The Development of Online Distance Learning
- Challenges and Opportunities for HE

DAAD DIES-Conference, 29. November 2011

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Overview

- What is online distance education (ODE)?
- A brief history of ODE
- Opportunities for higher education
- Challenges and barriers to ODE
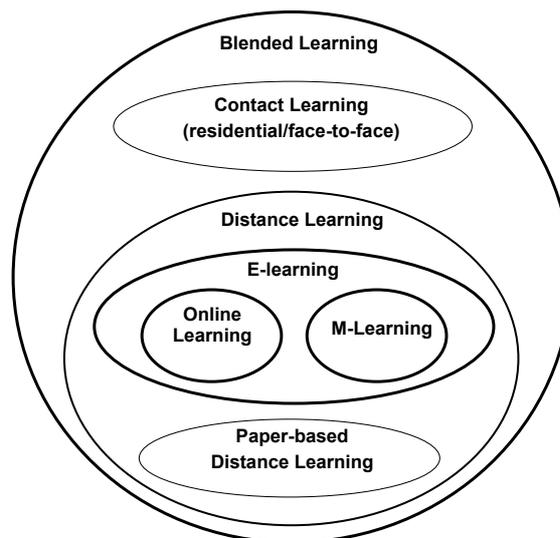
Distance Education

Simonson, Schlosser & Orellana (2011, p. 126):

"Distance Education is institution-based, formal education where the learning group is separated, and where interactive telecommunications systems are used to connect learners, resources, and instructors" (p. 126).
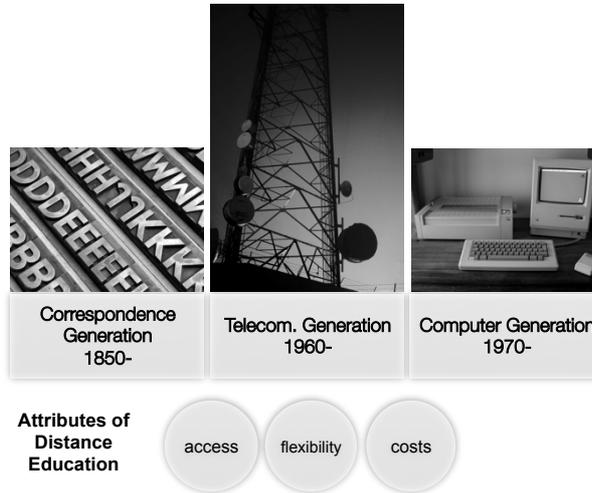
- carried out through institutions, formal education
- geographic separation of teachers and learners
- interactive telecommunications / media
- learning group, learning community, learning material

Simonson, M., Schlosser, C., & Orellana, A. (2011). Distance education research: a review of the literature. Journal of Computing in Higher Education, (23), 124-142.

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Brown, T. (2004). The role of m-learning in the future of e-learning in Africa. In D. Murphy, R. Carr, J. Taylor, & W. Tat-meng (Hrsg.), Distance education and technology: issues and practice (S. 197-216). Hong Kong: Open University of Hong Kong Press.

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Innovations in Educational Technology

| Correspondence Generation 1850- | Telecom. Generation 1960- | Computer Generation 1970- |

Attributes of Distance Education   access   flexibility   costs

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Impact of Media on the Delivery of DE:
The "Golden Triangle"

Flexibility $\xrightarrow{+}$ Access $\xleftarrow{-}$ Costs

+/-   +/-   +/-

Media
(synchronous/
asynchronous)

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Correspondence
Generation
1850-

- 1856 Langenscheidt-Toussaint
- 1858 University of London
- 1875 UNISA
- flexibility: very high
- interaction: very slow

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- Foundation of "Open Universities" to increase access to higher education ("mass higher education")
- 1969 OUUK
- 1974 FernUniversität in Hagen
- Network of study centres
- academic support through telephone, fax, video, tv broadcasts, video conferencing ("multimedia generation")

Telecom. Generation
1960-

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- Murray Turoff (New Jersey Institute of Technology) developed computer-conferencing (computer-mediated communication
- CoSy (conferencing system) used for online tutorials in 1988 at the OUUK (Mason, 1989)
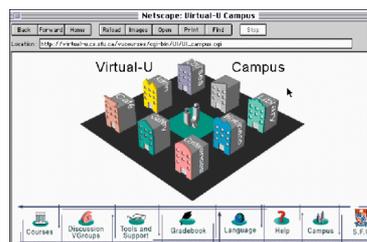- asynchronous cmc affords inter-personal discussion independent from time and space

Computer Generation
1980-

Virtual-U developed 1994 to 1995
at Simon Fraser University in Canada

Folie 9   Viola Browser 1993

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University College

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Development of online distance learning: UMUC

- University of Maryland University College, Adelphi, Maryland (USA)

- Four out of five undergraduate students enrolled in UMUC's programs are also working full time.

