

A Galaxy of Online Learning Style Ideas and Generational Learning Preference Comparisons

Curt Bonk, Professor, Indiana University
 President, SurveyShare, Inc.
 cjbonk@indiana.edu
<http://php.indiana.edu/~cjbonk>
<http://SurveyShare.com>

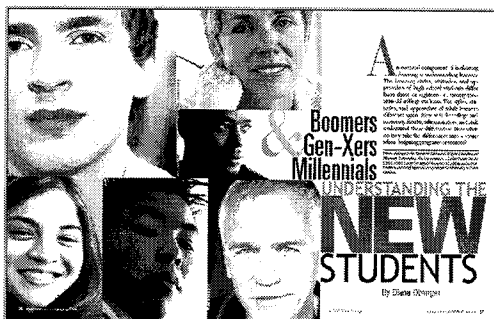


Effects of interactive multimedia in distance learning

Giti Javidi and Ehsan Sheybani, 2004, In Proceedings of the IASTED International Conference WEB-BASED EDUCATION

"The advancement in technology is shaping every aspect of our life, including education. One decade ago, the Internet was not critical to education. However, now, it has become an integral part of learning process. Internet technology is having a dramatic effect on colleges and universities, producing what may be the most challenging period in the history of higher education."

Generational Learning Styles



Students Returning to Campus with High Tech War Chest

Syllabus Magazine, August 24, 2004

- 90% own computer (65% broadband connect)
- 86% a calculator
- 84% a television
- 77% a cell phone
- 77% a printer
- 74% a DVD player
- 70% play games with phone
- 62% own a stereo
- 62% of 18 to 24 yr old text message with phone
- 55% own a gaming system.
- 41% with cell phones access Internet



Boomers, Gen-Xers, and Millennials: Understanding the "New Students", Diane Oblinger, Educause, July/August, 2003

Millennial Learning Preferences: (study of students age 12-17)

1. Email—81 percent
 2. Instant messaging—70 percent
 3. Internet for research—94 percent
 1. Also blogs, PDA, cell phones, wikis, etc.
- University students:
1. Own a computer—84 percent

Demand for Internet in US (Special MSNBC report, Dec 13, 2004)

Always online -- and always talking
When these days, without a word is an eternity




Photo: Peter Dinklage for MSNBC

Tech-savvy youths
More than any previous generation, today's young people are plugged in -- all the time -- with a wealth of communication and information at their fingertips.

Difficulty in disconnection
As technology continues to influence some are choosing to unplug from their gadgets. Others say it would be difficult to do so.

Percentage who say it would be difficult to disconnect by age, August 2004

Age Group	Young Tech (18-29)	Older wired (30-49)	Baby Boomer (50-69)
Computer	74%	54%	34%
Internet	65%	45%	24%
Email	67%	44%	24%

Average minutes per user per month by age, September 2004

Age Group	18-29	30-39	40-49	50-59	60-69	70+
Computer	1,200	800	500	300	200	100
Internet	1,000	600	400	250	150	75
Email	1,100	700	450	300	200	100

SOURCE: Pew Internet & American Life Project

Generation raised on Internet comes of age Online interaction considered just normal part of life

Tech / Science
Space News
Science
Tech News/Reviews
Space/Cons/News
Wireless Life
Games
Special Reports

MSNBC TV
News
Entertainment
Sports
First/Lastword
Tech / Science
Wealth
Health
Travel

Upfronts
Live Shows
Newsweek
Friday Show
Nightly News
Meet the Press
Dateline NBC



By Martha Irvine
The Associated Press
Updated: 8:54 p.m. ET Dec. 13, 2004

Even when he's asleep, Scott Stearns is hooked into the

Age and Interaction Preferences

- Older people prefer less interaction than younger people in distance education (Kearsley, 1995).
- Older trainees prefer private implementation activities (i.e., individual learning), not small group discussions (Vampola, 2001).

