Why Use Technology in Your Classes?

Reflective Practice Presentation

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by
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20th Century Generations

- Greatest Generation, 1901-1924
- Traditionalists, 1925-1945
- Baby Boomers, 1946-1960
- Generation X, 1961-1981 (Rivera & Huertas)

Know Your Students' Generation

The first step with any acceptable Instructional Design model is to assess your audience.

This is a *must* before creating your courses.

So, Who are Your Students?

- Labeled as Millennials
- Born between 1982 and 2002 [dates vary slightly depending on reference]
- Also known as the ‘Net Generation,’ they have grown up with information technology

Characteristics of Millennials

- Optimistic/Confident
- Collaborative; they enjoy cooperative activities
- Used to clear structure from adults;

  in fact, they expect it
- Have strong parent advocates (Newburn)
- Multicultural

Characteristics, Cont'd

- Civic-minded
- Goal-oriented/Multitaskers (Newburn)
- No brand loyalty (Carlson)
  - Accept as their right the ability to make choices and customize the things they choose
- Not identified by one music genre
- Tech-savvy, digital natives

Optimistic/Confident

Today's college students have grown up hearing . . .

- You are special
- You are smart
- You can do it! (Rivera & Huertas)

They are being raised at the most child-centric time in our history. They are showered with attention and high expectations from parents resulting in self-confidence that can almost seem like cockiness. (Thielfoldt and Sheef)

Optimistic/Confident, cont'd

Today's students have been more protected than any other generation:

- Wearing head gear, elbow pads, and/or knee pads when riding bikes/skating
- Using car seats
- Sitting in the back seat (Walker)

How did we 'Boomers' ever survive childhood!?

Collaborative

- Team-oriented; prefer to both learn and work in teams (Newburn)
- Gravitate toward group activities, perhaps because they have participated in so many from a young age; i.e., sports, dance classes, music lessons, etc.
- Enjoy peer-to-peer activities

Collaborative, Cont'd

Sweeney shares his observations from the New Jersey Institute of Technology:

"More and more students gather in groups to study. They pass around information from their laptops, pull information from the Internet, and learn together. In some cases, the students elect to work together in a group rather than go to class."

Clear Structure from Adults

Because adults have scheduled cooperative learning opportunities via sports, music lessons, and/or the classroom, Millennials have come to expect that type of environment. (Newburn) They have no tolerance for classes that are unstructured, which they deem to be wasting their time.

Clear Structure from Adults, cont'd

According to Prensky (2005), each student we teach today has *something* in his/her life that is really engaging – something that they do, that they are good at, that has an engaging, creative component to it. These may include downloading songs, playing video games, making movies, playing extreme sports. Whatever the activity, the students all do something engaging.

From this comes the motto of this group, *"Engage Me or Enrage Me."*

Strong Parent Advocates

- Millennials are very close to their parents
- As they in many cases are children of divorce, they tend to compensate with closer attachment to families and friends
- Because of the divorce, parents may tend to overcompensate by being involved
- Millennials feel the need to please their parents and have a deep love for them

Strong Parent Advocates, cont'd

- They report feeling pressure from parents to go to the top schools, participate in many activities, and to excel
- Many more Millennials are going to college and graduate school than any previous generation (Sweeney and Carlson)
- Parents of Millennials are often referred to as "hoverers." (Walker)
- These parents are also referred to as 'helicopter parents.'

Multicultural

- They are racially and ethnically diverse
  - According to Bhargava, 40% of Millennials describe themselves as being non-white
- One in five has at least one immigrant parent
  - They have grown up in a world of interracial relationships and see themselves as products of this world
- Millennials are more likely to be aligned by interests rather than ethnicity

Multicultural, Cont'd

The alignment by interests rather than by ethnicity is enhanced by students' access to social networks offered via the Internet such as MySpace, Facebook, blogs, etc.

Close friendships are no longer limited by geography. (Bhargava) As a result, ethnicity is less important than finding common pursuits.

Civic-minded

Many Millennials, during their high school years, were engaged in community service projects to meet graduation requirements.

This has left them wanting a focus on ‘the universal community’ in their classrooms. (McMillan) The universal aspect is also related to the social networking found in collaborative efforts.

Goal-oriented/Multitasking

- Millennials seem to shift mental functions (the major requirement for multitasking) easier, faster, more efficiently, and more comfortably than earlier generations
- Vast majority believe they are better at multitasking than older generations. Their visual, interactive, and experiential practices, such as with video and online games, reflects a preference for such sensory experiences (Sweeney).

