WHAT IS EDUCATIONAL TECHNOLOGY @ Missouri S&T?

Meg Brady

April 25, 2008
Overview

• What is Educational Technology?
• Meet the Team
• What do we do?
• How can we help you?
• Why is it important?
What is Educational Technology?

Definitions of **Educational Technology** on the Web:

- “Includes all components of informational technology used in the delivery of educational materials.”
  [www.buffalostate.edu/offices/disabilityservices/glossary.htm](http://www.buffalostate.edu/offices/disabilityservices/glossary.htm)

- “A complex, integrated process involving people, procedures, ideas, devices, and organization, for analyzing problems, and devising, implementing, evaluating and managing solutions to those problems, involved in all aspects of human learning.”
  [www.neiu.edu/~dbehrlic/hrd408/glossary.htm](http://www.neiu.edu/~dbehrlic/hrd408/glossary.htm)

Sometimes referred to as:
- Instructional technology
- e-Learning
- Learning technology
What is Educational Technology @ Missouri S&T?

EdTech@Missouri S&T is a new department within Information Technology (IT) responsible to support the use of technologies to enable and enhance the campus’ teaching and learning environments.
PHYSICAL v. VIRTUAL

- PHYSICAL Teaching & Learning Environments include:
  - Classrooms, lecture halls, auditoriums
  - Laboratories
  - Computer Learning Centers
  - Library
  - Residences
  - Offices
  - Meeting Rooms
  - Hallways and Atriums
PHYSICAL v. VIRTUAL

• **VIRTUAL** Teaching & Learning Environments include:
  – Blackboard
  – Web-based environments
  – Email
  – eConferencing
  – Blogs, Wikis, Podcasts
  – Virtual Desktop Environments
  – PCs, Smartphones, Laptops, MP3 Players
  – WiFi Hotspots
Meet the team

Angie Hammons
Malcolm Hays
Lauren Brady
Ken Arvieux
Sarah Lewey
Gandalf Sidio
Meg Brady
Meet the Team

• Meg Brady megbrady@mst.edu
  – Director

• Angie Hammons hammonsa@mst.edu
  – Educational Technology Specialist

• Malcolm Hays mhays@mst.edu
  – Content Support Analyst

• Gandalf Sidio sidiog@mst.edu
  – System Support Analyst & Technician
Meet the Team

• Ken Arvieux
  – Classroom Tech Support (temp)

• Sarah Lewey
  – EdTech Student Assistant

• Lauren Brady
  – Learning Space Design Student Assistant
EdTech Team Objectives

*Leadership for* development and execution of a campus strategy for physical and virtual *learning environments*

*Focused delivery and support* of current technology tools to maximize teaching and learning effectiveness

*Exploration of* emerging technologies and development of *new and innovative solutions*

*Manage transition paths* for educational technologies into campus technology infrastructure and academic practices
What do we do?

• Support Services
  – Direct support of people and technology

• Projects
  – Variety of internally and externally funded projects

• Activities
  – Ongoing efforts to collaborate & innovate
What do we do?
Support Services

• Blackboard support
  – Seminars, training, Faculty Learning Community

• Clicker support
  – Training, classroom preparation, Faculty Learning Community

• Classroom Technology maintenance & support
  – ClassTech preparation, maintenance, training/self help, best practices

• Content & Multimedia support
What do we do?

Our Projects

• Virtual Learning Environment
  – TabletPCs, Wimba, VoiceTools, and more
  – Virtual Desktop Environment (Anywhere Computing)

• Blackboard Intercampus Collaboration (BbIC)

• Classroom Technology Planning/Implementation
  – Auditorium/Lecture Hall Technology Solution
  – Lifecycle maintenance & support plan
  – CS 212/213, Language Lab, Centrally Scheduled Classrooms

• Academic Content Solution
What do we do?
Our Activities

• Foster collaborative partnerships with:
  – ITCC
  – Faculty educational research and other projects
  – CERTI and Instructional Designer
  – VCC and DCE and distance faculty
  – Library

• Foster faculty learning communities around technologies, in partnership with CERTI

• Consult with and survey faculty on instructional needs and tools
What do we do?

Our Activities

• Establish inclusive strategic and tactical planning processes for campus educational technologies
• Explore emerging and innovative learning technologies
• Seek external funding opportunities (grants, gifts, corporate, etc.)
How can we help you?

• Reduce the “front load effort” required to adopt a particular tool
• Find appropriate solutions for teaching and/or learning needs
• Connect you with colleagues using similar tools and to other resources
• Answer your questions
• Improve teaching and learning environments based on your needs
Why is it important?

• Enhance teaching and learning
  – Use of materials not otherwise possible to bring into environment

• Enable teaching and learning
  – Accommodate disparate learning abilities

• Extend teaching and learning
  – Reduce/remove time and distance barriers
Why is it important?

• Maximize campus investment in teaching and learning technology tools
  – Identify the right tools for the right tasks
  – Maintain and support the investment (keep it current)

• Achieve (and exceed) parity with other Top 5 Technological Research Universities
Why is it important?

