

E-learning Basics: Theory and Practices

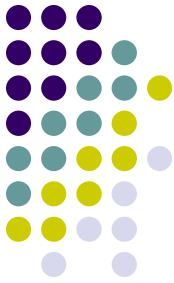
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IBICT, June 2009



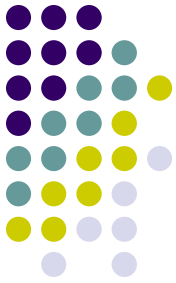
Defining E-learning

- At first, online education was a form of distance education
 - Delivered via computer-media
 - Students distributed across regions or countries
 - Students a distance from the university and from each other
- At the same time, course management systems came to campus
 - For registration, grades, etc.
- Then, online educational technologies came to campus
 - Distance education technologies began to be used for on-campus classes
- Now, new kinds of technologies and the Internet are influencing how we teach both online and face-to-face
- Names ...
 - Distance Learning, Asynchronous Learning, Online Learning, E-Learning, Networked Learning, Blended Learning, Ubiquitous Learning



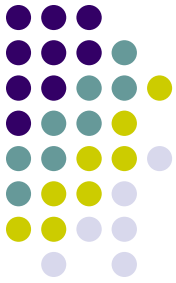
E-Learning is growing rapidly

- Pew Internet and American Life Project (2001)
 - 5% of adult U.S. Internet users (> 5 million people) had taken a class online for college credit
 - 1% (one million) were online taking a course each day
- National Center for Education Statistics (2003)
 - 2 or 4-year degree-granting institutions
 - 3 million people were enrolled in distance education courses
 - 56% (2,320) of these institutions offered distance education
 - 12% intended to start distance education within 3 years
- National Telecommunications and Information Administration (2004)
 - Percentage of U.S. Internet users 15 and over using the internet to take a course online
 - in 2001: 4% ----- in 2003: 6.5%



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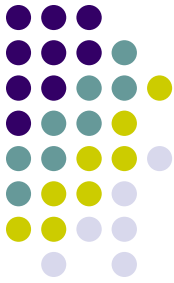
- Sloan Foundation
 - Major initiative in Asynchronous Learning Networks (ALN) ongoing since the mid 1990s
- Sloan Studies (2004, 2005)
 - 1.98 million students took at least one online course in Fall 2003 --> 2.35 million in Fall 2004 (18.2% increase)
 - In 2004, 65% of schools offering face-to-face courses also offer **online courses** (in 2004)
 - In 2004, 65% of all institutions, and 74% of public institutions are using **core faculty** to teach these courses



By Discipline - Fall 2003

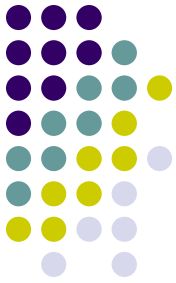
E-Learning Basics: Theory and Practice

- Business 42.7%
- Computer and Information Sciences 35.1%
- Education 24.9%
- Health Professions 31.4%
- Liberal Arts and Sciences,
General Studies, Humanities 40.2%
- Psychology 23.6%
- Social Sciences and History 28.4%
- All Other Programs 36.2%



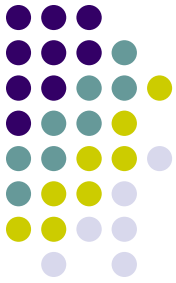
Technologies of E-Learning

- Course management systems
 - Also called Learning Management Systems, and Virtual Learning Environments
 - Blackboard, Desire2Learn, Moodle, Sakai, etc.
- Technology components
 - Common
 - Email, discussion lists, use of online library catalogs, electronic references, web searches, online quizzes, electronic submission of papers and grades
 - Becoming common
 - Web pages, blogging, wikis, podcasting, videos, online maps, simulations
 - Beginning to be used
 - Virtual worlds, online games, social networking sites
- Devices
 - Desktop, laptop, handheld computers, mobile phones



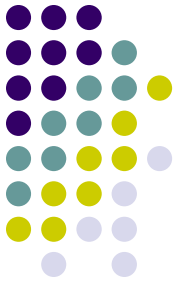
Trends: Technology

- Infrastructures for online connection
 - Wired infrastructures for Internet
 - Wireless connection
- Resources
 - Online journals, online versions of journals
 - E-books, and online copies of books
- Searching facilities
 - Google, etc.
 - Library catalogs
- Participatory (Web 2.0) systems
 - Integration of distributed knowledge
 - Crowdsourcing



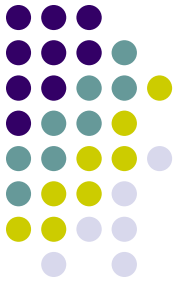
Trends: Social

- “Always on” (Baron, 2008)
 - Mobile phones and laptops: SMS, Tweets, Email
 - Expectation of constant contact
- Participatory culture (Jenkins, 2006)
 - Expect to be able to contribute, to define one’s own place in cyberspace, to join online spaces
 - Expect to be connected



Some questions to begin with ...