Goal-oriented/Multitasking, Cont'd

To illustrate the gap between the old mind-set and the new, a true story (Sweeney):

A 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 responded.*
>
> *"Why?" asked the student. "I have an "A" in your course, and I can recite back what you have said."*

This is a 'cultural shift.' To the professor it was rudeness.

To the student it was, "Why shouldn't I do it in a way that works for me?"

Tech-savvy, Digital Natives

For Millennials – (Rivera and Huertas)

- Computers are NOT technology – ***Why***?
- The Internet is better than TV
- Connectivity is 24/7
- Technology and multitasking are a way of life

Tech-savvy, cont'd

- They use blogs, wikis, and/or podcasts
- Typing is preferred to handwriting
- Staying connected is essential
- Things are on-demand; they have zero tolerance for delays

Tech-savvy, cont'd

Millennials have spent their lives surrounded by and using computers, videogames, digital music players, video cams, cell phones and all the other toys and tools of the digital age (Rivera and Huertas). They have no recollection of these items not existing.

Tech-savvy, cont'd

- Simply put, for Millennials technology is a way of life.
- In fact, according to Walker, *more than 2 million American 6-17 year olds have their own web sites!*

Tech-savvy, cont'd, ECAR Study

The EDUCAUSE Center for Applied Research (ECAR) conducted their fourth annual study of undergraduate students and information technology in March and April of 2007. The web-based survey was administered online to 103 institutions across the country. Demographics of the **27,846 respondents**: 62.1% female, 89.5% are full-time students, 57.2% live off campus.

Tech-savvy, cont'd, ECAR Study Results

Table 1. What Electronic Devices Students Own

Type of Electronic Devices Owned	Males (N=10,458)	Females (N=17,117)	All
Simple cell phone (without Web access	85.3%	86.6%	86.1%
Personal computer-- desktop	66.3%	57.0%	60.6%
Personal computer– laptop	73.1%	74.0%	73.7%
Electronic music/video device	77.0%	76.1%	76.4%
Electric game device	73.5%	45.6%	56.3%
Personal digital assistant (PDA)	15.9%	9.4%	11.9%
Smartphone (combo cell phone/PDA)	14.9%	10.4%	12.0%

Tech-savvy, cont'd, ECAR Study Results

Table 2. How Many Electronic Devices Students Own

Number of Different Types of Electronic Devices Owned	Males (N=10,458)	Females (N=17,117)	All
None	0.2%	0.2%	0.2%
One device	1.4%	2.0%	1.8%
Two devices	8.8%	14.3%	12.2%
Three devices	22.4%	36.3%	31.0%
Four devices	37.8%	30.3%	33.0%
Five devices	29.3%	17.0%	21.7%

Tech-savvy, cont'd, ECAR Study Results

Table 3. Hours per Week Doing Online Activities, by Major

Major	N	Mean Hours per Week	Median Hours per Week
Engineering	2,650	21.9	16
Business	5,279	18.7	15
Humanities	2,868	18.7	15
Social sciences	5,332	17.8	15
Physical sciences	2,042	17.5	14
Fine arts	2,325	17.4	14
Life sciences	4,547	16.3	14
Education	3,638	15.9	12

Tech-savvy, cont'd, ECAR Study Results

Table 5. Student Computer and Internet Activities

	Students Engaged (N= 27,846)	Median Frequency of Use	Associated Demographic Factor 1	Associated Demographic Factor 2
Create, read, send e-mail	99.9%	Daily	-	-
Write documents for coursework	98.6%	Several times/week	-	-
Use library on university/college web site	94.7%	Monthly	Social sciences	Humanities
Create presentations (PowerPoint)	91.7%	Monthly	Senior	Business

