The Myth about the Need for Public Computer Labs

“Students have their own computers, so public labs are no longer needed.”

Today’s students appear to be technologically proficient—IMing constantly, e-mailing photos from their cell phones, and socializing on the Internet. Although this isn’t a negative generalization, it masks the reality for a significant percentage of the student body: those who don’t own their own personal computers. According to the 2005 EDUCAUSE Core Data survey, 72 percent of all college and university students own their own computers. At public institutions, which enroll the majority of students in higher education, 36 percent of students do not own their own computers. Students at research universities are far more likely to own computers than are students at community colleges, where ownership averages 38.5 percent.

Many students simply cannot afford the technology or the software applications. Only in rare cases does this expense fall into the calculations for financial aid. Thus, there is still an obligation for campuses to provide adequate public computers for those students who cannot afford to own the technology. Even if students do have their own computers, those living off-campus may not have broadband access for sharing large data sets and images or for getting rapid Web response—all of which can limit educational success. Although eliminating public computer labs may be seen as a way for an institution to reduce costs, the more significant impact may be on equity of technology access—and ultimately educational opportunity.

Owning a computer isn’t enough. The computer must be sufficient for the task, in terms of both speed and software. In a course that requires advanced applications, such as 3D rendering or animation, a personal computer may not have enough power or network throughput or may not have the right applications to do the work. When faced with insufficient computer resources, students have nowhere to turn other than a computer lab. In addition, faculty are reluctant to depend on student-owned computers for classroom exercises because of the
institutions that have those computer labs, the CIO and other
unused cycles for research. As faculty increase the number
of software applications used and team projects required, students view labs as a logical place for group work. Public
clusters provide more than just access to the technology. These are “social places” where students can collaborate and share
expertise, both technical and disciplinary. Labs may even be used off-hours for entertainment (e.g., LAN parties or gaming
tournaments).

Instructional labs may also bring value beyond instruction. Student computer labs represent an untapped computing
resource, for students and researchers. Just as PCs in research labs can be clustered, the same can be done in an instructional
environment. By harnessing the unused lab cycles, campuses can provide opportunities for computationally rich
student projects, such as modeling, animation, and simulations. As student
demand ebbs and flows throughout the semester, faculty can take advantage of the
unused cycles for research.

In thinking about the need for public computer labs, the CIO and other
members of the executive team should ask themselves the following strategic
questions:

1. Do we know how many students have PCs
   on campus with them?

   With no figures for computer ownership, determining
   the number, size, and location of public computer labs becomes guesswork. The same is true for the level of
   support needed. Although national figures may provide a benchmark, they aren’t precise enough for campus
   planning.

2. What specialized applications are required?
   For how many students? Institutions should periodically conduct an inventory of specialized applications
   and usage. This will allow an understanding of what applications are needed, the departments that have those
   needs, and the number of students needing these applications. As technology becomes increasingly critical
   in all disciplines, institutions may also want to plan for how the demands on computer labs will change.

3. Do we know when, why, and how often
   existing facilities are used? What would be
   the impact of closing them? It is useful to
   know—rather than guess—how computers in public clusters are actually being used. Formal surveys and infor-
mal interviews can inform decisions about the appropriate number and size of clusters. Although a reduction
in the number of computer labs may be required due to space or funding issues, campuses should understand
why students are going to the labs and should consider alternative services. For example, a campus may want
to provide software access through terminal services or new licensing
arrangements.

4. What is the appropriate ratio of public-access computers per student for the campus?

   The appropriate ratio of computers is determined by the culture, service
   commitment, academic goals, and range of course offerings at a particu-
lar institution. There is not a “right” answer based on benchmarking or
   norms—only a qualitative answer based on an understanding of the
   institution.

Eliminating all public computer labs is not in the best interests of any campus. The key to conserving resources while
providing service lies in knowing the appropriate number of computers, the
software needed, the location of the computers, and the hours of use. There is no single answer for all institutions.
Understanding the student profile, the students’ needs, and the service culture of the campus will lead to the best solution.

Note

1. Brian L. Hawkins and Julia A. Rudy, EDUCAUSE
   Core Data Service: Fiscal Year 2005 Summary Report
   (Boulder, Colo.: EDUCAUSE, 2006), 32–33.