Some ways technology can be applied to enhance, enable, extend pedagogy:

- Enhanced presentation of materials – complex diagrams, video, demonstrations, Internet and off-site resources
- Active learning & student engagement – personal response systems (a.k.a. Clickers)
- Computational problem solving: discipline-specific software, student machines
- Simulations and modeling
- Live “online” content delivery – online office hours, study sessions, lectures
- Video/audio capture of content for supplement/review
- Student group collaboration/communication
- Course management efficiency
- And much, much more…
Why is it important? Faculty Experience

• Faculty have provided valuable input on technology needs through CERTI and other surveys, ITCC communication and informally

• Faculty say, technologies provided should be:
  – **Easy-to-learn:** Intuitive interface that operates “at the speed of conversation”
  – **Easily accessible:** Available from anywhere on campus
  – **Reliable:** Supported and maintained by IT so they are ready to use when needed

• Faculty need access to wide variety of support resources on the new technologies available
  – Hands-on workshops/seminars
  – Self-help materials
  – Content conversion services
  – Consultation and experimentation
Why is it important? Student Experience

• Students have provided valuable input on technology needs based on IT, CERTI and Student Council surveys and various round-table discussions

• Students expect:
  – Availability of basic course materials at any time
  – Ready access to course syllabi
  – Grades posted online (via Blackboard)
  – Ubiquitous classroom technology support
Why is it important? Student Experience

• More students bringing computers than ever before
  – 94.42% of incoming freshman in 2007 brought a computer*
  – 78.19% of these machines were laptops*

• Student benefits of increased usage of technology to support education:
  – Immediate feedback provided by personal response systems and online assessments
  – Access to technology outside of classroom for completing homework, projects and research

• Students express concern about:
  – Possibility of increased cheating with technology
  – Failures of technology, especially during class time
  – Instructors going too fast through materials

* Source: “UMR Entering Student Survey 2007”, New Student Programs Office
Why is it important?

EdTech@Missouri S&T is researching:

– Missouri S&T faculty and student survey data

– National Higher Ed survey data

– What our competitor & peer institutions are doing
### Technology is 3rd most important factor in student decision to attend Missouri S&T

<table>
<thead>
<tr>
<th>Factor</th>
<th>Very Important</th>
<th>Important</th>
<th>Total % of VI / I Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of UMR's academic reputation</td>
<td>712</td>
<td>197</td>
<td>97.94%</td>
</tr>
<tr>
<td>UMR offered desired academic program</td>
<td>729</td>
<td>166</td>
<td>97.49%</td>
</tr>
<tr>
<td><strong>Technology available at UMR</strong></td>
<td>460</td>
<td>380</td>
<td><strong>89.73%</strong></td>
</tr>
<tr>
<td>Small class size</td>
<td>375</td>
<td>417</td>
<td>84.79%</td>
</tr>
<tr>
<td>Scholarship and financial aid offer</td>
<td>449</td>
<td>332</td>
<td>83.79%</td>
</tr>
<tr>
<td>Personalized attention that UMR offers</td>
<td>301</td>
<td>445</td>
<td>79.95%</td>
</tr>
<tr>
<td>Costs of education relative to other schools</td>
<td>334</td>
<td>392</td>
<td>78.14%</td>
</tr>
<tr>
<td>Prompt response(s) from UMR</td>
<td>303</td>
<td>392</td>
<td>74.80%</td>
</tr>
<tr>
<td>Friends and family</td>
<td>281</td>
<td>400</td>
<td>73.61%</td>
</tr>
<tr>
<td>Campus visit or interview</td>
<td>264</td>
<td>413</td>
<td>73.34%</td>
</tr>
<tr>
<td>Geographic location</td>
<td>209</td>
<td>408</td>
<td>66.12%</td>
</tr>
<tr>
<td>Opportunities for co-curricular activities</td>
<td>185</td>
<td>416</td>
<td>65.39%</td>
</tr>
<tr>
<td>Honors Program</td>
<td>126</td>
<td>395</td>
<td>56.56%</td>
</tr>
<tr>
<td>High school teachers</td>
<td>152</td>
<td>339</td>
<td>52.79%</td>
</tr>
<tr>
<td>High school counselors</td>
<td>119</td>
<td>289</td>
<td>44.00%</td>
</tr>
<tr>
<td>Other/not listed above</td>
<td>146</td>
<td>183</td>
<td>38.60%</td>
</tr>
<tr>
<td>A UMR Summer Camp Program</td>
<td>167</td>
<td>141</td>
<td>33.36%</td>
</tr>
</tbody>
</table>

Source: “UMR Entering Student Survey 2007”, Missouri S&T New Student Programs Office
SURVEY DATA

- **92.39%** of students are prepared or well-prepared to use computers
- **67.41%** of students use a computer for social activities (MySpace, Facebook, etc.)
- **97.11%** planned to bring a cell phone
  - An increasing number of students using smartphone technology with email/web access

Source: “UMR Entering Student Survey 2007”, Missouri S&T New Student Programs Office
SURVEY DATA

- Research conducted by Eduventures:
  - Most students spend up to 5 hours a day on the Internet
  - Email most popular communication tool
  - 30% of students own both a laptop and desktop machine

SURVEY DATA
Educause Center for Applied Research

Student Perceptions About IT in Courses by
"Instructors Use IT Well in Courses"

- Agree instructors use IT well (N = 16,115)
- Neutral about instructors use IT well (N = 7,787)
- Disagree instructors use IT well (N = 3,778)

- IT in courses results in more prompt feedback from my instructor
- The use of IT in my courses has improved my learning
- I am more engaged in courses that require me to use IT

Source: “The ECAR Study of Undergraduate Students and Information Technology, 2007”, www.educause.edu/ecar
SURVEY DATA
Educause Center for Applied Research

• OBSERVATIONS:
  – Instructor skill with IT greatly impacts student perception of the value of IT in courses
  – Curriculum matters when it comes to student use and skill with technology
  – IT in courses is about convenience
  – Overall, students prefer moderate amount of technology in courses
  – Students are increasingly mobile
  – Students expect IT to be available

Source: “The ECAR Study of Undergraduate Students and Information Technology, 2007”, www.educause.edu/ecar
QUESTIONS?
SUGGESTIONS?
Contact Us At
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http://edtech.mst.edu