Digital Natives and Digital Immigrants: Teaching in the 21st Century

Presentation by: Francisco Barocio, Donna Deerfield, & Cindy Shieh
What is a digital native?
Who is Marc Prensky?

Marc Prensky is a writer, speaker, consultant, and designer in the field of education and learning. He is well known for coining the terms digital native and digital immigrant.

*Digital native-* “native speakers” of the digital language of computers, video games and the Internet (Prensky, 2001, p.1)

*Digital immigrant-* those of us who were not born into the digital world but have, at some later point in our lives, become fascinated by and adopted many or most aspects of the new technology (Prensky, 2001, p.1-2)
Additional Categories

**Digital Recluse:** use of technology that is not by choice

**Digital Refugee:** unwillingly forced to use technology, does not trust electronic resources

**Digital Explorer:** uses technology to push the envelope. seeks new tools that can do more and work faster

**Digital Innovator:** adapts and changes old tools for new tasks, creates new tools

**Digital Addict:** dependent on technology, if technology is not available they will go through withdrawals

(Herther, 2009, p. 16)
Why is there a disconnect between digital natives and digital immigrants?

**Digital natives:**
- According to Dr. Bruce Perry, digital natives "think and process information differently than their predecessors" (as cited in Prensky, 2001, p. 1).
- "Digital Natives are used to receiving information really fast. They like to parallel process and multi-task" (Prensky, 2001, p. 2).

**Digital immigrants:**
- Today's "digital immigrant instructors, who speak an outdated language... [struggle] to teach a population that speaks an entirely new language" (Prensky, 2001, p. 2).
- Digital immigrants "typically have very little appreciation for the skills Natives have acquired" (Prensky, 2001, p. 2).
What do other people think about digital natives versus digital immigrants?
The myth of the digital native


by Rob Wall

Prensky says:
‘Lest this perspective appear radical, rather than just descriptive, let me highlight some of the issues. Digital Natives are used to receiving information really fast. They like to parallel process and multi-task. They prefer their graphics before their text rather than the opposite. They prefer random access (like hypertext). They thrive on instant gratification and frequent rewards. They prefer games to “serious” work. (Does any of this sound familiar?)’

Wall says:
‘When I watch students working with computers, I don’t see any evidence of digital natives. Their ability to use a computer to create a product - graph, spreadsheet, movie, etc. - is no greater or less that adults. There are undoubtedly some students who are very sophisticated computer users, but as a percentage of the population I would judge that they are equally well represented in the adult population’

- Are all the teenagers natives? (aptitude, economic, likes)
- Learners today have shorter attention spans (do they?)
- Today, learners are better at multitasking (are they?)
- This generation learns better with games (didn’t we also?)
- DNs don’t like lectures (who does?)
- DNs are a lot better at using technology (I’m better than my dad)

I do not think this is a discontinuity event between generations. It is just another change,
Support for Prensky: Modify Instruction to fit the Learner

"Middle School Tries Paperless Classroom" by Harrison Keely

-At Cleveland Middle School's Virtual Learning Academy in Cleveland, Tennessee, two teachers will teach class without using paper in order to introduce more technology to their students. Jim David and Sandra Farlow, the two teachers, say that they are opposites. While Mr. David calls himself a "digital native," Ms. Farlow refers to herself as a "digital immigrant." They think that middle school is the perfect time to teach curriculum while using technology. Each classroom will have 20 students. Mr. David believes that "an online environment provides students with more opportunity for success" (Keely 2010). Ms. Farlow thinks that "the focus on technology helps students see their capabilities without being held back by motor skills" (Keely 2010). An eighth grader at the school, Matt Ezell said that though "the classwork is more challenging than typical... it's very fun" (Keely 2010). He also goes on to say that "technology isn't the most effective tool for everyone... [it's] a great resource, but we don't want it to take the place of interaction" (Keely 2010).
Brain ReWiring Research

Gary Small:
- Ages 55-76
- Half well practiced in web searching
- Initially found that people with prior experience had much greater activation in their frontal lobe when they search online than those who had never searched online.
- A week later, the non group showed brain neural circuitry similar to those of the first group.
- It proved that there was rapid adaptation as we learn new technologies.
ReWiring The Brain

John Medina
- "The brain is in the business of reacting to its environment by continuously rewiring itself in response to external experience."

Gary Marcus
- "experience can indeed radically alter our cognitive capabilities"

Alvaro Fernandez
- "The brain is completely flexible, we never lose the ability to adapt, to learn, and even to generate new neurons.
- Digital natives can be more experienced, but "experience is something that can be overcome with training".
- "Today age is less important than attitude, behavior, and habit in terms of mental functioning and learning." (Herther, 2009, p. 17-20)
References