- In fall 2006, the median age for students enrolled in UMUC's undergraduate programs was 32 years old.

- However, in contrast to traditional distance education, the number of younger first time students is growing.

"Our student body is quite diverse. In age the biggest segment, is from 25 to 44; but increasingly the age group under 25 is growing. These are usually traditional students who go to residential campuses. However, in the United States, those campuses are becoming more and more expensive, and many students have to work and go to school part-time. So increasingly they come to us."
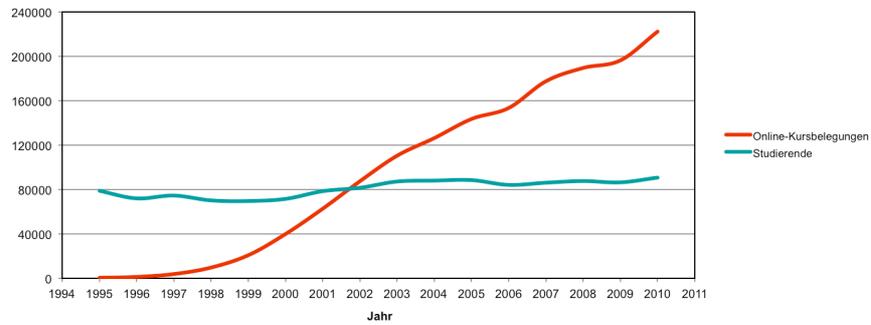(Nick Allen, President UMUC, 2004, EDEN Conference)

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University College

Student numbers and web enrollments (UMUC, 2010)

Staying the Course
Online Education in the United States, 2008
I. Elaine Allen and Jeff Seaman
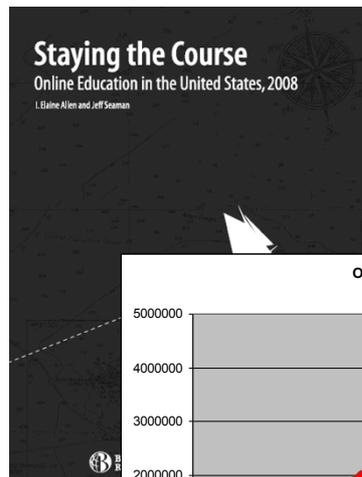
Allen, E., & Seaman, J. (2009). Staying the course - Online Education in the United States, 2008. Sloan Foundation.

Online Enrollments USA (Sloan Foundation)

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DE in the Russian Federation
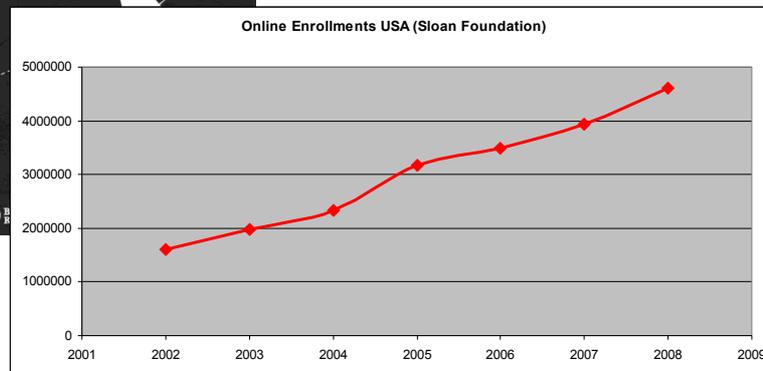
Zawacki-Richter, Kourotchkina & Bäcker (2011)

Tab. 1: Entwicklung der Studierendenzahlen seit 1914 nach Studienform[*]

Jahre	Gesamt	Präsenz-studium	Fern-studium	Abend-studium	Externat
1914	86,5	86,5	-	-	-
1917	149,0	149,0	-	-	-
1927	114,2	114,2	-	-	-
1940/41	478,1	335,1	128,0	15,0	-
1950/51	796,7	502,6	277,1	17,0	-
1960/61	1.496,7	699,2	629,9	167,6	-
1970/71	2.671,7	1.296,5	985,4	389,8	-
1980/81	3.045,7	1.685,6	959,1	401,0	-
1990/91	2.824,5	1.647,7	892,3	284,5	-
1995/96	2.790,7	1.752,6	855,8	174,8	7,5
2000/01	4.741,4	2.625,2	1.761,8	302,2	52,2
2002/03	5.947,5	3.104,0	2.399,9	346,0	97,6
2003/04	6.455,7	3.276,6	2.703,7	351,3	124,1
2004/05	6.884,2	3.433,5	2.942,5	361,8	146,4
2005/06	7.064,6	3.508,0	3.032,0	371,2	153,4
2006/07	7.309,8	3.582,1	3.195,9	372,3	159,6
2007/08	7.461,3	3.571,3	3.367,9	352,9	169,2
2008/09	7.513,1	3.457,2	3.540,7	343,7	171,5
2009/10	7.418,8	3.280,0	3.639,2	323,6	175,9

