

CERT'S PODCASTS: SECURITY FOR BUSINESS LEADERS: SHOW NOTES

Cyber Security, Safety, and Ethics for the Net Generation

Key Message: Capitalizing on the cultural norms of the Net Generation is essential when developing security awareness programs.

Executive Summary

Students and employees born between 1981 and 1994 are members of the Internet (Net) Generation. This generation has grown up with the Internet, World Wide Web, cell phones, instant messaging, blogs, and social networks. Typically, they are team oriented and prefer visual, image-based content as well as experiential, interactive learning. They are digital natives and expect their academic institutions and organizations to speak the language.

In this podcast, Rodney Petersen, a Government Relations Officer and Security Task Force Coordinator for [EDUCAUSE](#), discusses effective ways to educate the Net Generation about cyber-security, cyber-safety, and cyber-ethics, taking their cultural norms and expectations into account.

PART 1: THE GENERATIONAL DIVIDE: DIGITAL IMMIGRANTS VS. DIGITAL NATIVES

Background on EDUCAUSE

EDUCAUSE is a non-profit association whose mission is “to advance higher education by promoting intelligent uses of technology.”

Membership includes 2,200 colleges and universities, and 250 corporations.

Current areas of focus include teaching and learning, managing the enterprise, evolving the role of IT in leadership, e-research, and e-scholarship.

Through Rodney’s role and office, EDUCAUSE works closely with Congress, federal agencies, other higher education associations, and IT trade associations to influence federal policy and regulations in privacy and security.

The Generations and What Distinguishes Them

Colleges and universities are very focused on generational issues as these greatly impact the delivery of education and services.

Generations are defined by birth cohorts who share common location and history or common peer persona that reflects their collective identity.

What distinguishes them beyond just their age are their social, economic, and technological perspectives and experiences. Generations include:

- **Matures** - born before 1946, they grew up during the golden age of radio with 78 RPM records, telephone operators, and party-lines.
- **Baby boomers** - born between 1947 and 1964, they grew up with TV, FM stereo, mainframe computers, and LP records.
- **Generation Xers** - born between 1965 and 1980, they grew up with video games, Unix, email, CDs, and Microsoft and Apple.
- **Net generation (NetGens) or millennials** - born between 1981 and 1994, this group grew up with the Internet,

- World Wide Web, mp3, DVDs, PDAs, cell phones, instant messaging, blogs, and social networks.
- **Post millennials** - born from 1995 to the present.

Digital Natives vs. Digital Immigrants

NetGens are native speakers of the digital language of computers, video games, and the Internet.

In contrast, baby boomers, as one example, might be referred to as digital immigrants given that they did not grow up with this technology and have had to learn its language later in life.

Today's technology (compared to previous generations) is more available, personal, mobile, powerful, multi-functional, multimedia, and communication-centric. This is what NetGens are used to and what they expect.

PART 2: NETGENS: HOW THEY USE TECHNOLOGY, HOW THEY LEARN

What NetGens Have Experienced by Age 21

By the time they reach 21 years of age, NetGens have:

- watched 20,000 hours of TV
- spent 10,000 hours on cell phones
- spent 10,000 hours playing video games
- sent and received close to 500,000 emails and text messages
- only spent 5,000 hours reading

How NetGens Behave

This presents unique challenges as NetGens attend universities and join the workforce. NetGens:

- are much more team oriented
- are much more social
- live in the moment
- at ease with multi-tasking
- prefer doing rather than hearing
- prefer experiential, interactive learning

What NetGens Expect

Their technology service expectations include:

- 100 percent uptime
- immediate response
- easy navigation
- the ability to personalize their environment
- having free access to everything online

Today's college and university students:

- pick their classes using [RateMyProfessors](#)
- get to know their classmates through [Facebook](#)
- share their lives on [MySpace](#)
- connect professionally through [LinkedIn](#)

Challenges for Cyber-security, Cyber-safety, and Cyber-ethics

As students, NetGens are used to always being connected and using technology to participate in social networks.

They tend to process information faster and are visually (vs. textually) oriented. They search online first vs. going to the library. They are producers as well as consumers of content.

As students and in their homes, they are used to high levels of freedom and openness. These high levels typically do not exist when using corporate computers and networks. This can create a culture clash.

Another challenge is NetGen mobility and their personal use of a wide range of mobile devices, most of which they will want to connect to academic institution and corporate networks.

Striking the Right Balance

While security is important, academic and business leaders need to appreciate that NetGens are extremely creative, engaged, and energetic. These traits are exactly what leaders need in corporate environments to advance innovation, science, and technology.

It is important to find the right balance between use of technology and corporate needs.

PART 3: CREATIVELY CONVEYING THE RIGHT MESSAGES

Cyber-safety

Many NetGen students are familiar with cyber-safety messages that they've been hearing since they were children and teenagers – staying safe online and protecting themselves from predators.

It can be useful to start from this vantage point when conveying messages about cyber-security and cyber-ethics – to be more safe, secure, and ethical online.

The Right Kind of Awareness and Education

To be relevant, cyber education content should employ multimedia and be both graphically oriented and visually appealing (as contrasted, for example, with a text-based policy and procedures manual).

Using computer games and other forms of video, such as those available on the Federal Trade Commission's [OnGuard Online](#) site, can be very effective.

The EDUCAUSE/Internet2 Security Task Force conducts a [student video contest](#) so students are involved in using multimedia video as well as developing content.

Peer-to-peer learning carries more weight than traditional approaches.

For Faculty

Faculty members who are teaching members of the Net Generation need to shift from being the traditional “sage on the stage” to becoming the “guide on the side.” This reflects a learner-focused approach that is more effective with this generation of students.

The EDUCAUSE [Learning Initiative](#) provides useful guidance to help make this shift, improve learning, and help faculty members better understand Net Generations' use of technology.

Resources

Federal Trade Commission's [OnGuard Online](#)

National Cyber Security Alliance's [StaySafe Online](#)

EDUCAUSE [Learning Initiative](#)

EDUCAUSE/Internet2 [Security Task Force](#)

Little, Julie K. "[The Net Generation: Balancing Freedom and Security in their Digital World.](#)" Securing the eCampus 2.0 Conference, Dartmouth College, EDUCAUSE Learning Initiative, November 2008.

Lorenzo, George & Dziuban, Charles. "[Ensuring the Net Generation Is Net Savvy.](#)" EDUCAUSE Learning Initiative, September 2006.

Oblinger, Diana & Oblinger, James, editors. [Educating the Net Generation](#), EDUCAUSE, 2005.

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