Information Technology at Small Colleges

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Union College
Schenectady, New York
www.union.edu

- Founded 1795
- 2,100 students
- Liberal Arts
- Engineering programs since 1845
## Student Survey – May 2005

<table>
<thead>
<tr>
<th>Device</th>
<th>Current Year</th>
<th>Previous Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own a PC</td>
<td>99.7%</td>
<td>98% last year</td>
</tr>
<tr>
<td>Own Desktop</td>
<td>21.6%</td>
<td></td>
</tr>
<tr>
<td>Own Laptop</td>
<td>78.3%</td>
<td>45% last year, 15% previous year</td>
</tr>
<tr>
<td>Own Tablet PC</td>
<td>0.2%</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>0.34%</td>
<td></td>
</tr>
<tr>
<td>Own a PDA</td>
<td>16.6%</td>
<td></td>
</tr>
</tbody>
</table>
Student Survey - 2005

- 93.6% use/used Blackboard for courses
- 91.1% of residence hall students have connected to ResNet
- 55.2% of respondents have used Union’s wireless network
- Many comments about wireless – love it, want it in more areas, etc.
Must never forget our purpose in utilizing technology

- Enhance/enrich the academic experience
- Further research efforts of faculty and students
- Assist and facilitate the administrative activities of the institution
Important to ask

“What’s the (business) problem for which this (technology) is a solution”

NOT

“What can we use this (technology) for?”
Illustration

When is the right time to deploy a given technology?
Kennebec River – Bath, Maine - Summer of 2003
“... have to decide when to play”

-George Hickman
CIO, Albany Medical Center
Wireless

- Growing demand
- On recent student survey – students love it, want it in more locations
- Fueled by growth in laptop purchases
Wireless Society

Wireless Society
-Schools, remote, etc.

CNN 11-23-2003
Wireless Goals at Union

- All common/study spaces in all residence halls
- All common/study spaces on campus
- Lounges
- All classrooms
- Labs
- Entire library
- Outside spaces where students congregate
- etc.
- Currently over 120 access points deployed (and the number is growing)
Notebook Computers
(portable computing)

- Prices down
- Students are voting with their purchases

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent of students owning laptops at Union</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring 2005</td>
<td>78%</td>
</tr>
<tr>
<td>Spring 2004</td>
<td>45%</td>
</tr>
<tr>
<td>Spring 2003</td>
<td>15%</td>
</tr>
</tbody>
</table>
Notebook Computers

- Sales of notebook computers has passed that of desktop computers
- Factors:
  - Declining costs of notebooks
  - Wireless

Source: ABC Evening News, June 6, 2005
Tablet PCs

- In concept they may be the best match for student use
- Consumer models now coming out ➔ prices are going down
- Less intrusive in class, at conference, etc.
Administrative Computer Systems

- Shakeout in the industry (e.g. Jenzabar, Oracle/PeopleSoft, SCT → Sungard → Investor group)
- 3rd or 4th generation systems
- Graphical interfaces
- Off-the-shelf (not as much do-it-yourself)
Administrative systems

- Increasingly integrated
- Important consideration – staffing and skills needed to support
- Running on Windows now
Multimedia

- Faculty and students want more than just static images
- Videotape $\rightarrow$ digital
- Skills needed – more than when just manipulating still images
- Video capture/video production
- NEXT SLIDE – What we do
What We Do
Electronic Classrooms - types

- Presentation
- Collaborative computer classrooms
- Computer classrooms
Easy-to-use

- As little “cable-plugging” as possible
- Allow for Improvisation – video, DVD, etc. – use as the situation evolves (in class)
- Provision for use of notebook computers as well as for “installed” computer in room
Presentation classrooms at Union College

- Permanently mounted projector
- Lectern with equipment
- VCR
- DVD player
- Computer
- Document camera
- Control system
- Audio w/mounted speakers
- Networked
- Cable TV
- Connection(s) for labtop computer
Every classroom has

Behind the lectern
Collaborative computer classroom

- everything in a Presentation Classroom
- plus one computer to be shared by 1-4 students in a collaborative learning situation
Full computer classroom

- everything in a Presentation Classroom
- plus one computer for each student
Online Learning

- Not just for distance education
- To supplement/complement class material
- To collect assignments
- Post class notes
- . . . etc.
Online Learning

- Course Management System (CMS)
- Examples: Blackboard, WebCT, etc.
- Commercial versus Open Source (e.g. sakai)

http://sakaiproject.org/

- 93% of our students have used Blackboard for courses
A community source software development effort to design, build and deploy a new Collaboration and Learning Environment (CLE) for higher education.


The Sakai Project's primary goal is to deliver the Sakai application framework and associated CMS tools and components that are designed to work together.

These components are for course management, and, as an augmentation of the original CMS model, they also support research collaboration.

Source: sakaiproject.org
Security

- Physical
- Viruses, Trojans, worms, etc.
- Identity theft
- Liability
- Requires vigilance and new methods
Federal regulations

- FERPA
- HIPAA
- Gramm-Leach-Bliley (GLB) Act
Staffing

- Having enough
- Attracting
- Retaining
- Investing in

Our most valuable resource!!
Student Technology Assistants

- At Union – USTAR program
- USTAR – Union Student Technology Assistant Resource
- Started with a grant from AT&T
Online library resources
(the remote library)

We’ve come a long way
since the library automation
meant an online catalog.
Online library resources (the remote library)

- Can level the playing field – geographically, quantitatively and qualitatively
- Access to journals is unprecedented for ALL libraries
- Collaborative/sharing opportunities are varied and wonderful
Training and online training

- On-on-one
- Small group
- Online
“Webification” of everything

- Common graphical interface (universal interface)
- Accessible from anywhere, anytime
- No need for client software
Windows servers

- Easier to manage than Unix
- Less steep learning curve
Thin client devices

- Less expensive than PCs
- No moving parts
- Software accessed from server
- Windows Terminal Services, Citrix
- Have over 80 of them deployed – mostly in administrative offices, experimenting with in labs
- At Union – Neoware clients
Other

- e-Portfolios
- Blogging
- GIS (Geographic Information Systems)
We must be careful not to get into an “arms race” over technology.

Unfortunately, maybe we already are.