. They want to control their own learning and be able to learn the material at their own

pace with whatever resources they have available to them. In response, some components of learning could be self-paced and available to students online. Choices could be available so students can choose to attend a lecture or listen to it at a time and place of their choice. The practice is now being employed at some universities. The University of Washington offers pod casts of many classes. When instructors were asked if pod casts reduced class attendance, they responded that some students attended classes *and* listened to pod casts, others did not attend as many of the regular classes, but faculty were not concerned as long as the students learned.

Students should also be given more assignments that are customized to their needs. There has been a tremendous increase in the number of distance-delivered courses, Blackboard, WebCT and other methods combining classroom and distance-delivery.

Changing educational relationships

In this era of rapid change the information the students learn is quickly obsolete. Students will be lifelong learners and as such, it is important they learn how to learn. As Frond states:

“In many disciplines, the half-life of information is measured in months and years. From this perspective, what a person can do is more important than what degree they obtained” (Frond, 2000).

Frond also predicts the creation of more alumni and professional networks and the formation of learning and scholarly communities. He envisions a change in focus from an internal, on campus, temporal experience to one that is external, global and lifelong (Frond, 2000).

Conclusions

Technology has played a major role in shaping the Millennial generation. Technology has brought individuals and classes together from great distances, changed the way people interact, and influenced their family and social relationships. U.S. demographic trends forecast a society that is increasingly dependent upon technology, is racially and ethnically diverse, affluent and highly educated.

New technology allows us to present information in many new and different ways. Students today can explore, discover and interact with information. This in turn has changed the way students learn.

Communication speed continues to increase dramatically. Millennials have adapted to the increased speed of delivery by multitasking and skimming. All of these factors have affected educators and educational institutions. In response, educators will need to change teaching methods, integrate new technology, plan student services and design spaces for the newest generation of learners. They need to design education that is more personalized and customized to suit individual students, rather than groups. The use of online education, distance-delivery, service learning, and the use of peer evaluation and group learning all are steps in the right direction.

Change comes at a high cost. It will not be possible to enact all these changes all at once or single-handedly. In an era where lifelong learning will play an important role new learning communities will need to be forged and resources and knowledge shared.

As Goldenberg-Hart suggests: “We are no longer in an era when even a well-endowed institution can proceed alone. What are needed are alliances among institutions...”

(Goldenberg-Hart, 2004).

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