Boomers, Gen-Xers, and Millennials: Understanding the "New Students", Diane Oblinger, Educause, July/August, 2003

Nontraditional Students:

- Delayed enrollment
- Attend part-time
- Work full-time
- Are financially independent
- Have dependents
- Are single parents
- Lack a high school diploma

The Generations

HIGHER EDUCATION, BLENDED LEARNING AND THE GENERATIONS:
KNOWLEDGE IS POWER-NO MORE, Dziuban, Moskal, & Hartman (in review)

- Mature/Silent: prior to 1946
- Baby Boomers: 1946-1964 (or 1961)
- Gen Xers: 1965-1981 (or 1961-80)
- Millennials: 1982-??? (the new learner, the Net Generation, Generation Why?, Nexters, the Internet Generation)
- Neomillennials???

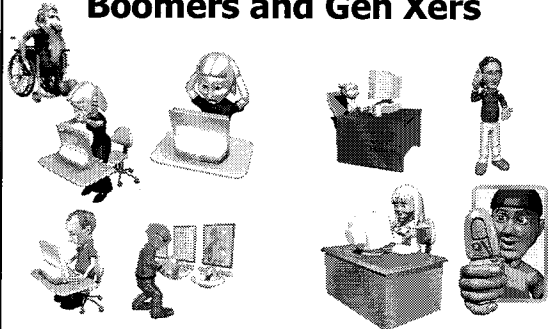
Generations: Dealing with Boomers, Gen-X, and Beyond

N. Boyce Appel, April 1, 2005, Practice Management Digest

Generalizations about Generations—Categorizations vs. Stereotypes

Generational Group	Born	Age	Stereotype
Silent Generation	1925 - 1942	61 - 78	Adaptive
Baby Boomers	1943 - 1960	43 - 60	Idealists
Thirteenth (Gen. X)	1961 - 1981	22 - 42	Reactive
Millennial (Gen. Y)	1982 - ?	13 - 21	Civic

Differences between Boomers and Gen Xers



Generation Xers

The Bresnahan Group 2000

- One thing Generation Xers don't like is being called "Xer!" This is due to a lot of negative publicity.
- So, are Generation Xers the lazy, whining, cynical, disloyal, arrogant, scatterbrained people they are purported to be?

Generation Xers

The Bresnahan Group 2000

- They look for a manager who will coach and develop them, invite them to contribute, and recognize their efforts. If this atmosphere is not provided, they will leave when the opportunity presents itself.

Generation Xers

The Bresnahan Group 2000

- Xers regard companies as places to grow, not places where they will grow old. Their focus is on gaining skills and knowledge that will qualify them for the next job.

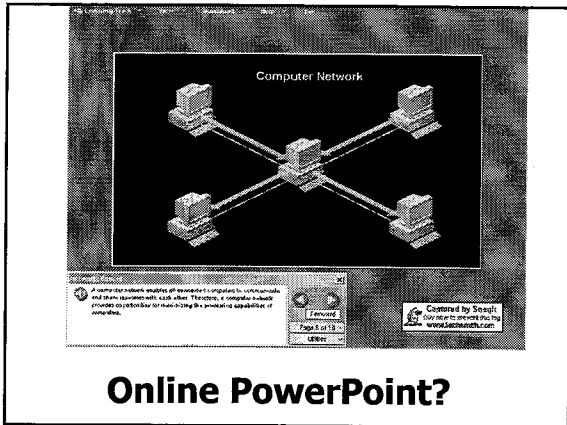
Generation Xers

The Bresnahan Group 2000

- They focus on the end results, therefore it is important to know upfront why information is needed. They like to be involved and look to control their own destinies. They resent and resist being force-fed.

Independence: Boomer (from Learning: Generation Does Matter, Leslie Darling, CLO, Element K, CLO Magazine)

- Dependence on instructor or authority figure to define and support learning.



Online PowerPoint?

Independence: Xer (from Learning: Generation Does Matter, Leslie Darling, CLO, Element K, CLO Magazine)

- Having grown up for the most part with both parents working/furthering their education, Xers are used to getting things done on their own. Hence, they tend to be independent problem solvers and self-starters. They want support and feedback, but they don't want to be controlled. (Brown, Bettina Lankard, 1997)

Technology: Boomer (from Learning: Generation Does Matter, Leslie Darling, CLO, Element K, CLO Magazine)

- Most boomers became aware of computer technology later in their education or in their careers. The computer is seen as a "nice to have" tool to do things they used to do manually or with paper and pencil. The translation of "how would I do this with the computer" is usually made.

