

Educating the Net Generation

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Diana G. Oblinger and James L. Oblinger, Editors



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Educating the Net Generation

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Technology and Learning Expectations of the Net Generation

Gregory R. Roberts

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Introduction

I am a member of the Net Generation. The Internet and related technologies have had a major influence on my generation's culture and development. Many, if not most, Net Generation students have never known a world without computers, the World Wide Web, highly interactive video games, and cellular phones. For a significant number, instant messaging has surpassed the telephone and electronic mail as the primary form of communication. It is not unusual for Net Geners to multitask using all three communication methods at once, while still surfing the Web and watching television.

Higher education often talks about the Net Generation's expectations for the use of technology in their learning environments. However, few efforts have been made to directly engage students in a dialogue about how they would like to see faculty and their institutions use technology to help students learn more effectively. Through a series of interviews, polls, focus groups, and casual conversations with other students, I gained a general understanding of the Net Generation's views on technology and learning.¹

Technology Expectations of the Net Generation

To better understand what the Net Generation expects from technology in support of learning, we must first understand how the Net Generation defines technology. In one-on-one interviews, I asked my fellow students at colleges and universities across the country to complete the sentence, To me, technology is _____.² The following responses reflect the wide range one would

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expect from such a broad group; they also provide some common threads that hint at a shared perspective.

To me, technology is...

- ▶ “Reformatting my computer system and installing cutting-edge software that allows me to do what I want, when I want, without restrictions, viruses, and the rules of Bill Gates.” —Jody Butler, Junior, Idaho State University
- ▶ “The ability to adapt and configure an already established program to [something that] benefits me daily, be it customizing WeatherBug to state the weather in my particular region or formatting my cell phone pad to recognize commonly used phrases in text messaging.” —Christopher Bourges, Senior, Duke University
- ▶ “Any software and hardware alike that gives me the power to do what I need to do faster than ancient methods of conducting things, such as e-mailing versus writing, messaging three people versus buying a three-way calling package, digital research versus traveling to a well-stocked library, et cetera.” —Lindsey Alexovich, Senior, American University

These comments reflect two consistent themes that appeared across the range of responses I received from students regarding their views on technology:

- ▶ The definition of technology is not confined to computers or the Internet. Technology is viewed as any electronically based application or piece of equipment that meets a need for access to information or communication.
- ▶ Customization is central to the definition of technology for Net Geners. Technology is something that adapts to their needs, not something that requires them to change.

The first theme is reinforced by the results of a poll conducted with 25 students at The Pennsylvania State University, where students were asked to indicate whether they considered a set of applications or hardware to be technology. Overall, the average response to whether Web browsing, instant messaging, and the Internet constitute technology was neutral.³ For Net Geners, technologies that are still considered transformative by their parents’ and grandparents’ standards (for example, instant messaging) are a basic part of their everyday lives; they are only considered technology in the broadest sense of the term. In light of what these students did not consider technology, their definition of what constitutes technology is fascinating, and it emerged as a third major theme: For the Net Generation, technology is “what’s new,” and the time between new and old can be quite brief when viewed from a perspective other than the Net Generation’s.

“Everything new and different is automatically technology because it’s usually branded as ‘hard to understand,’” explained Lauren St. John, a senior at the University of Pittsburgh–Johnstown. “For example, [take] voice over the Internet. This seems like a new concept, but really we’ve been using this for years. Anyone with a mike on their computer would just press the ‘talk’ icon on instant messenger and there you have it—voice over the Internet.”⁴

Together, these three themes pose interesting questions for colleges and universities:

- ▶ How will institutions define and develop technology-enabled learning when students view technology as encompassing a wide range of mobile options beyond the traditional classroom?
- ▶ Do student expectations regarding technology and customization constitute a barrier to effective teaching and learning with technology?
- ▶ What does it mean when students consider an institution’s “advanced technology” as “so yesterday?”

To address these questions, we have to look at the learning expectations of the Net Generation.

Learning Expectations of the Net Generation

The Net Generation’s learning expectations begin with the expertise and passion of the faculty member. The following student comments represent the general perspective of students interviewed for this process:⁵

- ▶ “To me, my success in the classroom depends on the teacher. If the teacher is prepared and knowledgeable about their particular field, I know I can expect to learn from their knowledge as well as know what is expected of me.” —Joseph Gerocs, Junior, San Diego State University
- ▶ “I love when I come back from a class where my professor’s knowledge of a particular field is astonishing.” —Samuel Bass, Junior, Southwest Missouri State University
- ▶ “It’s great when the professor is passionate about the field. They are usually knowledgeable about their field. In turn, that knowledge and passion rubs off on me, and that’s my ideal class environment!” —Thomas McMillian, Senior, Texas Tech University

These students still view expert faculty members who are committed to teaching as the key ingredient for learning success. However, the data collected for this project also suggest that Net Generation students have high expectations for

faculty members' technology knowledge and skill. For example 25 students at the University of Pittsburgh–Johnstown were asked to rate the following three items in terms of their importance to successful learning (scale of 1 as least important to 10 as most important):

1. The professor's experience and expertise.
2. The professor's ability to customize the class using the current technology available (for example, Courseweb, BlackBoard, and so forth).
3. The professor's ability to professionally convey lecture points using contemporary software (for example, PowerPoint).

