How Can We Meet the Needs of Our Digital Native Students?

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Characteristics of a Digital Native

• Like to receive their information quickly
• Like to multi-task
• Prefer graphics before text
• Function best when networked
• Thrive on instant gratification and frequent rewards
• Prefer games to "serious" work
Digital Immigrants

- Teachers need to learn to communicate in the language and style of their students
  - Don’t change the meaning of what’s important - but go faster, less step-by-step

- Rethinking needs to be applied to all subjects at all levels
  - We need to invent digital native methodologies for all subjects, at all levels, using our students to guide us.
Net Geners Want to Learn...

• One key characteristic of this generation is that they are very education oriented.
  o Educational pressure begins early - college-directed goals take hold as early as the first year of high school.

...But Net Geners Learn Differently

• They are unique in that they are the first to grow up with digital and cyber technologies - they are saturated with it.
• To Net Geners, who have "grown up digital," the social interaction and structure of the classroom is more important than the potential distractions of the Internet.
Teaching & Learning with the Net Generation

• Oblinger and Hagner (2005) observe that Digital Age students express a need for more varied forms of communication and report being easily bored with traditional learning methods.

• Glenn (2000) notes that Net Geners need self-directed learning opportunities, interactive environments, multiple forms of feedback, and assignment choices that use different resources to create personally meaningful learning experiences.

• Hay (2000) finds that Net Geners want more hands-on, inquiry-based approaches to learning and are less willing simply to absorb what is put before them.
Learning with Media & Multitasking

• Use of media in many different formats highlights another clearly notable characteristic of their learning style.

• They are accustomed to multiple stimuli, Net Geners report being bored in the traditional classroom
  • Net Geners claim multi-tasking simply helps them get everything done. Whatever the motivation, educators must contend with the fact that multitasking is a way of life for many of today's students.
Teaching with Media & Multitasking

• Classroom practices designed to accommodate emerging learning styles are gaining a foothold at all levels.
  o Educators are increasingly moving from the traditional lecture to discussion-based classes that allow for more individual expression.
  o Use of teamwork and reliance on experiential learning have become the norm rather than the exception in classrooms today.

• Educators should formulate strategies that meet students halfway while avoiding the pedagogical pitfalls noted by Baron and other concerned critics.
Social Interactivity & Learning

• Learning is a means to achieving professional ambitions.

• The Internet is a tool for learning and an essential part of social life. The distinction between Internet tools for fun and for work is thus a blurry one.

• To reach the Net Generation more effectively, educators need to consider strategies that exploit the social networking skills students exhibit outside of class.

• By incorporating the online habits of Net Generation students within the framework of clearly defined pedagogical goals, educators can tap into the distinctive proficiencies of their students while ensuring focused learning and positive outcomes.
The Internet is a complex tool that - with appropriate instruction - can provide access and skills students will use their entire lives. Janes (2007) claims that "searching . . . is the new reading. In an information world increasingly dominated by the digital and the networked, these kinds of skills are important, and increasingly more evident" (p. 38). But what exactly are these skills?

- The American Association of School Librarians and the Association for Educational Communications and Technology (1998) created these standards as a framework for information literacy.

  - Standard 1. The student who is information literate accesses information efficiently and effectively.
  - Standard 2. The student who is information literate evaluates information critically and competently.
  - Standard 3. The student who is information literate uses information accurately and creatively.
A New Literacy for the Digital Age

1. Effectively Finding Information - for students who are not strong spellers
   - encourage the use of Internet directories instead of traditional search engines
   - directories use preselected web sites to provide structure and allow browsing
   - Intute http://www.intute.ac.uk/, Librarian's Internet Index http://lii.org/, and Open Directory Project http://www.dmoz.org/

   for students with reading limitations
   - enhance a student's learning by selecting Web sites that pair text with graphic images (Salend, 2010)

- Kartoo.com- The most unusual aspect of Kartoo is that results are presented as a visual map using size and animation to indicate relevance and relationships.
- Ask.com- a traditional search engine that offers a small screen capture of each Web site. These screen captures allow you to see the site's layout and design before actually visiting the site.
- creating custom search engines reduces the number of results, but it also ensures that students will not be accessing inappropriate material during the search - Rollyo by Yahoo! (http://rollyo.com/) or Google Custom Search (http://www.google.com.libproxy.hbu.edu/coop/cse/)
2. Critically evaluating information- questions to ask yourself
   • The Source: Who provided the information?
   • Date: How old is the information on the Web site?
   • Bias: Why did this person post this information?
     o Biases can be difficult to see, especially for students with disabilities who have limited knowledge of the topic and difficulty interpreting the language (Mastropieri & Scruggs, 2010). Therefore, some students with exceptionalities would benefit from direct instruction by a special educator who can teach them how to identify author biases and differentiate between fact and fiction on web sites.
   • Audience: Who is this information for?
3. Properly Using Information
   • Plagiarism is a common example of improper information use in schools
   • Plagiarism can occur in different forms and for different reasons
   • One of the best ways to help students use information properly is for their teachers to be good role models. Teachers should educate themselves about Fair Use, the Public Domain, and Creative Commons and follow the guidelines as best they can.

