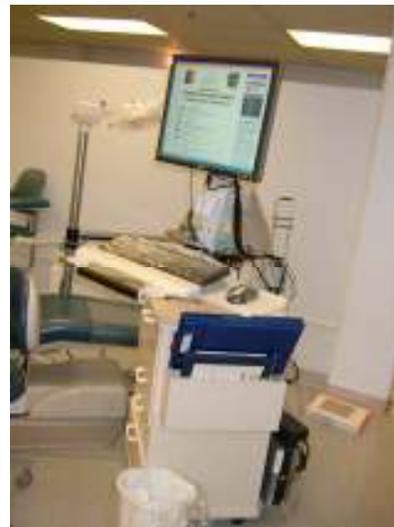# Thinking Outside the Box

Innovative, Specialized Educational Technologies

Minnesota State University, Mankato

Tech-Rec

Dental Lab
Library Pods

MINNESOTA STATE
UNIVERSITY
MANKATO

Educause 2006 Dr. Joan Roca, Lynnette Engeswick,
Todd Pfingsten, Wayne Sharp, David Esping

Have you thought of putting a computer lab in a **Recreation Center**? No? How about computers in a **Dental Lab** or creating a **casual, comfortable** classroom with sofas & arm chairs? We did! We thought outside the box & incorporated our computerized **educational technologies** into many **specialized departmental areas**.

Computers at Minnesota State University, Mankato have permeated every "normal" aspect of campus, from business classes & the dorm, to wireless laptop study areas. So why not integrate customized technology into specialized areas, like the **Dental Lab** or the newly remodeled **Otto Recreation Center.**

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Thinking Outside The Box

Specialized Educational Technologies

Thinking Outside the Box is critical to all institutions. **Innovation & creativity** are integral to the field of technology. Not all campuses have the opportunity, funding, or support to execute such specialized creative projects.

These examples illustrate how **Thinking Outside The Box**, mixed with cooperative funding & collaborative effort across departments, can satisfy **Specialized Educational Technology** needs.

Each project is a success in its own right. **Tech-Rec** has received national exposure for its original thought, the **Casual Computing Lab** received statewide recognition. All are well utilized, highly successful, & popular with staff and Students.

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Tech-Rec technology includes:
Sony Vaio PC-TV, 17" LCD, DVD CD,
Stereo Audio, 3.2 GHz, 512MB Ram,
180 GB HD, 100mb Ethernet,
Cable TV,
"Virtually Indestrucible Keyboard",
Ergotron Command Post

Library Pod technology includes:
Custom design "pods" furniture in
cloverleaf form to wrap around
building pillars,
8 cpu's per pod, 13 pods,
        totaling 104 cpu's,
Dell GX620, 2.8 GHz, 2GB Ram,
        19" LCD, 160GB HD, DVD CD,
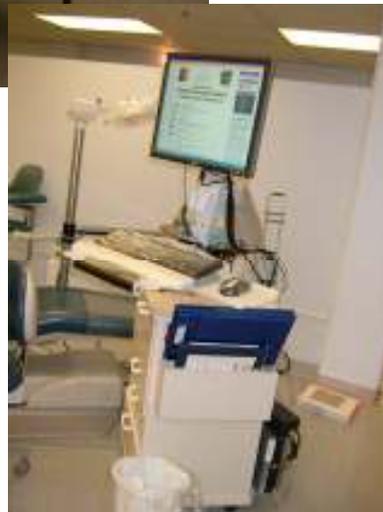   100MB Ethernet

Dental Lab technology includes:
12 Dental Chairs,
Dell cpu per chair mounted to
moveable cabinet by an Ergotron
Command Post & Arm,
Inter-Oral Cameras,
Digital Radiography,
Dentrix software suite with
        video training,
Dell SX280, 17" LCD, DVD CD,
100mb Ethernet, Wireless.

Tech-Rec

Library
Pods

Dental
Computer
Workstation

Tech-Rec

Exercising **Your Mind & Body**

Technology and Recreation combined, allowing one to exercise body & mind simultaneously.
Minnesota State Mankato created Tech-Rec with the opening of the newly remodeled Otto Recreation Center. Grand Opening of this $8 million dollar renovation was held October 1, 2005.

Tech-Rec integrates technology and learning with an everyday exercise routine. It allows the student to watch Cable **TV**, listen to on-line radio stations, check **email,** play a **DVD**, watch exercise videos streamed down over the **internet**, record workout stats and nutritional information; and also provide the opportunity to **study** class lectures, review homework or do research; **all while exercising on the latest workout equipment.**

Tech-Rec

Exercising **Your Mind & Body**

MSU is believed to be the first to combine a fully functional computer with TV, on campus, for a recreation "specialized computer lab". MSU installs a computer with specialized configuration programming that allows the student to easily & quickly select the various options: **TV, Radio, MavMail, course material, MavDisk, workout routines, & Athletic websites.**

Students can access MSU's course management system, **D2L** (Desire 2 Learn); save their work to the campus file storage system **MavDisk**; follow on-line workout routines; get on-line instructions on proper exercise work-out techniques; and view Fitness/Wellness news items (workout hints, news happenings, interviews).