- What is e-learning primarily about?
 - Education? Technology? Saving Money? Making Money? Providing a Public Good? Other?
- Do you Agree or Disagree with the following?
 - Elearning is no different from offline learning
 - Elearning is available to anyone anywhere
 - Any resources needed for elearning are online
 - Online courses, programs and universities are as good as offline courses, etc.
 - Elearning is appropriate for everyone
 - Elearning is primarily about teaching techniques
- [Hint: there is no right or wrong answer]



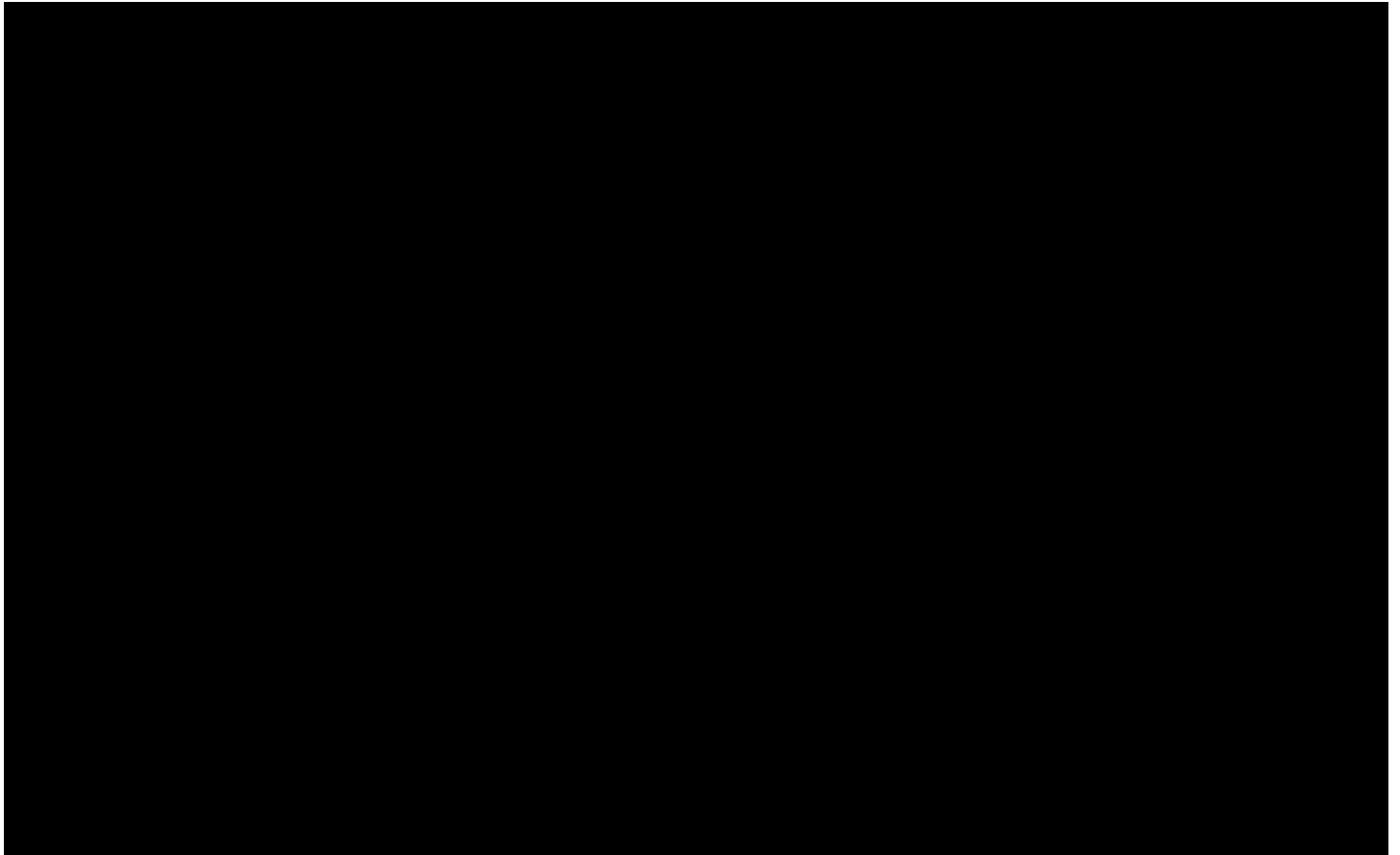
Elearning is a Complex Phenomenon

- A phenomenon at the intersection of multiple social and technical forces, involving:
 - Teaching and learning
 - Course management
 - Technology implementation and support
 - Administrative buy-in and/or mandate
 - Social and political support for Internet infrastructures
 - Acceptance by stakeholders, e.g., faculty, students, future employers, accrediting agencies
 - Societal trends in technology, e.g., web 2.0

