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**Summer Institute**

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## Book Review

*iBrain: Surviving the Technological  
Alteration of the Modern Mind*

Presented by Sue Pearson

**2009 Summer Institute – Granlibakken, Lake Tahoe, California**

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iBrain: Surviving the  
Technological Alteration of  
the Modern Mind

Gary Small, M.D. and Gigi  
Vorgan

Sue Pearson

HET Summer Institute 2009



## Book's Focus



1. Key strategies for bridging the brain gap
2. A technology toolkit for digital immigrants
3. Tips for managing techno-brain burnout

“ The people who are crazy  
enough to think they can  
change the world are the  
ones who do.”



iBrain, p. 1

## Digital Definitions

### Digital Natives:

- A *digital native* is a person who has grown up with digital technology such as computers, the Internet, mobile phones and MP3. This group has never known a world without computers, 24-hour news, Internet and cell phones.



1. *Millennials* (most technologically savvy-value financial success, balance work and play)
2. *Generation Xers* (self-reliant, risk-takers)

## Digital Definitions

### Digital Immigrant:

- A *digital immigrant* speaks DSL, digital as a second language. These are people who came to the digital/computer age as adults (radio, telephone, TV-biggest impact)
1. *Baby boomers* (willing to challenge authority-Woodstock; work long hours; value individualism)
  2. *Seniors* (most traditional, respect for authority, least technologically sophisticated)



## INFO BYTE

2,800,000,000:


This is the number of people who are connected by handheld communication devices – 40% of the world's population. Enter the Mobile Wallet, a technological advance that allows cell-phone users to buy products and services over their cell phones. Mobile Wallet, the study says, “are projected to grow significantly, to 1.4 billion by the year 2015.”

Can you say “ka-ching?”



Delta Sky Magazine, February 2009

Digital Native Learners Prefer	Digital Immigrant Teachers Prefer
<ul style="list-style-type: none"> <li>Receiving information quickly and from multiple multimedia sources</li> <li>Parallel processing and multitasking</li> <li>Processing pictures, sounds and videos before text.</li> <li>Interact/network simultaneously with many others</li> <li>Learning that is relevant, instantly useful and FUN!</li> </ul>	<ul style="list-style-type: none"> <li>Slow and controlled release of information from limited sources</li> <li>Singular processing and single or limited tasking</li> <li>Provide text before pictures, sounds and videos.</li> <li>Students work independently rather than to interact/network</li> <li>Teach to teach the curriculum guide and to standardized tests</li> </ul>




## High-Tech Revolution

The high tech revolution is redefining how we:

- Communicate
- Reach people
- Influence people
- Exert political and social exchange
- Glimpse into the lives of co-workers, neighbors, celebrities, and politicians.
- Young minds tend to be the most exposed




## High-Tech Revolution



As a consequence of this high tech revolution (overwhelming and early high-tech stimulation of the Digital Native's brain), we are witnessing the beginning of a deeply divided brain gap between younger and older minds-in just ONE generation-resulting in two separate cultures.


## High-Tech Revolution

- This revolution has also plunged us into a state of *continuous partial attention*, described as continually staying busy-always scanning for contact
- Differs from multi-tasking* where we have a purpose for each task and are trying to improve productivity




## Loss of Face-to-Face Social Discourse

- Internet is replacing TV as prime source of brain stimulation.
- We rely on the Internet and digital technology for entertainment, political discussions, and even social reform as we chat with friends and co-workers.
- As the brain evolves and shifts its focus toward new technological skills, it drifts away from fundamental social skills such as *reading facial expressions during conversation or grasping the emotional context of a single gesture*



## Research/Studies



- 2007 University of Texas: study of more than 1,000 children found that on a typical day 75% of them watch TV, 32% watch videos/DVDs-total exposure? One hour 20 minutes. For 5-6 year olds, an additional 50 minutes is spent in front of the computer.
- Kaiser study: young people ages 8 to 18 expose their brains to 8.5 hours of digital and video sensory stimulation each day (most spent passively-watching TV/videos/DVDs, listening to music, video games, and using the computer)

Technology . . . The  
 knack of so arranging  
 the world that we  
 don't have to  
 experience it.

Max Frisch, architect and author



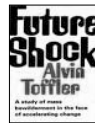
### 1. Key Strategies-Bridging the Brain Gap-Social Skills 101

- Reconnect with face-to-face offline communication exercises (3 T's-Tools, Town Hall, Tribes)
- Cut back on technology time. Track personal use-begin to decrease that amount by 10-20%.
- Make a conscious effort to spend time with people you care about
- Schedule regular family dinners (teens who reflect on day with families less likely to abuse drugs)
- Adopt healthy lifestyles-diet, stress reduction, exercise, off-line mental aerobics



“The illiterate of the  
 twenty-first century  
 will not be those who  
 cannot read and write,  
 but those who cannot  
 learn, unlearn, and  
 relearn.”

Alvin Toffler, author of *Future Shock*



### 2. Technology Toolkit

- Making technology choices
- Email-subject line; concise; mind your form, include message thread, note return address, to CC or not, attach w/care, keep up with your inbox, save important emails, manage your time, etiquette, BEWARE!
- Sending photos of self (sometimes sexually explicit)



### 2. Technology Toolkit

#### Search engines

- Trim your keywords
- Homepage search engine
- Advanced searches (using quotations)
- Online dictionary/thesaurus/almanac and phone book
- Calculator
- Get a library card



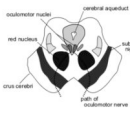
### 2. Tknlgy Tlkt

#### Text Messaging



- Short and sweet
- Do hand exercises-stretches to relieve joint stiffness, pain and tendinitis
- Best to avoid texting during meetings, meals, social interactions and while driving
- Use shortcuts-B4 2 long, u'l b txting 2

## 2. Technology Toolkit



### Online Safety and Privacy

- When safety becomes threatened, brain activity shifts parasympathetic gray area, a region that controls fight or flight.
- Change password on a regular basis; automated hackers can test up to 10 million per second-lower case letters only password can be compromised within 6 hours. Add upper case letters and numbers-may take thousands of years to break.
- Know company/district rules; limit surfing; double-check posts, create pdf's of documents-prevents misrepresentation, joke off-line

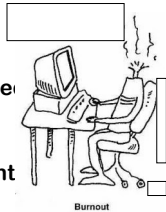
“It has become  
appallingly obvious that  
our technology has  
exceeded our humanity.”

Albert Einstein, Theory of Relativity



## 3. Managing Techno-Brain Burnout

- Vary management styles (pair techie savvy Millennial with corporate savvy Boomer)
- Vary learning environments: Generation X through web-based formats, Boomers through traditional classroom settings
- Multi-generational: grandparent with grandkids
- Improve human contact skills



## THE FUTURE BRAIN

- Will be tech savvy
- Ready to try new things
- Mastered multi-tasking and *paying attention*
- Fine-tuned its verbal and non-verbal skills
- Assert itself PLUS express empathy
- Excellent people skills
- Able to nurture its own creativity



“When looking at the future,  
the “what” is far more  
predictable than the “when.”  
And the “how” will always feel  
different than predicted.”



- Thomas Frey - Senior Futurist, The DaVinci Institute

“Never trust anything  
that can think for itself  
if you can't see  
where it keeps its brain.”

~J.K. Rowling~

