

Understanding UW Students' Technology Needs

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INTRODUCTION

What do we know about student technology needs, particularly here at the University of Washington (UW)? This information sheet summarizes key trends from data we, researchers in UW Information Technology, have collected on student needs over the last few years. The data are ample and derive from several large-scale, comprehensive investigations of the UW student population. To set these findings within a larger context, we also include in this summary findings from multi-institutional projects, such as the student technology surveys conducted by the EDUCAUSE Center for Applied Research (ECAR) and the annual *Horizon Report* produced by the New Media Consortium. Results from the latter studies provide evidence of additional student technology needs. UW Information Technology and several campus partners are considering these trends as they craft a comprehensive IT strategy for students. Individual units within UW may also find the information in this summary helpful as they develop their own strategies for supporting student technology use.

KEY TRENDS

Mobile Technologies: On the 2009 ECAR student survey, 44% of UW respondents indicated that within the next three years they anticipated using their cell phone or handheld device to do many of the things they currently do on their laptops. *The Horizon Report* includes mobile computing among technologies on the near-term adoption, collaboration, and communication horizon, meaning that they anticipate academic use at many institutions to become more widespread over the next year. Almost all students carry some form of mobile device, and these offer new opportunities for communication and collaboration in service of learning, particularly through an increasing range of mobile applications and ever-expanding cellular network.

Laptop Use on Campus: In our recent study on computer use and learning spaces, students emphasized the need to use personal laptops for study, but indicated that laptop use was made more difficult by several impediments. Students felt that laptops were too heavy to be considered truly mobile devices. Students also needed specific types of infrastructure to make laptop use practical. Students desired access to electrical outlets and Ethernet ports, for example, to facilitate access to online study materials and frequent recharging required to run their laptops.. They felt further that wireless coverage was spotty across campus and should be improved. Students also desired improved access to printing stations, especially the ability to print from their own laptops rather than through campus computers.

Classroom Technology: Inconsistent and inadequate classroom technologies are another source of frustration for students. In survey responses and focus groups, students often conflated inadequate technologies in classrooms and instructor competence, believing that lack of facilities indicated a lack of preparedness on instructors' parts. They felt that consistent availability of technological resources would improve both their own learning and instructors' ability to convey information. This was a key finding from our 2005 technology surveys; since then we have not conducted research directly on this topic, but students continue to voice frustrations about classroom technology during interviews and focus groups.

Flexible, Accessible Learning: Students want to be able to learn and work where and when they desire. Students are increasingly mobile and want to balance demands among work, home, and school efficiently. They want easy and efficient access to information and to their social networks to support "just-in-time" learning, through a range of devices. In our learning spaces research, we found that in order to accommodate their schedules, students need flexible, distributed learning spaces, accessible at any time of day, near cafés or other eateries. These spaces should support use of students' laptops and mobile devices.

Applied Learning and Collaboration: In 2007, the AACU recommended that students use emerging technologies for “research, experimentation, problem-based learning, and creative work,” especially in their majors. *The Horizon Report* notes that today’s students need skills in critical inquiry and flexible thinking; they need to be connected to broad social issues through civic engagement; and they need support in applying their learning to solve large-scale complex problems. In part to meet these needs, teaching and learning practices have become more interdisciplinary, collaborative, and field-based; students are learning through experience and applying their skills in a wide variety of applied research and service project settings. Collaborative technologies—many available free of charge—play an important role in connecting members of a learning community that extends far beyond the traditional classroom. Our 2005 and 2008 technology surveys showed high levels of student interest in collaborative technologies.

Online Access to Course Materials: Our surveys, focus groups, and needs assessment interviews all revealed that students want more course information consistently available online. This need begins when students register for courses. They want up-to-date information about courses of interest, including a course description, requirements, prerequisites, and a list of technologies that will be used. They also expect all courses to have a regularly updated Web site with assignments, readings (including electronic course reserves), lecture slides and/or podcasts, and all other course materials assembled in one place. For most students, the technology used to present such information (CommonView, Learning Management Systems, or other Web tools) matters less than that information is available and accessible. *The Horizon Report* also points to eBooks as a technology that is likely to see significant adoption over the next two to three years. As use of these resources grows students will want to be able to access them via course Web sites.

Web 2.0 Technologies: In our 2008 technology surveys we found that even though many technologies are available, most UW faculty primarily use email, Web pages, word processing software and presentation software to support their teaching. Less often used are those technologies that involve students in content creation and collaborative activities (so-called “Web 2.0” technologies). The most seldom used Web 2.0 technologies include social networks, podcasts, blogs and wikis. Online discussion boards and file sharing are used more often. There is high interest in Web 2.0 technologies among educational technology professionals, and the application of these technologies to support student learning has been widely discussed in education and technology journals and conferences.

Digital Literacy: *The Horizon Report* notes that, despite agreement on its importance, little attention has been paid to educating students in digital literacy skills. As technologies evolve, digital literacy must focus less on tools or particular platforms and more on ways of thinking, seeing, and crafting narratives and arguments through a range of media. The importance of improving students’ digital literacy was also a finding in our e-portfolio research studies.

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