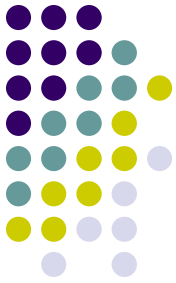


Acceptance by Faculty

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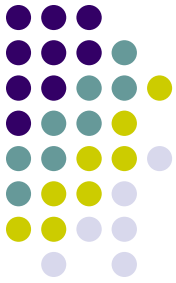


2005 Sloan report "Growing by Degrees", p.13



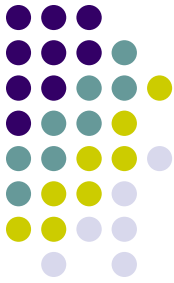
Acceptance by Faculty and Others

- Recent initiatives that failed to get acceptance from key stakeholders
 - UK E-University
 - Failed to get buy-in from potential students
 - University of Illinois “Global Campus”
 - Failing to get acceptance from faculty



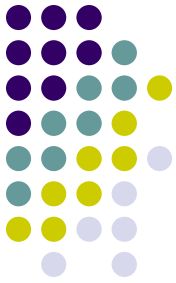
What kind of a problem is it? Whose problem is it?

- Technical → Designers, programmers
- Institutional → University administration and boards
- Administrative → Faculty, staff, visiting teachers
- Educational → Instructors
- Information → Librarians, Instructors, Tech support
- Communication → Leaders, Mentors, Communities
- Financial → Everyone!
- Student Life → Graduates & Undergraduates
- Work Life → Employers
- Material → Laboratories, internships



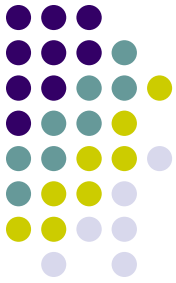
Whose field is it?

- Education
 - Pedagogy, collaborative learning, learning sciences, adult learning, situated learning
- Computer Science
 - Learning objects; Computer-supported cooperative work; Collaboratories
- Management
 - Knowledge management; Communities of Practice; Records management; Organization theory
- Social psychology & Communication
 - Communication behavior; Group behavior; Life course studies
- Sociology
 - Communities; Social studies of science, and of technology
- Library and information science
 - Use and users of information; Online resources; Digital libraries; Information ecologies



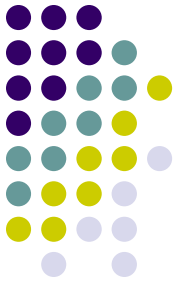
Interdisciplinary Perspectives on Elearning

- Internet Research
 - Issues about access, culture, online community
- Computer-mediated communication
 - Language, behavior, communication online, literacy
- Virtual communities
 - Creating a group presence online
- Asynchronous learning networks (ALN)
 - Education and online, asynchronous networks
- Computer-supported collaborative learning (CSCL)
 - Education perspective translated into computing setting
- Distributed Knowledge
 - Information transfer to co-construction of new knowledge

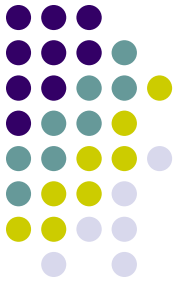


New Questions Who is the Learner?

- Young undergrads or adult learners
- Self-motivated students or all students
 - 70% of institutions offering online courses say it requires greater discipline by students
- Degree oriented or lifelong learners
 - Formal and/or *informal* learning
- University based or elsewhere
 - Workplace, training, libraries
- Ubiquitous learners
 - Searching and accessing learning anywhere, anytime



Who Teaches Online?



Who Teaches Online?

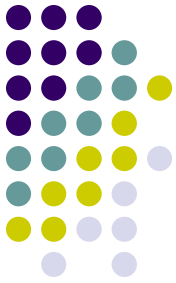
- Issues of professional status, administrative control, accreditation
 - Outsourcing teaching from faculty to others
 - Commodification of the teaching process
 - Faculty create the curriculum, others give the course
- Technical and Administration issue
 - Where are they teaching from?
 - Who will support them, their technology, their interactions with students
- Cultural and identity issues
 - How will they gain and disseminate an understanding of college culture?
 - What will it mean to be a faculty member in the elearning institution of the future?



What is the Role of the Teacher?

New models, new practices

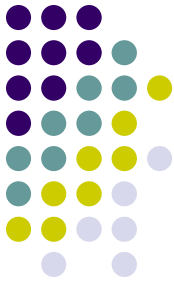
- Collaborative learning
 - Computer-Supported Collaborative Learning (CSCL)
 - From 'Sage on the Stage' To 'Guide on the Side'
- Situated learning with local apprenticeships
- Creating and maintaining "presence"
 - Presence: the feeling of being there, with others
- Building communities of learners
 - Virtual communities
 - Communities of Practice (Wenger)



What is the Role of the Student?