Tech-Rec

Exercising **Your Mind & Body**

This is a collaborative project between
Campus Recreation, Human Performance, Information
Technology Services, Academic Computer Center, MSU
Students, Charter Cable & Sony.

Tech-Rec has opened the door for the integration of
traditional study methods, and work out regiments, with
technological innovations; in a state-of-the-art facility.

This **innovative project** has become a heavily utilized
campus wide resource, with students studying Modern
Languages or catching up on the latest sports or taking
practice exams or watching the soaps or checking the
stock market or doing internet researches; all while
exercising. Participation in campus recreation has
increased dramatically.

Library Innovations

Effective Designs to Encourage Collaboration

Innovation in this Library Computing Environment focused on creating Casual Collaborative Computer "pods." Design goals included maximizing computer numbers in minimum floor space with numerous structural pillars, while **encouraging collaborative work, comfort, & individual work space.**

The challenge was to be **creative** in developing a new **collaborative computerized learning environment** within this single space.

Solutions included:

- Pod tables for 8 computers, wrapped around the building's support pillars: 104 total workstations.
- Café-height tables with seating for 3-4 students.
- Soft sofa seating for groups of 2-6 students, with power in end-tables for laptops.

A coffee shop adds to the techno-café feel.

Library Innovations

Effective Designs to Encourage Collaboration

The innovative design efforts shown here were funded & implemented collaboratively by **Library Services & Information Technology Services**. The new areas have been enthusiastically accepted by our students. **They are packed**!

Students study individually, in small groups on personal or Library computers, work collaboratively at café-height round tables, and get comfortable on the sofas with their laptops. Surprisingly, the soft seating sofas are the last to be filled in these heavily utilized areas. This **success** is demonstrating the need to further expand with more "pods."

Many libraries have similar building constraints and needs for more technology and space-efficient "pods." We believe this is a "**Best Practices**" example.

Dental Lab

Specialized Dental Technologies

Innovation: Computerized Dental & Digital Radiography Lab incorporates technology into very specialized fields of Dental Hygiene & Dental Assisting. One of the primary problems with this project is that there was not room for a computer, dental cabinet, multiple cables & dental tools. So the challenge was to be innovative to reduce clutter, while also adding new technology & advanced learning opportunities.

Our **solution** was to design a moveable dental cabinet with command post arm to support an LCD monitor/kybd/mouse & hide the computer. Wireless technology removes the need for network cabling. A large power strip consolidated all electrical needs. **Inter-Oral cameras** attached to cpu, can be viewed by the patient through the LCD monitor.
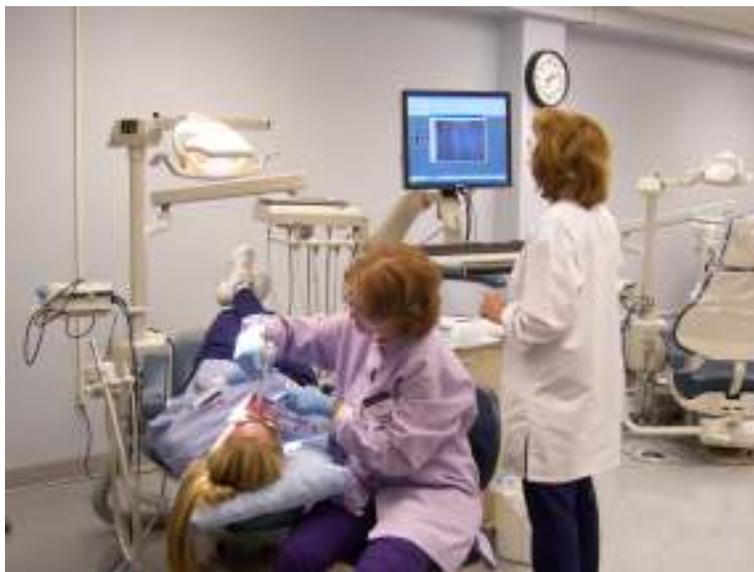
Dental Lab

Specialized Dental Technologies

Digital Radiography is the alternative to replace x-ray film & chemical film development. It is much quicker for students to spot a mistake & easily take another digital picture. The Digital Radiography pictures can then be stored on the patients files or sent electronically to a Dentist at another location for consulting. This is the future direction of dentistry. Four Digital Radiography stations were built into the x-ray rooms.

Dentrix allows students to learn the latest dental office software, record patient information, store pictures from the Inter-Oral cameras or the Digital Radiography. Follow-up appointments can be scheduled while the patient is still in the dental chair.

Dental Lab

Specialized Dental Technologies

This is a **collaborative** project between Dental Hygiene at MSU, Dental Assisting at South Central College, Information Technology Services, & the Academic Computer Center. **Cooperative funding** provided by student technology fee, Academic Affairs, Dental Hygiene, Dental Assisting.

This lab is treated as a "**Satellite Computer Lab**", is on the three year computer replacement cycle, is maintained & supported by the Academic Computer Center.

This is a highly **successful** project with student enrollment at maximum. Students & faculty are learning on the latest dental technologies available to the industry. 90% of students pass board exams upon graduation & are immediately hired.

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