Are computer labs becoming passé?

passé, adj. [Fr.], past; out of date; old-fashioned.
The University of Notre Dame, founded in 1842 by a priest of the Congregation of Holy Cross, is an independent, national Catholic university located at Notre Dame, Indiana, adjacent to the city of South Bend and approximately 90 miles east of Chicago.

The University is organized into four undergraduate colleges — Arts and Letters, Science, Engineering, and the Mendoza College of Business — the School of Architecture, the Law School, the Graduate School, 10 major research institutes, more than 40 centers and special programs, and the University Library system. Fall 2005 enrollment was 11,417 students.

The Office of Information Technologies supports approximately 500 workstations spread across 9 public computing labs, including Windows, Macintosh and Linux operating systems. (http://oit.nd.edu/clusters_classrooms/)

Until recently our computing labs have changed very little from their original design. Most spaces offer individual workstations and reflect the need of 10-15 years to provide students with access to desktop computing resources. In 2004, the University’s Council for Academic Technologies issued a report calling for a move away from the traditional model and the creation of flexible learning spaces. (http://ucat.nd.edu/reports.htm) Some specific recommendations were:

- Reconfigure selected labs using models found at Emory, Dayton, and University of Chicago.
- Provide Internet-only computer stations in labs.
- Provide group workspaces and breakout rooms in or near clusters.
- Expand types of technology in clusters, including multimedia equipment.

We are also looking for ways to redesign our computing labs to encourage more laptop use (while still providing needed desktop computing resources). The 2006 ECAR Student Survey found that 75% of Notre Dame seniors and 90% of Notre Dame Freshmen own laptops, and yet we do not observe a significant percentage of students bringing their laptops to our computing labs or to the classroom.

A final observation: for some not yet identified reason this academic year has seen a sudden surge of interest from various departments on campus for reconfiguring traditional computing labs. Is this true for your campus as well?
Eastern Illinois University

John Henderson
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Eastern Illinois University (EIU) is located in Charleston, Illinois, in east central Illinois. EIU is currently rated as a Carnegie Classification Master’s Colleges and Universities. Level I institution. The current enrollment is 12,130 students enrolled in on and off campus classes.

In the spring of 2006 the Student Technology Fee Subcommittee (STFS) conducted a survey of laboratories on campus of which Academic Technology Advisory Committee (ATAC) supports 20 and another 20 are department/college supported. ATAC provides a university-wide forum for discussion of technology issues and the development of recommendations for strategic direction concerning the use of academic communication, computation, information, and instructional technologies.

Based upon a review of the data and consideration of other economic issues, STFS reached the following conclusions:

• the laboratory space as currently configured on campus exceeds student need and demand.
• current laboratory space can be utilized more efficiently
• the student technology fee will not be able to continue to support the current configuration of laboratories on campus.
• the student technology fee cannot support expansion of laboratory space on campus in its current configuration.
• the current model of departmentally generated proposals is an inefficient method for appropriately allocating student-funded resources.
• the committee continues to believe a regional model of distribution of resources is most appropriate.
• in the current economic and political environment it is important to maintain the current student technology fee, until we can rethink and justify specific needs.

These conclusions point to the key belief that it is time to move beyond the status quo regarding computer labs on the EIU campus. The student technology fee subgroup recognizes a need to change and advance laboratory support and management on campus.
The University of Minnesota Duluth (UMD) is located in Duluth, Minnesota, at the tip of Lake Superior, the largest of the Great Lakes. UMD is a comprehensive regional university where undergraduate students can choose from 12 bachelor degrees in 75 majors and graduate students have programs in 20 different fields, plus six cooperative programs offered through the Twin Cities campus. UMD consistently ranks among the top midwestern, regional universities in U.S. News and World Report's "America's Best Colleges" issue. UMD's fall 2006 enrollment was 11,190 students.

ITSS is responsible for supporting 22 public or departmental computer labs and computing areas around campus. Specific information about some of these areas can be found here: www.d.umn.edu/itss/labs/

New research in teaching and learning space design has prompted the Student Computing team of ITSS to consider changes to the traditional layout and design of many of the existing computing spaces. A team has been formed to look at options for improvements. The team will use focus groups and surveys for faculty and students to determine what they like/dislike about the current labs, and what they would like to have in each area.

