E-Learning Support: Institution Solutions, Faculty and Student Perspectives

Presented to the EDUCAUSE Center for Applied Research
Agenda

• Introduction/Methodology
• Current State of E-Learning
• Faculty and Student Support Requirements
• Infrastructure, Training, Course Curriculum Development and Support Practices
• Longer Term Support Challenges
Introduction: Research Goals

• As e-learning gains popularity, three priorities emerge:
  ▪ Provide adequate technical infrastructure
  ▪ Train students and instructors to use e-learning tools
  ▪ Redesign courses to incorporate e-learning into pedagogy

• Support issues critical to continued growth and success of e-learning

• This study investigates:
  ▪ Current instructor and student support requirements
  ▪ Effective e-learning support practices
  ▪ Longer term e-learning support challenges

IDC conducted the survey under contract with the EDUCAUSE Center of Applied Research (ECAR).
Introduction: Definitions and Research Scope

- **E-learning definitions**
  - **Online distance learning courses** where the instructor conducts all class sessions primarily online - NOT via mail or telephone - requiring no face-to-face meetings between students and instructor either in the classroom or via video during the course.
  - **Hybrid courses** where the instructor combines the elements of online distance learning courses and traditional courses to replace some classroom sessions with virtual sessions; for example online forums, or Web-based activities.
  - **Traditional courses** where the instructor teaches all sessions in the classroom, but incorporates technology in some or all classes; for example, PowerPoint presentations, Web-based activities, multimedia simulations of key concepts, virtual labs, and/or online testing.

- **Study Parameters**
  - Focus on **centrally administered departments** that offer e-learning resources across the entire institution
  - Not a definitive assessment of e-learning in higher education; rather a look at effective support practices
Methodology: Quantitative

• IDC and ECAR conducted online survey of EDUCAUSE members Q4 2002.

• 277 valid responses were received from cross-section of institution types

• Results analyzed by
  ▪ Carnegie Classification: Doctoral, Masters, Baccalaureate, Associate, and Other
  ▪ FTE Size: <5,000 FTE, 5,000-9,999 FTE, & 10,000+ FTE
  ▪ Private and Public

• E-Learning activity and support experience the key
Methodology: Qualitative

Colgate University
Fort Hays State University
Georgia State University
Harford Community College
Maricopa Community Colleges
Marquette University
The Ohio State University
Pace University
Pennsylvania State University
Saint Philip’s College
University of Alaska Southeast
University of Arizona
University of British Colombia
University of Central Florida
University of Southern California
The University of Texas at San Antonio
University of Washington
Virginia Polytechnic Institute and State University
Winston Salem State University

Institutions Chosen for illustrative e-learning programs
• Masters Institutions represented a slightly higher proportion of survey respondents than doctoral institutions.
• Professional Institutions (Art, Business, Medical/Health, Engineering) are in ‘Other’
• The majority of respondents came from smaller institutions
• Public Institutions comprised 57% of the Respondents

Base: Total Respondents (n=277)
Respondent Demographics: Job Titles

- IT Executives comprised the largest portion of survey respondents; representative of EDUCAUSE’s membership base
- Senior Administrators include Presidents and Chancellors
- Senior Academic Officers include Deans

Base: Total Respondents (n=260)
E-learning Overview: Drivers

• Expression of Institution Goals
  ▪ Tightly integrate with institution fabric
  ▪ Administrator’s vision
  ▪ Departmental need

• Vehicle for Community Outreach

• Convenience and Lifestyle for Students
  ▪ Especially for adult learners

• Expanding Educational Bandwidth
E-learning Overview: Percentage of Responding Institutions Offering Courses

**Base: Total Respondents (n=277)**

- **Associate (n=43)**
  - Online Distance Learning Course: 86%
  - Hybrid Courses: 95%
  - Traditional Courses With Technology: 100%

- **Bacc. (n=52)**
  - Online Distance Learning Course: 27%
  - Hybrid Courses: 50%
  - Traditional Courses With Technology: 100%

- **Masters (n=80)**
  - Online Distance Learning Course: 76%
  - Hybrid Courses: 89%
  - Traditional Courses With Technology: 100%

- **Doctorate (n=61)**
  - Online Distance Learning Course: 87%
  - Hybrid Courses: 93%
  - Traditional Courses With Technology: 100%

