

Digital divide changing but not for students torn by it (w/ Video)

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Joanna Goode, professor of education studies, studied 500 undergraduate students to see what computer savvy they brought with them, and how what they knew or didn't know affected their studies. Credit: Photo by Jim Barlow

When students enter college, they either have it or they don't. And which side of the digital divide they fall on may well shape their identities and what route they take into careers, suggests a new study.

The research looked at the computer technology knowledge of 500 undergraduate students and how skills they brought from [high school](#) impacted their early college coursework. The findings, published online in advance of regular publication in the journal *New Media and Society*, should be on the radar screens of both high school and university educators, says Joanna Goode, a professor of education studies in the

University of Oregon's College of Education. Institutions, she said, "are perpetuating rather than resisting inequalities associated with the digital divide."

"I found that high-school opportunities around technology really shape students' abilities to engage fully in university [academic life](#)," Goode said. "If students don't have experiences in high school, they show up for college ill-prepared to have a variety of choices about which directions to go in their scholarship. Strong preparation, either at home or in high school, can really launch students into feeling successful in college. Insufficient preparation really gives students a sense of not belonging and a deficit in their own perspectives as academic beings."

The study, conducted in California with a comprehensive survey and selected follow-up interviews with three students with different technological experiences, captured a snapshot of the digital divide in 2004. While the definition of digital divide may need revision, Goode said, the problems identified in the study likely have gotten worse and need to be addressed.

Wikipedia -- an online knowledge source used by most college students, according to a recent study -- defines the digital divide as "the gap between people with effective access to digital and information technology and those with very limited or no access at all." Today, that definition might well be more about how people's identities -- tied to their understanding and use of computers and software -- create both academic opportunities and obstacles, Goode said. "While the knowledge divide is still important, at a fundamental level, it is now more a case of what is the context of using technology, and why does it matter for each individual?"

Computer technology and Internet access are keys to success in college, but students often had left high school with skills ranging from very little

to fully saturated, Goode found. Very few of the students had received formal training geared for academic success in their high schools.

Goode became interested in studying the digital divide as the focus of her doctoral studies after witnessing students' problems with technology as a high-school teacher. "Do we all have to have the same knowledge about computers to be successful?" she asked. "Do scientists and artists have to know how to use the same tools? Well, no. I wanted to look at how this technology impacts peoples' real lives."

In her study, Goode chose three students with varying technology skills for in-depth interviews:

- Lara, a first-generation student who moved to the U.S. from Mexico at age 16: She was given a computer, did not have Internet access at home but learned Microsoft Office. She earned extra credit by using PowerPoint in a crowded, under-funded high school where computer use was not taught. At college, she went through orientation and a summer minority program to get ready for campus, but didn't know until school started that Web skills were assumed to exist. She did not know how to obtain citations from a library's online card catalog to complete a paper, nor could she use science software needed for a class. Frustrated by her lack of online knowledge, she changed from a science major to Spanish. She later learned that the university offered free Internet access and provided access to free software.
- Jeff, a Chinese-Vietnamese student, from a private high school: He used computers regularly, knew how to use library electronic catalogs, his dad was a computer programmer and his mother used several software programs in her job. Jeff used technology extensively, used a leading biology software suite and Microsoft

Office. He built his own computer. But while being knowledgeable and confident, he did not have an absolute love for using computers but used them seamlessly.

- Scott, a lover of technology whose entire life revolved around computers: He worked in a campus-based computer store, his father was an electrical engineer and he had access to computers since he was very young. He took a summer camp course on building Web pages and used technology constantly. He wrote blogs, used digital cameras and purchased computers and books for resale on the Web.

These students helped Goode explore what they knew about technology when entering college, and whether their knowledge level was a barrier or a gatekeeper to certain majors.

The picture that emerged from all the data, Goode said, was that in the high schools, "some kids are being trained for using technology for academic purposes or they may be taught for low-level vocational uses that makes them good workers but not necessarily good scholars."

"Even though there is no prerequisite for knowing about technology to get to the university level -- there are requirements for math, science and other things -- there is no technology prerequisite," she said. "But once you walk onto campus, you can't enroll in classes, you can't get financial aid, you can't get onto Blackboard (a widely used electronic education software suite), you can't answer emails. If you have no technology knowledge, you will not even survive the first week at most university campuses."

Many students, Goode said, begin college unprepared technologically but have no ready access for remedial workshops or help during orientation. "They are left on their own," she said. If they don't have that knowledge

it's one more sense of 'I don't' belong, I'm not prepared. I'm out of here."

Such a feeling, she added, is especially hard on first-generation students who had little technology exposure at home or in high school. "The high schools aren't telling them, the college counselors aren't telling them, and it's not until they get to campus that it is a reality. There's no time to go back and catch up on that knowledge."

University campuses, Goode said, have the resources, but even today it is only the technologically savvy students who seek them out. "The students who really need the help get no outreach programs to help them learn about campus technology programs such as workshops, resources and free software," she said.

High schools and colleges, she said, have to start thinking about the digital divide in much more complex ways and provide learning experiences for [students](#) to build their identities so they have a chance for being successful in college across majors, so that their destinies aren't already decided based on what experiences they have in high school."

Provided by University of Oregon

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