[*]Quelle: Федеральная служба государственной статистики [Föderales Amt für Statistik], http://www.gks.ru/free_doc/new_site/population/obraz/vp-obr1.htm (Zugriff am 03.01.2011)

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FernUniversität in Hagen

Entwicklung der Studierenden in den Wintersemestern WS 1975/76 - WS 2010/11
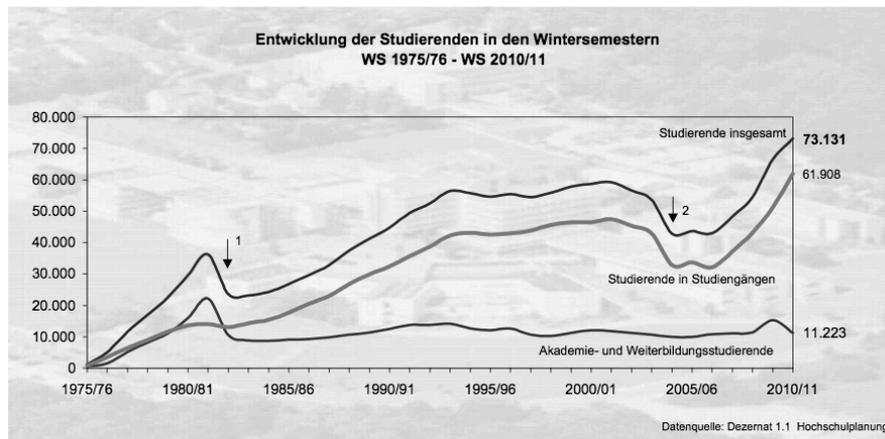
| 1 - SS 1982 Beginn der Erhebung von Gebühren für den Bezug von Studienmaterial
▼ 2 - SS 2004 Beginn der Erhebung von Studiengebühren nach den StKFG

Widening participation with ODL

- Growing demand for flexbile learning opportunities in the era of lifelong learning.
- Access to mass higher education
- Non-traditional students: working professionals, students with disabilities, or students with social/family obligations.
- Internationalization via modern ICTs
- Globalization of the education market:

Lucy was a student from Latin America, working in New Zealand and completing part-time an Australian degree which was being offered via Singapore […] We asked her what she wanted to do when she finished her qualification. She said her aim was to gain a position in the United States office of the European company she worked for. (McBurnie & Ziguras, 2007, p. 6).

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Barriers to Distance Education

- Large-scale study
- Factor-analytic study to identify dimensions of barriers to distance education
- 64 items (barriers) derived from literature, previous research and selected case studies
- Rated on a 1-5 scale (no barrier to very strong barrier)

Muilenburg, L. Y., & Berge, Z. L. (2001). Barriers to distance education: a factor-analytic study. *Distance Education*, *15*(2), 7-22.

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Sample

- N=2,504 valid surveys (collected in the US)
  - 1,276 form HE institutions
  - 448 from corporate sector
  - 375 from community colleges
  - 129 from government organizations
  - 126 from middle or secondary schools
  - 117 from non-profit organizations
  - 33 from elementary schools
- Job functions:
  - 1,150 teachers, faculty or trainers
  - 648 managers, directors
  - 346 support staff
  - 167 higher administrators (e.g. dean, vice-president)
  - 193 other

Muilenburg, L. Y., & Berge, Z. L. (2001). Barriers to distance education: a factor-analytic study. *Distance Education*, *15*(2), 7-22.

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Analysis

- Exploratory factor analysis of the 64 items (barriers) revealed 10 factors that accounted for 52% of the overall variance.
- 14 variables that were not included in any factor, e.g.:
  - competition with on-campus courses, or for existing students
  - isolation felt by instructors
  - problems with vast distances or time zones
  - lack of professional prestige for distance learning
  - accreditation issues
  - language barriers across cultures

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Table 1. Factor Analysis of Barriers to Distance Education

Barrier	1	2	3	4	5	6	7	8	9	10
Lack of partnerships/consortia agreements	.516									
Full-time equivalent issues	.510									
Technology fee	.494									
Tuition rate	.491									
Lack of transferability of credits	.464									
Lack of ongoing credibility of program	.445									
Local, state, or federal regulations	.440									
Revenue sharing with departments or business units	.426									
Difficulty competing with new distance learning (DL) business models	.396									
Lack of money to implement DL programs	.340		.307							
Traditional academic calendar/schedule hinders DL	.304									