- **Total (n=274)**
  - Online Distance Learning Course: 71%
  - Hybrid Courses: 80%
  - Traditional Courses With Technology: 100%
E-learning Overview: Characteristics

• Online Distance Learning
  ▪ Evolution from established distance learning programs
  ▪ Outreach for broader student audience
  ▪ Most established; 50% of respondents implemented programs in or before 1999
  ▪ Gradual penetration into total course offerings
  ▪ Associate institutions in particular plan aggressive growth

• Hybrid
  ▪ Despite later implementation, greater percentage of courses offered (11% hybrid vs. 5% online distance)
  ▪ Mix and match physical classroom and online sessions
  ▪ Flexibility encourages instructors to experiment with e-learning
  ▪ Classroom space needs
E-learning Overview: Characteristics

• Technology in the classroom
  ▪ Universal implementation
  ▪ Easiest to adapt – start small
    – Posting notes online, for example
  ▪ Course management systems are primary driver
    – Easy for instructors
    – Student exposures in other courses
E-learning Challenges: Respondents’ Categorization of Student and Instructor Computer Skills

- E-learning’s success rests on adequate technical skills to use e-learning tools effectively
- Wide spectrum of computer abilities – not much difference between students and instructors
- Note this is respondents’ impressions, not first-hand experiences
E-Learning Challenges: Students

- The lack of ability to utilize technology is not a significant challenge.
- Rather the challenge is to enable students to use the technology more: to provide an adequate network infrastructure and to keep up with their technology demands.
- Results vary little by Institution Type, Percentage of Course Offerings, or IT Organization.

Base: % of respondents rating factor 4 or 5 of a significant challenge (scale of 1-5)
(n=260)
E-Learning Challenges: Students

• Courses not designed to take in account student bandwidth and computer hardware limitations

• Lack of technical infrastructure off campus
  ▪ Problem especially for online distance learning

• Lack of technical skills overall or lack of appropriate technical skills
  ▪ Can play computer games, but can’t design a PowerPoint slide

• Time management
  ▪ E-learning is a different course experience that requires as much or more time commitment
E-learning Challenges: Instructors

- Lack of knowledge and confidence are two significant support challenges for Instructors
- Results vary little by Institution Type, Percentage of Courses Offered, or IT Organization

Base: % of respondents rating factor 4 or 5 of a significant challenge (scale of 1-5) (n=260)
E-learning Challenges: Instructors

• E-learning Adaptation Cycle
  ▪ Moving from technical proficiency to pedagogic issues to course redesign

• Time commitment
  ▪ Rethink and restructure classes
  ▪ Technical and pedagogic training
  ▪ Increased time requirements for student communication

• Technical Issues
  ▪ Lack of course prototypes/software standards
  ▪ Perceived technical limitations of course management software
  ▪ Lack of support staff expertise to create effective course material
  ▪ Unreliable technology in classroom
E-learning Support Practices: Infrastructure

• Critical to e-learning success
• Course management systems
  ▪ Common platform to distribute knowledge or create standard practices
  ▪ Mission critical function requiring 24 x 7 support and system redundancy
  ▪ On some campuses, multiple platform issues
  ▪ Storage and traffic issues
• Well-equipped and adequate number of classrooms and student computer labs
  ▪ E-learning popularity strains current resources
  ▪ Technical requirements gain sophistication
    – Multimedia
  ▪ Equal computer access for all students
E-learning Support Practices: Training

Availability of Faculty E-learning Training Resources

- Evaluation of Instructors’ Effectiveness with E-learning Tools: 69%
- Pilot Training to Test E-Learning Elements in Classrooms: 83%
- Sessions, Workshops, Courses: Pedagogy: 91%
- One-on-One Instruction: Pedagogy: 92%
- On-Site Classroom Network or Technology Training Class: 93%
- One-on-One Instruction: Technology Training: 97%
- Sessions, Workshops, Courses for Technology Training: 100%

ECAR
IDC
Analyze the Future
E-learning Support Practices: Training

• “Cafeteria” training: a menu of training options
  ▪ Vary of training needs
  ▪ Classroom, workshops, online tools
  ▪ Importance of grassroots support
• Melding one-on-one into classroom settings
  ▪ Additional staff in classrooms for individual questions
• Evolution of resources as proficiency rises
• Short and focused training
  ▪ Brown bag lunch session covers one topic thoroughly
• Training in a practical context
  ▪ Mock up classes in course management training
E-learning Support Practices:
Course/Curriculum Development