*Teachers must raise their own comfort level with Internet searching so that they can better help their students find and use information online (Salend, 2010). Internet searching truly is a lifelong skill for all students, and we must commit to explicitly teaching these new information literacy skills (Mastropieri & Scruggs, 2010; Salend, 2010)*
Another way to reach our digital native students is to expose them to Video Games in the classroom.

In 2003 the initiative known as serious games was born. This was a result of video games being added to teaching and training. (Harmon, 2003 and Macedonia, 2002)
Why Video Games?

The initiative has changed the way educators have viewed instruction to meet the needs of the *Net generation*.

- Although video games have been around for over 30 years, it hasn't been until recently that they were incorporated into the classroom by way.

- The gaming population falls between the ages of 10-34, with the majority between 14-19.

- By the time our students reach these age ranges they should have already been exposed to the concepts of gaming. We as teachers have to make the games educational.
Childhood is a time for constructing the relationship between the world through play.

Learning to play is learning to master situations (Bateson 1972).

If early childhood already witnesses the use of play for educational purposes, then it's also time to build on the structure, leaving older children and adults will continue to use this structure to entertain and learn. This sends us back to the dual logic of play (Myers 1999).

Play 2 education and entertainment
Games are not just played, they are.....

- talked about
- read about
- fantasized about
- cheated at
- altered
- models for everyday life

There is a politics, an economy, a history, and social structure and function, and an everyday lived-experience of the game (de Castell & Jensen, 2003). This is life application first hand.

Imagine what life would be like for a teacher to hear students discuss, and interact with curriculum the way they discuss and interact with video games. Video games have been said to be the next best discovery, as they offer a way to captivate students to the point that they will spend hours learning on their own time (*FAS 2006)

* Federation of American Science
Learning with Video Games

Students of the Net generation live in media saturated environments as they spend an average of 6.5 hrs per day engaged with various media (Robert, Foehr, and Rideout, 2005).

- One advantage to educational games is that games tend to generate a much higher level of students' positive emotional engagement, thus making the learning experience more motivating and appealing (Rieber et al., 1998), improving participation and achievement (Jayakanthan 2002).
- Games can also motivate passive students to contribute more than they would in a traditional learning environment (Tanner & Jones, 2000).
- In addition video games motivate learning by challenging and providing curiosity, beauty, fantasy, fun, and social recognition. They reach learner who do not do well in conventional settings (Dede, 2004).
THE DIGITAL GENERATION:
TEACHING TO A POPULATION THAT SPEAKS
AN ENTIRELY NEW LANGUAGE

The 'True' Digital Natives

• Were born after 1987-1990.
• Also known as the Millennials.
• Came into a world where the World Wide Web already existed.
• Came into a world where much of our current technology was already in use. This includes computers, software, digital media and entertainment, etc.
Characteristics of the Millennials

- Gravitate towards group activity and social networking.
- Identify with their parents' values and feel close to them.
- Do not spend a lot of time watching TV and spend more time doing housework and homework.
- Associate a certain 'Cool factor' with being smart.
- Fascinated by new technology.
- Racially and ethnically diverse.
- One in five millennials has at least one immigrant parent (Oblinger 2003).
Different Generations in the Workforce

• FOUR GENERATIONS EXIST IN THE WORKFORCE TODAY (Gravett, 2007):
  o Radio Babies: born from 1930 - 1945; they are characterized as conservative, loyal and fiscally responsible.
  o Baby boomers: born from 1946 - 1964; they are ambitious, highly educated, having a strong work ethic.
  o Generation Xers: born from 1965 - 1976; they are independent, resulting from dual income families and a high rate of divorced parents, very self-sufficient.
  o Generation Yers: born from 1977 - 1990; they are accepting of differences in race, ethnicity, sexual orientation, etc., socially conscious.
A generation gap now exists in the workforce. For example, a certain organization may employ people from all of the above generations. Each generation has different methods of problem-solving and getting the job done. The younger generations (the digital natives) tend to rely more on instant messaging and use technology as a primary means of problem-solving. The older generation (the digital immigrants) depend more upon learned knowledge and use technology as a secondary means. This creates conflicts among the generations in the workplace.
The Need for Common Ground

• There are things that the Digital Natives and Digital Immigrants can learn from each other.

• Digital Immigrants will have to try and reprogram their brains to think outside the box. Methods of learning that may have been effective in the past are not necessarily as effective today.

• Digital Natives could learn to appreciate some learning methods of 'olden times'. After all, what would happen if suddenly the power went out??
How do we go from this ....
.... to this ?!
References