Consistent with the anecdotal results identified above, the highest average score (8 out of 10) went to Option 1; the students view faculty expertise as paramount. However, the average scores for Options 2 (7.64) and 3 (7.68) were barely below that of Option 1. For this group of students, less than a half point separated the importance of the faculty member's general academic expertise from the importance of the ability to use technology effectively to communicate that expertise (Option 3) and customize the learning experience for students (Option 2).⁶

Student expectations regarding technology customization in the classroom are closely linked to faculty knowledge and skill. The Net Generation's views on technology in the classroom include the expectation that professors will use technology to better communicate expert knowledge. Additional feedback indicates that Net Generation students may consider a balanced use of technology in the learning environment essential. For example, members of another group of 25 University of Pittsburgh–Johnstown students were asked to rate their preference for the level of interactivity in the learning environment, with various forms of technology understood as key enablers of interactivity. The options were:

- ▶ 100 percent lecturing
- ▶ 75 percent lecturing and 25 percent interactive
- ▶ 50 percent lecturing and 50 percent interactive
- ▶ 100 percent interactive

The vote wasn't even close—all 25 students gave the highest rating to a balanced, 50-50 environment.⁷

The judicious use of PowerPoint emerged as a commonly cited component of faculty technology use from the student perspective. Victoria Kyes, a sophomore at Middle Tennessee State University, spoke for many members of the Net Generation when she stated, "Using PowerPoint increases a teacher's ability to convey essential information."⁸ Lacy Kniep, a junior at Central Washington University,

highlighted that it is the appropriate use of PowerPoint that helps a faculty member improve learning. From her perspective, PowerPoint is

a software package developed to provide power to a particular point. For example, if I am the professor and I want my students to understand the definition of a distribution channel, I will place various information about distribution channels on a PowerPoint slide to drive home this particular point; however, I would not place my entire course lesson on marketing techniques on every slide.⁹

Thus, student views regarding faculty use of PowerPoint help illustrate the Net Generation's desire for the use of technology to support learning, as long as faculty members have the technological—and pedagogical—knowledge and skill necessary to use it appropriately.

It is interesting to note that the student focus on PowerPoint may signal that the Net Generation still holds relatively modest expectations for what constitutes leading-edge technology in the learning space. For example, none of the students surveyed regarding the important contributors to successful learning pushed back on the identification of BlackBoard as “current technology” and PowerPoint as “contemporary software”;¹⁰ however, many people—Net Generation and non-Net Generation alike—might consider those applications as well-established features of the current higher education landscape. It may be that Net Generation students have seen so few examples of advanced technologies applied to learning that those options do not come to mind when they think about teaching and learning with technology. The window of opportunity for colleges and universities to avoid the negative impact of increased expectations may be narrowing, however, as expressed by Nivedita Bangerjee, a junior at the University of Pittsburgh:

I love when my profs take us through virtual 3-D programs to help explain a particular topic. As a visual learner in my major [biology], learning through seeing is very useful. With all the programs available in today's age, I think all professors should use technology in the classroom. It will only help drive home key points.¹¹

Conclusion

The views expressed by the Net Generation students interviewed and surveyed for this chapter suggest that the Net Generation defines technology broadly. It is not just computers and the Internet, but whatever digital devices or applications that help a student meet his or her needs. A key component of the Net Generation's

definition of technology is customization, or the ability to adapt technology to meet individual needs, rather than vice versa.

Given the technology expectations of Net Geners, it is no surprise that they may also have significant expectations regarding the use of technology to support learning. However, those expectations appear tied to faculty members and their ability to use technology correctly. In this study, PowerPoint registered as the most common example of faculty use of technology. Students praised PowerPoint's ability to help faculty members convey specific information when used appropriately. On the other hand, they expressed significant frustration with faculty members who simply transferred their lecture notes to PowerPoint slides and expected quality learning to occur.

The feedback from this select set of Net Generation students does contain some good news. It indicates that the Net Generation's general expectations regarding leading-edge technology have not fully impacted its expectations about the use of technology to support learning. This may signal a failure in the responsiveness of colleges and universities in terms of keeping pace with the rapidly changing technological landscape. However, it may also indicate that the opportunity to catch up with the Net Generation has not been lost. Higher education must continue to engage the Net Generation in a dialogue regarding its expectations about technology and learning to assess how wide the window of opportunity may still be, as well as how quickly it may be closing.

Endnotes

1. This research initiative relied on one-on-one interviews (in person and by phone), focus groups, and random polling using the University of Pittsburgh–Johnstown network in late 2004.
2. This information resulted from two focus groups at the University of Pittsburgh–Johnstown, one in late September 2004 and the other in mid-October 2004.
3. From a focus group held in late September 2004 at the University of Pittsburgh–Johnstown.
4. These quotations came from telephone interviews on October 8, 2004.
5. Data from random polling conducted October 8, 2004, using the University of Pittsburgh–Johnstown network; 25 students responded.
6. Data from random polling conducted November 5, 2004, using the University of Pittsburgh–Johnstown network; 25 students responded.

7. Data from random polling conducted October 8, 2004, using the University of Pittsburgh–Johnstown network; 25 students responded.
8. From a telephone interview with Victoria Keys on October 1, 2004.
9. From a telephone interview with Lacy Kniep on October 1, 2004.
10. From one-on-one interviews on October 11, 2004.
11. From a one-on-one interview with Nivedita Bangerjee on September 24, 2004.

About the Author

Gregory R. Roberts is the residence director of the Living/Learning Center, a 456–person residence hall at the University of Pittsburgh–Johnstown. He is a senior in business management who has served as president of Chi Lambda Tau Honorary Leadership Fraternity and on the executive board of the Alpha Kappa Psi Professional Business Fraternity, the Student Judicial Board, the Student Council of World Affairs, the Student Senate, and the Academic Integrity Review Board. Roberts has worked as a junior intern program coordinator in the White House Drug Policy Office, strategic team intern at the Department of Defense–Military Traffic Management Command, research intern for the House of Representatives Judiciary Committee, and policy intern for EDUCAUSE. Future plans include a master’s in business administration and a doctorate in global studies.