Availability of Faculty E-learning Course/Curriculum Resources

- Learning Object Repositories: 71%
- Copyright research and approval: 87%
- Curriculum Adaptation for E-learning: 90%
- Online material research and review: 91%
- Creation of e-learning course materials: 92%
- Authoring tools and software support: 96%
- Off-the-shelf authoring tools and software apps: 98%
E-learning Support Practices: Course/Curriculum Development

- Time Intensive Activity
  - Vague notion of how to transform course
- Gentle transition to E-learning in courses
  - Incorporate one tool or element at a time
- Formal or informal partnership programs
  - Personal mentors to walk instructor through the whole transformation process
- The importance of grassroots support
E-learning Support Practices:
Technical Support

Availability of E-learning Technical Support Resources

- In-class support or mentoring while teaching: 74%
- Online community tools: 80%
- Support Group Meetings: 81%
- E-learning/Technology Telephone Help Desk: 82%
- Listservs: 83%
- Online reference tools: 97%
- Computer or web-based Instructional Tools: 97%
E-learning Support Practices:
Technical Support

• Wide scope of support issues
  ▪ Computer crashes to ‘how to’ questions
• Immediate response
• 24 x 7 response
• Supplement current resources with
  ▪ Outsourcing support function
  ▪ Leverage student workers
  ▪ Supplement with online tools
  ▪ Grassroots support
Priority of E-Learning Support

Aligns with e-learning activity

Providing IT Support to Instructors for Traditional Courses Using Technology is a Priority
Providing IT Support to Instructors for Hybrid Courses is a Priority
Providing IT Support to Instructors for Online Distance Learning is a Priority

Base: Total Respondents' Degree of Agreement with Statement (n=260)
E-learning Support Challenges: Demand versus Ability to Support

- Many Respondent Institutions believe growth in e-learning support demands outpace their ability to provide support - especially for instructors

Base: Total Respondents' Degree of Agreement with Statement (n=260)
E-learning Support Challenges: Creating Supportive Environment

- Most Agree – ‘Institution Encourages Instructors to Incorporate Technology into Instruction”
  - Short term incentives: stipends and release time
  - Long term incentives: recognition for tenure and promotion
  - Cohesive policy across institution

Base: Total Respondents’ Degree of Agreement with Statement (n=260)
E-learning Support Challenges: Evolution and Scaling

• Changing nature of e-learning support requirements
  ▪ Base proficiency to advance technical requirements
  ▪ Increased pedagogical requests (a good sign!)
  ▪ Evolving resources offerings and optimal mix

• Scaling resources as support demands rise
  ▪ Integrate resources to promote efficiencies
  ▪ Use technology tools to refocus staff members
  ▪ Develop common processes and tools to achieve economies of scale
  ▪ Augment central resources at the department level – critical for pedagogy
E-learning Support Challenges: Funding

- No growth in budget as support requests rise
- Lack of measures to quantify e-learning’s effectiveness
- Solutions:
  - Leverage consortia/system wide solution
  - Greater reliance on fees
  - Recycle department dollars

Spending is Adequate to Address Online Distance Learning Support

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Spending is Adequate to Address Hybrid Course Support

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Spending is Adequate to Address Trad. Courses w/ Tech.

Base: Total Respondents’ Degree of Agreement with Statement (n=260)
Future of E-learning Support

- Evolution of support roles and rethinking instruction as a team activity
- Growing popularity of online learning object resources like MERLOT
- Greater management of e-learning course materials
- The growing role of grassroots support
Final Conclusions/Recommendations

• E-learning has reached critical mass – and poised for potentially significant growth

• The continued formalization of support infrastructure
  ▪ Articulate training needs and requirements
  ▪ Provide resources
  ▪ Bridge between faculty and administrative goals/priorities

• Growth in the number of requests as well as the breadth of resources

• Each institution will create own recipe

• The ultimate goal is to “take the ‘e’ out of e-learning
  ▪ Mainstream adoption
  ▪ Integration with institution’s broader mission