Technology: Xer (from Learning: Generation Does Matter, Leslie Darling, CLO, Element K, CLO Magazine)

- Generation Xers are technologically literate because they grew up with computers as part of their working world. They consider computer technology as a "need to have," not a "nice to have." Technology is an expected way of accessing information.

Entice with Technology Giveaways

NEWS
 Great gives out PDA to education students

Gateway M275 tablet PC, Winona State University, Mayville State University
 The schools will provide the tablet computers to full-time students who do not have laptops from previous programs.

Slickberry 7330 PDA, University of Maryland
 The school has begun handing out the sleekest personal digital assistants to faculty and more than 200 full-time graduate students in the Smith School of Business.

Students get PDA to help them in education

Gen Xers in Workplace (the diffs)
N. Boyce Appel, April 1, 2005, Practice Management Digest

- More collaborative and independent
- Less hierarchical
- More altruistic
- Good at dealing with change
- More comfortable with women bosses
- More skilled in management

Gen Xers in Workplace (the diffs)

N. Boyce Appel, April 1, 2005, Practice Management Digest

- More tech-savvy (the first real information-age generation)
- Candid in communication
- Self-reliant
- Rule-shy
- Not intimidated by authority
- Creative
- Strive for real balance between work and private life
- Desire workplaces that feel like communities

Gen Xers in Workplace (worst things)

N. Boyce Appel, April 1, 2005, Practice Management Digest

- Fear-based environment
- Poor time management
- Micromanagement
- Politically based culture
- Indirect communication
- Opinions and ideas ignored
- Prevalence of lip service, not action

Gen Xers in Workplace (worst things)

N. Boyce Appel, April 1, 2005, Practice Management Digest

- Failure to give feedback and regular performance reviews
- Meaningless raises
- Insincere, gratuitous "thank you's"
- People thrown into jobs without training
- Disorganized, cluttered, or dirty workplace
- Not telling the "why's"
- "Because I said so" or similar attitudes
- Unacceptable staff behavior overlooked.

Gen Xers in Workplace (best things)

N. Boyce Appel, April 1, 2005, Practice Management Digest

- Team-based management
- Diversity
- Exploration
- Experimentation
- The idea is the power, not the person
- Team and individual credit
- "Resume building" opportunities.

Gen Xers in Workplace (best things)

N. Boyce Appel, April 1, 2005, Practice Management Digest

- Appreciate us. Show you care.
- Be flexible. Let us have a life beyond work.
- Create a team. Give us the family we never had.
- Develop us. Help us to increase our skills.
- Involve us. Ask our opinions.
- Lighten up. Remember, it's not brain surgery.
- Walk your talk. Practice what you preach.

Gen Xers

(Neil Yamashiro, 1998, US Army National Guard)

- Cynical, have different values, distrust older generation, have a distorted view of reality, spent a lot of time alone, products of divorce, competitive, do not feel loyalty to an organization, believe in getting what they can—situational ethics, desire instant gratification without having to work for it, independent

**Boomers, Gen-Xers, and Millennials:
Understanding the "New Students", Diane
Oblinger, Educause, July/August, 2003**

Attributes of the info age mindset:

- Computers are not technology
- Believe it is cool to be smart
- Are fascinated by new technologies
- Reality is no longer real
- Doing is more important than knowing
- Learning more like Nintendo than logic
- Multitasking is a way of life
- Typing preferred over handwriting
- Staying connected is essential
- There is zero tolerance for delays
- Consumer and creator are blurring

Prefer online to traditional!

EDUCATION with Student News

Students prefer online courses

Classes popular with on-campus students

Friday, January 12, 2006; 9:18 p.m. EST (00:18 GMT)

(AP) -- Andy Steele lives just a few blocks from the campus of Black Hills State University in Spearfish, South Dakota, so commuting to class isn't the problem. But he doesn't like lectures much, isn't a morning person, and wants time during the day to restore motorcycles.