Tech-savvy, cont'd, ECAR Study Results

Table 3. Student Computer and Internet Activities, cont'd

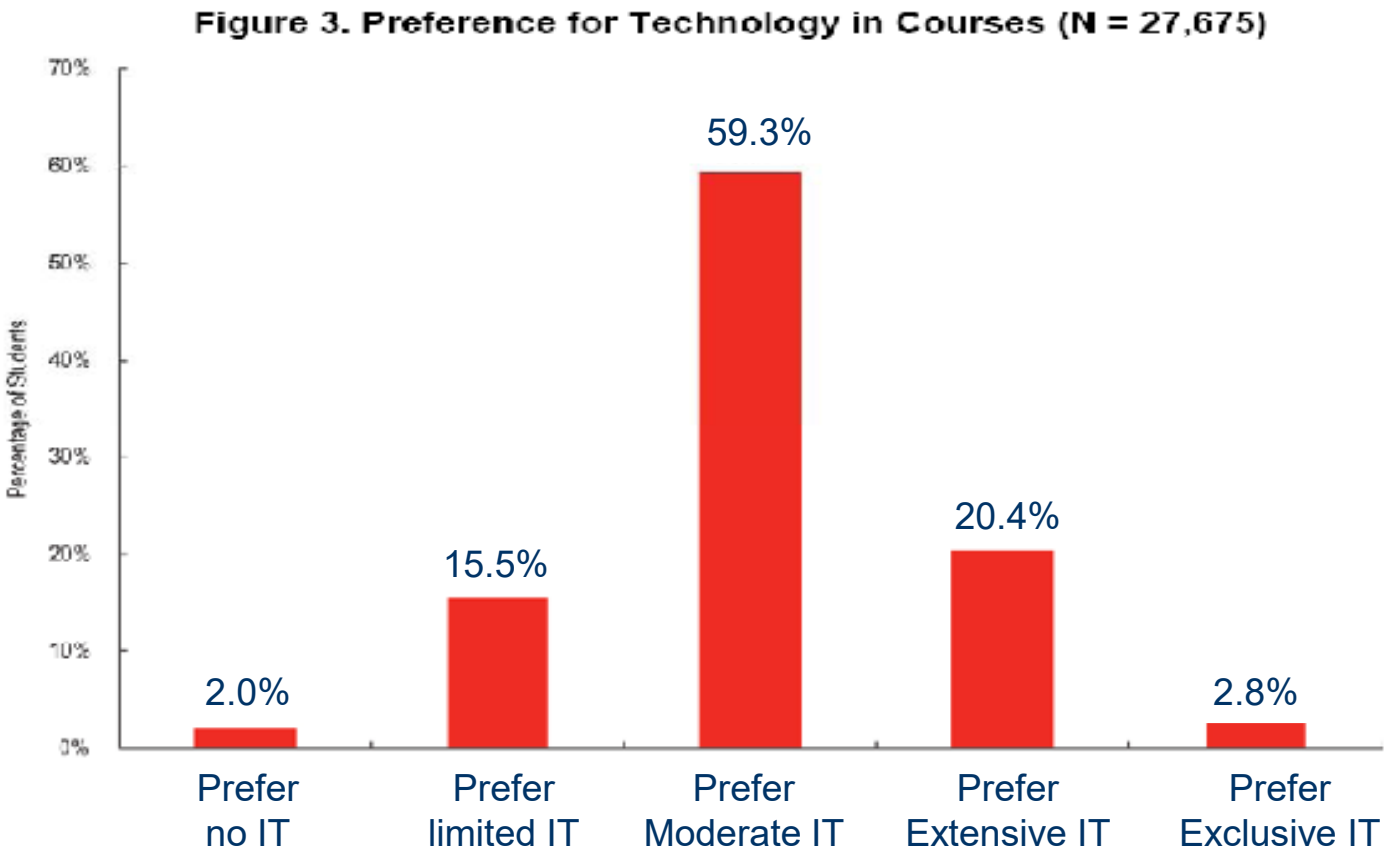
	Students Engaged (N=27,846)	Median Frequency of Use	Associated Demographic Factor 1	Associated Demographic Factor 2
Create spreadsheets or charts (Excel)	87.9%	Monthly	Senior	Engineering/ business
Online shopping	86.4%	Monthly	Senior	Male
Create, read, send instant messages	84.1%	Daily	Age (younger)	Reside on campus
Use course management system	83.0%	Several times/week	4-year institutions	-
Online social network (Facebook, etc.)	82.6%	Daily	Age (younger)	Reside on campus
Play computer games (online or offline)	78.3%	Weekly	Male	Age (younger)
Download Web-based music or videos	77.8%	Weekly	Age (younger)	Male
Create graphics (Photoshop, etc.)	72.3%	Monthly	Fine arts	Engineering

Tech-savvy, cont'd, ECAR Study Results

Table 3. Student Computer and Internet Activities, cont'd

	Students Engaged (N= 27,846)	Medians Frequency of Use*	Associated Demographic Factor 1	Associated Demographic Factor 2
Access or use wikis	41.7%	Weekly	Male	-
Create audio/video (Director, IMovie, etc.)	32.6%	Once per quarter/ semester	Male	Fine Arts
Create Web pages (Dreamweaver, HTML, etc.)	29.1%	Once per quarter/ semester	Male	-
Blogging	27.8%	Monthly	Female	-