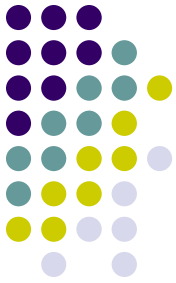
New models and responsibilities

- Collaborative learners
 - Peer-to-peer Learning
 - Learner-leaders (Montague)
- Adult learning style for all ages
 - Independent, student-led inquiry
- Presence
 - Social, cognitive and learner presence
- Joining and staying present in online communities of learners
 - Learning new communication, group and education norms
- Ubiquitous learners
 - From lifelong learning to learning in everyday life



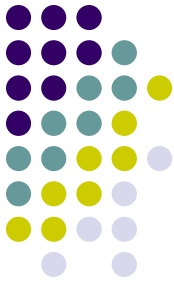
Cognitive, Teaching and Social Presence

- Three types of presence identified as important for online education (see Rourke, Anderson, Garrison & Archer, 2001)
 - Cognitive Presence
 - “the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication”
 - Teaching Presence
 - “designing and managing learning sequences, providing subject matter expertise, and facilitating active learning”
 - Social Presence
 - “the ability of learners to project themselves socially and emotionally in a community of inquiry”
 - Supports the cognitive and affective objectives, and is associated with aspects of engagement, appeal, and persistence in completing the cognitive tasks



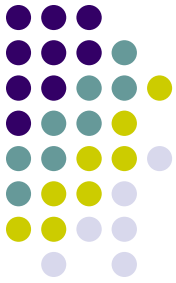
What is the Role of Local Context?

- Online contexts
 - Learning new norms of interaction and education
 - New technologies, each supporting different aspects of interaction (different ‘affordances’)
- Competing offline contexts
 - Work, Home, Family
- Embedding in local contexts
 - Community-embedded learners (Kazmer)
 - Learning at work and work learning from them
 - Helping family with their technology



Elearning Ecologies

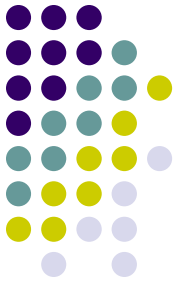
- Online places and spaces; Offline learning and work places; Libraries; Laboratories; Workplaces; Cyberspace
- Students and Teachers
 - At Home
 - Kitchen, bedroom, home office; Daytime, night time; with kids, without kids; with spouse, without spouse
 - At Work
 - During work hours, after work hours
 - At School
 - Outside class, inside class; In public, in private
 - On Facebook, Orkut, etc.
- Hybrid classes with on and offline components
- Hybrid lives with on and offline components



What is the Role of the Medium?

Classrooms vs Computer-Mediated Communication

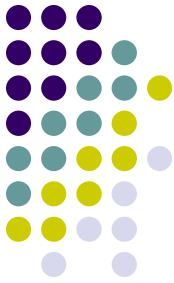
- What is lost and gained in the change from physical classrooms to online spaces?
 - Asynchronous versus Synchronous communication
 - Gain anywhere, anytime involvement
 - Lose immediacy for interaction and feedback
 - Text-only versus voice + dress + body languages
 - Gain anonymity, judgment on writings alone
 - Lose multiple cues to interpret and judge others
 - Lack of *social presence* can lead to difficulties in commitment, trust, engagement
 - Gain skills in communicating via contemporary online means
 - Lose use of multiple means of communication and persuasion
 - Gain a written, visible, and persistent record of conversation
 - But the written record can make people initially shy about conversing
 - Physical versus Virtual Presence
 - Lose physical presence in the classroom



What is a University in the Age of E-Learning?

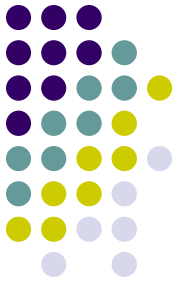
University Futures

- What is a university?
 - What purpose does a campus serve? What is the future of land-based colleges and universities?
- What are the implications for libraries?
- Does e-learning scale?
 - Should e-learning scale? Is it a means of reaching many at low cost, or a corruption of the ideals of oncampus teaching?
- Where will it end?
 - University to Schools to Everyday Life



Moving Forward Questions?

- Three upcoming lectures
 - Computer-Mediated Communication: What a difference a medium makes
 - Presenting also method and results from a longitudinal research study on “community development among distance learners”
 - Social Informatics of E-learning: E-learning as a socio-technical intervention
 - Presenting also method and results on the social networks among members of e-learning classes
 - Emerging E-Learning Theory and Applications
 - Presenting also current work on automating presentation of online networks among e-learners



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