- In spite of laptop initiatives we have not seen a significant decline in the usage of our computer labs by students and plan to continue to make these physical and electronic resources available.

- At the same time, we're going to be looking at some ways to do some significant design changes to the labs themselves to provide users more useful resources like configuration flexibility, better collaborative work space, etc.

- The cost of some software for specific degree programs is cost-prohibitive to students own, so there is value in ITSS or their departments providing the applications in a computer lab.

- The convenience factor means some students do not often bring their laptop with them to campus. Additionally, not all faculty integrate a laptop as part of their course materials (some even discourage students from using them during class periods).
Indiana State University is a comprehensive, state-assisted institution of higher education, which was founded in 1865 as Indiana State Normal School. Today, with nearly 11,000 students, we still turn out excellent teachers and school administrators. Our graduates are also leading the way in the areas such as insurance, aerospace, packaging technology and the sciences.

At Indiana State University, there are 47 general or discipline specific labs on campus. With the upcoming 2007 laptop program (Fall implementation), it is believed that we will eventually move to 9 or fewer (there will probably be 1 or 2 24-hour open labs and a few discipline specific where software requirements drive the retention of the lab).

The Office of Information Technology computer labs survey indicates that usage has remained at a constant, generally, for about three years. Of 389 students surveyed, the majority (41%) indicated that stop in more than once a week. Daily usage followed at 23%. Less than weekly usage has nearly doubled in the past two years.
Data from the Campus Computing Survey (campuscomputing.net) provides a 15 year history of how institutions of higher education have deployed computer labs. Average statistics are reported for the following types of institutions: Doctoral public, Doctoral private, 4–Year public, 4–Year private and Community Colleges.

The data show that since 1990, institutions:
• have dramatically increased the number of computer labs they offer. The trends have been increasing on at least a linear basis.
• have dramatically reduced their ratios of students per lab computer. The downward trend was steepest in the 1990s and has been flattening in the 2000s.

As of 2006, institutions of all types have, on average, settled onto a 10:1 ratio of students per PC in public labs, clusters or classrooms.

**Informal correspondence with institutions**

<table>
<thead>
<tr>
<th>Reasons for reducing computer labs</th>
<th>Reasons for keeping computer labs</th>
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<tbody>
<tr>
<td>5 had laptop programs</td>
<td>No laptop requirement</td>
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<tr>
<td>4 were under budget pressure</td>
<td>Commuter population</td>
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<tr>
<td>3 had low usage</td>
<td>High usage / student demand</td>
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<tr>
<td>2 repurposed as a collaborative space</td>
<td>Closing of departmental labs</td>
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<tr>
<td>1 had labs in academic departments</td>
<td>Laptops too big to carry around</td>
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<tr>
<td>1 was under space pressure</td>
<td>Specialized hw and sw in labs</td>
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<tr>
<td>1 reported inefficiencies</td>
<td>Good places to study and socialize</td>
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<tr>
<td>1 reported labs were not “user-friendly”</td>
<td>Wireless too slow, broadband expensive or unavailable</td>
</tr>
<tr>
<td>1 repurposed as a classroom</td>
<td>Labs double as classrooms</td>
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</tbody>
</table>

Profile of institutions that have reduced computer labs:
• 86% - Four year or doctoral institution
• 64% - Public
• 57% - Small to medium size
• 57% - Residential
• 36% - Laptop program
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Session discussion points (and space for taking some notes!)

1. **Vision**
   - Where are we going?
   - Am I behind?
   - Laptops

2. **Daily Operations**
   - Nitty gritty: What’s working/what’s not
   - Laptops
   - Do I have flexible and reconfigurable space?
   - What kind of problems do I encounter?
     - Campus-wide image; software, etc.

3. **The End User**
   - Funding
   - Are we being consistent, holistically in IT and within our own IHE
   - Laptops
   - Campus wide software