Tech-savvy, cont'd, ECAR Study Results



IUP IT Support Center Sample Stats

Week Ending	31-Aug	7-Sep	14-Sep	21-Sep	28-Sep	5-Oct	Total
How Many Wireless Setup	381	83	68	103	76	49	760

Technology Implications for Faculty

Respondents to *The ECAR Study of Undergraduate Students, 2007* (Caruso and Salaway), identified the top five positives about IT as an enabler of learning:

1. Technology facilitates organization and control in the learning environment.
2. Technology facilitates communication with faculty and classmates.
3. Technology can make content more accessible, including class materials and Internet resources.
4. Technology in courses is valuable when directly linked to applications useful to future employment.
5. Technology is an enabler of learning when professors use it effectively.

Technology Implications for Faculty, cont'd

Respondents to ECAR's study also identified four categories about IT as a barrier to learning:

1. There are problems with technologies themselves and their institutional implementations and support.
2. The proliferation of technology has created a more complex learning environment.
3. Poor use of technology by faculty (underuse, overuse, inappropriate use, or over dependence of technology) detracts from the learning experience.
4. Instructors sometimes overestimate student comfort with or access to technology resources.

Technology Implications for Faculty, cont'd

- Instructor technology skill sets need to be better developed.
- Instructors should be trained on how to effectively integrate technology and pedagogy.
- Instructor and administrator awareness about how their students differ in technology savvy and access to technology resources should be heightened. (Caruso and Salaway)

Technology Implications for Faculty, cont'd

Newburn identifies the following as 'musts':

- Email – if you haven't started using it to communicate with your students, do so immediately.
- Blog – create a classroom blog where students can respond to prompts or to other students' work
- YouTube – consider searching through this site for videos that can enhance your curriculum

Technology Implications for Faculty, cont'd

Marc Prensky, who describes faculty as Digital Immigrants vs our Millennials who are Digital Natives, recommends that educators reconsider both their methodology and their content:

- Educators must learn to communicate in the language and style of the students, i.e., going faster, less step-by-step, more in parallel, and with more random access.

Technology Implications for Faculty, cont'd

Prensky continues:

- The content of future courses for Millennials is digital and technological but also includes the ethics, politics, sociology, languages, and other areas that go with them.
- Simplified, it means *learning new ways to present 'old' stuff*. This means adapting materials to the language of the Digital Natives.

General Implications for Faculty

Provide many challenges but also the structure to back it up, i.e., breaking down goals into steps and offering necessary resources and information students may need to meet the challenges. (Thielfoldt and Scheef)

General Implications for Faculty, cont'd

According to Rivera and Huertas, faculty need to work on:

- Providing a diversity of learning experiences in the classroom
- Conducting continuous research of what works for students to learn
- Providing experiential, interactive, and authentic learning
- Staying connected to their students
- Revising curriculum taking into account the Millennial learning styles

General Implications for Faculty, cont'd

Sweeney recommends:

- Offering a large number of alternative learning methods and opportunities from which students can select
- Utilize case studies, learning games, and interactive projects that are more likely to keep Millennials' attention

General Implications for Faculty, cont'd

Walker further recommends:

- Allow students ample opportunities to work collaboratively and in groups
- Present an environment where mutual respect is honestly practiced
- Implement a flexible schedule that has timelines, where the work is chunked into small amounts; give feedback in a timely fashion
- Permit students to multitask

General Implications for Faculty, cont'd

McMillan makes the following recommendations:

- Retool classroom for constant testing, feedback, monitoring skills and mastery
- Market a safe, protected, 'accountable' environment
- Prepare for students who have a lot and expect a lot
- Create an expectation of success for all, including special-needs kids
- Showcase groups and team skills

Conclusion

Prensky:

> "So, if Digital Immigrant educators *really* want to reach Digital Natives, i.e., their students, they will have to change. It's high time for them to stop their grousing, and as the Nike motto says, 'Just do it.' They *will* succeed in the long run."

Conclusion, cont'd

This is where your Instructional and Research Technologies team comes in. Our goal is to assist faculty in any way possible to meet the needs of the Millennials in our classrooms:

- redesigning instruction
- incorporating technology into curriculum
- implementing online components in a course management system

Conclusion, cont'd

You tell us what you need, and we'll make it happen.

- Visit us in G-1 Stright Hall
- Collaborate in G-33 Stright Hall
- Request individual and/or small group workshops

For more information, phone me at x7-7844 or email me at mlw@iup.edu.

Special Thanks . . .

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It is greatly appreciated! ☺

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