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The World of e-Learning Research: an Overview of Current Research

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Agenda

1. Introducción and methodology
2. Survey of research in e-learning:
 - strategies and policies
 - teaching and learning
 - technology
3. Who sets the research agenda?
4. How to improve research in e-learning
5. Conclusiones

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Sources

2006 survey of literature on e-learning research from 2003-2005
 15 print-only journals + 50 online journals = >2,000 reviewed papers
 28 books/major reports/theses with research focus
 Google search for keywords
 Articles in English/Spanish/French

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Methodology

Focus on post-secondary/vocational education (NOT schools)
 Many theoretical/analytical papers with no empirical base
 So results/conclusions based ONLY on papers with:

- actual experience of e-learning
- qualitative and/OR qualitative data
- analysis/evaluation of data

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What is e-learning?

(Bates, 2005; OECD, 2005)

The diagram shows a spectrum of learning modes from left to right:

- face-to-face no e-learning** (leftmost)
- class-room aids**
- labs/laptops**
- mixed mode (less face-to-face + e-learning)**
- distance education**
- distributed learning** (rightmost)

Arrows indicate the flow between these modes: "blended learning" between class-room aids and labs/laptops; "distributed learning" between mixed mode and distance education.

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Proporciones actuales de diferentes tipos de e-learning en Norteamérica + Europa

Tipo de e-learning	Proporción
sin tecnología en clase	<1%
apoyos en clase	80%
laptops en clase	10%
modo mixto	<1%
todo a distancia	10%

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Main focus of research studies by type of e-learning

1. Majority on fully online (distance)
2. Some on 'blended learning' meaning classroom aids
3. Very little research on e-learning in vocational education/training (but HALF of all e-learning students)
4. Almost no research on mixed mode (the future?)

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Main areas of research

MAIN focus:

1. Policies and strategies: 10%
2. Teaching and learning: 30%
3. Use of technology: 60%

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Research into policies and strategies

Very broad category, includes at international/regional/national levels:

- policies/strategies/developments in e-learning, e.g. virtual universities
- longitudinal statistics (funding, enrolments)
- completion rates/drop-out/satisfaction
- national quality standards
- globalization and e-learning

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Research into policies and strategies (cont.)

Institutional level:

- strategic planning for e-learning
- identification of best practices
- evaluation of virtual universities
- partnerships/consortia
- costs of e-learning
- business strategies for e-learning
- copyright & IP issues

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Research into policies and strategies (cont.)

What is NOT being researched:

- performance indicators for e-learning
- evaluation of government or institutional strategies for e-learning
- cost-benefit analysis of e-learning
- effects of quality assurance processes
- impact of e-learning on workforce

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Teaching and learning

Research being done on:

- methods of course design
- quality assurance and best practice
- e-learning and learning outcomes
- synchronous vs asynchronous
- students: digital natives, learning styles
- tutoring/learner support/discussions

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Teaching and learning (cont.)

What is NOT being researched:

- blended learning in mixed mode
 - role of face-to-face
 - best combinations
 - types of learners who benefit most
- models of course development
- supporting knowledge construction
- inter-cultural issues in global e-learning

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Technologies

Greatest area of research

- Europe: learning objects, personalization
 - North America: social networking, Web 2.0 (podcasting, Second Life)
 - LMS (integration with admin systems), open source, open content
- Problem: research needs to be within educational context

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What is NOT being researched

Content management

Impact of Web 2.0 tools on course design/learning outcomes/students

Role of animations/simulations

Costs: LMS, social networking, learning objects, simulations

Business models/cost-benefit analysis of new technologies

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Features of the research

1. Few large research programs in e-learning: individuals working in isolation
2. Separate worlds: educators vs computer scientists; on-campus professors vs distance educators
3. Poor quality: single cases, personal reflection, inadequate knowledge of the field

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Features of the research

4. In teaching/learning, lack of
 - quantitative studies
 - large samples
 - convincing results
5. Focus on narrow range of issues: drop-out; constructivist learning; learning objects; technology standards; university teaching

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What sets research agenda?

1. Funding

- Europe: European Commission; lots of problems
- national research councils: e-learning interdisciplinary; lack of earmarked funds

2. Traditional academics vs students: difficulty in finding supervisors; lack of good program proposals

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What sets research agenda? (cont.)

3. Personal interests of individual academics
4. Governments: sometimes create earmarked funds for innovation, but don't really understand e-learning
5. Private sector: EnCana, Cisco, IBM, Gates Foundation, Hewlett

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How can research in e-learning be improved?

Structural:

1. Establish educational technology as an inter-disciplinary department in universities: home for Ph.D. students
2. National research councils/ government to give higher priority to research in educational technology
3. Inter-university research groups
4. Partnership with businesses/industry

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How can research in e-learning be improved? (cont.)

Academic:

1. More research into e-learning in schools/vocational education
2. More emphasis on large-scale, quantitative research (e.g. surveys)
3. Develop on-going programs of research
4. Inter-disciplinary teams: academics, instructional designers, Web specialists

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How can research in e-learning be improved? (cont.)

Academic:

5. More focus on strategies/policies, less on technology per se
6. More focus on theory-building, best practices, based on empirical data
7. Ph.D. students to work on on-going research programs, not in isolation
8. Better academic time management (projects, deadlines, research time)

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Conclusions

1. E-learning research to date is poor - very little influence on practice
2. Many areas of e-learning not being researched
3. Lack of innovation in blended learning, use of Web 2.0
4. Much to be learned from research in distance education

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Conclusions

Problems:

- funding
- lack of large-scale, on-going projects
- lack of academics with inter-disciplinary (education + technology)/research qualifications

Is e-learning a useful term for research purposes?

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Conclusiones (cont.)

- **MTA is well positioned: area devoted to e-learning; SUV as partner; masters and Ph.D.**
- **But: research plan essential to ensure funding, appropriate staff, projects, and quality research**