So Steele, a full-time senior business major, has been taking as many classes as he can from the South Dakota state system's online offerings. He gets better grades and learns more, he says, and

Andy Steele takes an online course in the library of Black Hills State University.

Relevance: Boomer

- Learn "what" or "how" first, and the "why" may come later as part of experience.

Relevance: Xer

- "What's in it for me?" is a question to which Gen Xers require the answer before they take the time to learn what or how.

Lifelong Learning: Boomer

- An expectation of working in the same organization for the life of your career. The concept of learning is based on specific events (college education, specific training programs).

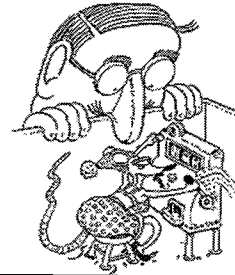
Lifelong Learning: Xer

- Generation Xers do not expect to grow old working for the same company, so they view their job environments as places to grow. Learning is considered a continual process. They seek continuing education and training opportunities; if they don't get them, they seek new jobs where they can continue learning!

Simulation: Boomer

- Life experienced at a slower pace promotes an expectation of "it's ok to wait." Learning experienced from an early age as lecture with drill and practice without stimulation/response. Gaming as part of a learning context may be considered less effective because it is less "serious" and in some cases can be distracting.

Behaviorist Interactivity



Simulation: Xer

- Conditioned to expect immediate gratification (they grew up with drive-through fast food, remote controls, automatic teller machines and microwave ovens), and an expectation that learning should be stimulating and fun (Sesame Street). Generation Xers crave stimulation and expect immediate answers and feedback.

Simulation: Xer

- Genxers have a rapid-fire information consumption capability. Rushkoff argues that many of the things for which this generation is maligned, such as short attention spans and lack of ability to concentrate on a single task at once are not problems but actually brilliant coping mechanisms for a world overloaded with information.

Simulation: Xer

- To older generations, "Xers seem impatient for answers, always demanding information, asking questions, and pursuing multiple lines of enquiry simultaneously. What looks to some [adults] like a lack of attention in Xers is, rather, a rapid-fire style of interacting with information which comes naturally to us as children of the information revolution." (Tulgan, 1995:173)

Simulation: Xer

- "The skill to be valued in the twenty-first century is not the length of attention span, but the ability to multitask - to do many things well at once.... [and] the ability to process visual information very rapidly." (Rushkoff, 1996:50)

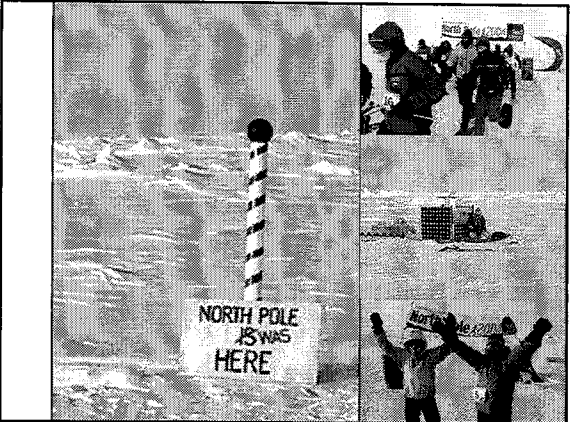


**Comfort with Unknown:
Boomer**

- Discomfort is avoided. If I don't know how, I ask for assistance. "Trying it on your own" activities are not the norm.

Comfort with Unknown: Xer

- As illustrated by their involvement in extreme sports such as bungee jumping and sky surfing, Generation Xers are fearless. (Brown, Bettina Lankard, 1997)
- Hand-holding and baby steps are not expected and in some cases resented. Challenge is expected more than comfort.



Learner Control: Boomer

- The traditional instructor-focus is what is expected. The instructor determines what is important to learn and how it should be learned. Consistency and control are maintained with the "tell me, tell me, tell me" approach.

Learner Control: Xer

- Xers expect a range of options, in terms of what they learn and how they learn it. They require autonomy and flexibility for their own learning. They demand a variety of instructional methods from which they can choose to learn, e.g., videotapes, self-paced modules, interactive CDs.

Millennials Least Favorable to Blended—Why?

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KNOWLEDGE IS POWER—NO MORE, Dziuban, Moskal, & Hartman (in review)

Perhaps cannot relate to technologies offered to these students. Millennials say:

"I spend more time reading and reviewing without the professor telling me everything there is to know."

"I respect myself more as a self-teacher."

"Learning that takes place in the classroom isn't as important as time studying on your own."

"Online gives me something to do when I'm bored with the professor."

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Millennial Learning Preferences:

- Teamwork
- Experiential activities
- Structure
- Use of technology

Neomillennial Learning Styles

Planning for Neomillennial Learning Styles: Implications for Investments in Technology and Faculty
Chris Dede, Harvard University, Educause, 2005

- Fluency in multiple media--value all types of communication, activities, experiences, rather than working in a single best medium
- Actively seek, collect, and synthesize experiences, rather than absorb a single best source
- Active learning with opportunities for collective reflection
- Non-linear and associated webs of learning rather than linear stories
- Co-design of learning experiences personalized to individual needs and preferences instead of pre-customized

Neomillennial Learning Styles

Planning for Neomillennial Learning Styles: Implications for Investments in Technology and Faculty
Chris Dede, Harvard University

- Blended/personalized places (not specialized computer labs)
- Mobile wireless computing
- Avatars and personal agents
- Smart objects
- Virtual worlds
- Augmented reality



MAY 1, 2006, Business Week Online: My Virtual Life A journey into a place in cyberspace where thousands of people have imaginary lives.



Digital Movies of Campus Life



Future of Instruction

Planning for Neomillennial Learning Styles: Implications for Investments in Technology and Faculty
Chris Dede, Harvard University

- Learners influence design of content, pedagogy, and assessment based on individual preferences and needs
- Knowledge sharing among students as a major source of content
- Guided social constructivism and situated learning as major forms of pedagogy
- Case-based participatory simulations complement presentational/assimilative instruction
 - Current = passive, one size fits all

Interactivity & Continuing Motivation

- **"The convenience is nice, but that's not what keeps it. It makes you want to try it, but it's not what keeps you interested in it. It's got to have more interaction. It doesn't hold my interest as long as what I think it should, and I think if there was some more interactivity of a program, then it would really keep my interest more, and I would be more enthused about taking more courses."**

- An adult student who took a Dreamweaver course

Reasons for Not Completing the Course (KJ Kim, 2005)

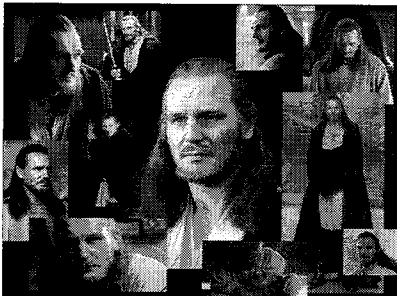
Reason	Frequency	Percent
1. I was too busy.	19	5.2
2. The content was not relevant to me.	14	3.8
3. It was too boring.	14	3.8
4. There were technical difficulties.	9	2.4
5. I got all the information that I needed to get from the course.	9	2.4
6. Other	7	1.9
Total	79	100.0

Implications of the Findings (KJ Kim, 2005)

Principles for Designing Self-Directed e-Learning Environments to Sustain or Increase Learner Motivation

1. Provide learners with content that is relevant and useful to them.
2. Include multimedia presentations in the course that simulate the learner's interest.
3. Include learning activities that simulate real-world situations.
4. Provide learners with content that the difficulty level that is just right for them.
5. Provide learners with hands-on activities that engage them in learning.
6. Provide learners with enough feedback on their performance.
7. Design the Web site that is easy to navigate.
8. Design the course in a way that the learner is satisfied with the overall learning experience.
9. Incorporate some social interactions in the learning process (e.g., interaction with instructor, technical support staff, or animated pedagogical agents).

Addressing Learning Styles



Why Address Learning Styles?

- Promotes reflection on teaching
- Move from just one mode of delivery
- View from different viewpoints
- Offer variety in the class
- Might lower drop-out rates
- Fosters experimentation