Administrative structure

Table continued on the following page

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Barrier	1	2	3	4	5	6	7	8	9	10
Organizational resistance to change		-.724								
Lack of shared vision for DL in organization		-.722								
Lack of champion for DL in organization		-.640								
Lack of strategic planning for DL		-.555							-.359	
Difficult to convince stakeholders of DL benefits		-.498								
Lack of knowledge/support for administration		-.465						.380		
Slow pace of implementation		-.433								
Lack of "right" people to implement DL		-.381	.317							
Lack of identified need		-.348								
Lack of colleague knowledge/support of DL		-.336					.327			
Difficulty keeping up with technological changes			.527							
Lack support staff to help with course development			.517							
Lack of technical support			.504							
Lack of technology-enhanced classrooms/labs/infrastructure			.461							
Lack of personal technological expertise			.452							
Lack of DL training provided by organization			.357			.306				
Lack person-to-person contact				.637						
Disrupts traditional social organization of classroom				.535						
Quality of course/program, students, or learning				.457			.350			
Concerns with evaluation, testing, assessment, outcomes				.406						
Faculty compensation, incentives, workload, tenure, etc.					-.683					

Organisational change

Technical expertise, support & infrastructure

Social interaction & program quality

Faculty compensation & time

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Barrier	1	2	3	4	5	6	7	8	9	10
Increased time commitment (course development, training, etc.)					-.588					
Lack of grants for DL					-.420					
Perception that computers may replace teachers						-.785				
Faculty feel job security is threatened						-.720				
Fear of technology						-.486				
Threat to instructors' sense of competence, authority						-.464				
Copyright and fair-use issues							-.769			
Lack of policy concerning intellectual-property rights							-.743			
Legal issues (computer crime, hackers, piracy, viruses)							-.464			
Lack of research supporting effectiveness								.464		
Lack effective evaluation for courses/programs								.395		
Lack adequate student access or equal access concerns									-.703	
Lack of adequate instructor access to DL									-.597	
Lack of advisement for DL students										-.693
Lack of library access or materials delivery										-.650
Lack student services (e.g., admissions, financial aid)										-.527
Inability to monitor identity of DL students										-.394
Difficulty recruiting faculty or students										-.316

Callouts:
- Threat of technology
- Legal issues
- Evaluation/effectiveness
- Access
- Student support services

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Education Innovation: Organizational Change

- Meso-level of educational management
- Support from top management

"[…] unless a college or university is prepared to make a serious long-term, institution-wide commitment to the goal, it is extremely difficult to go virtual in a big way."
Nicholas H. Allen (2001: 72)
Provost / Chief Academic Officer
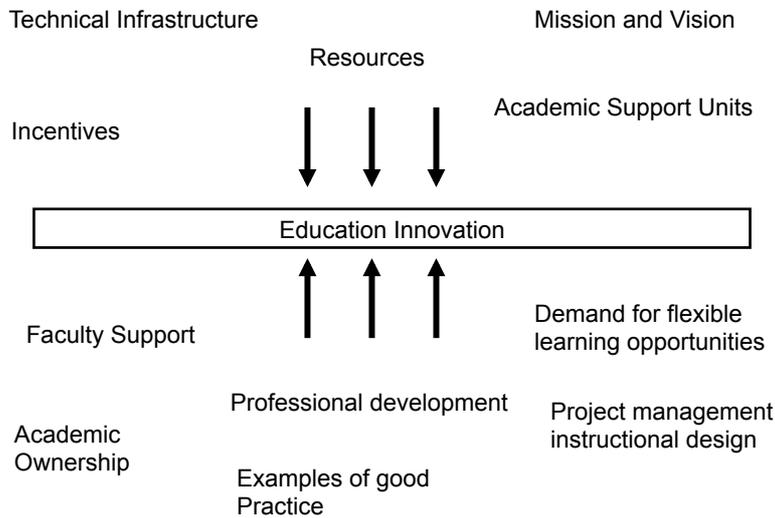University of Maryland University College (UMUC)

- Faculty participation – incentives for innovative teaching
- Faculty support

"Presidents may dream visions, and vice presidents may design plans, and deans and department heads may try to implement them, but without the support of faculty members nothing will change."
A. W. (Tony) Bates (2000: 95)
Distance Education & Technology Continuing Studies (Director)
University of British Columbia

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Organizational Change: Top-Down / Bottom-UP

Technical Infrastructure   Mission and Vision

Resources

Incentives   Academic Support Units

↓   ↓   ↓

| Education Innovation |

↑   ↑   ↑

Faculty Support   Demand for flexible
                                         learning opportunities

Professional development

Academic   Project management
Ownership   instructional design

Examples of good
Practice

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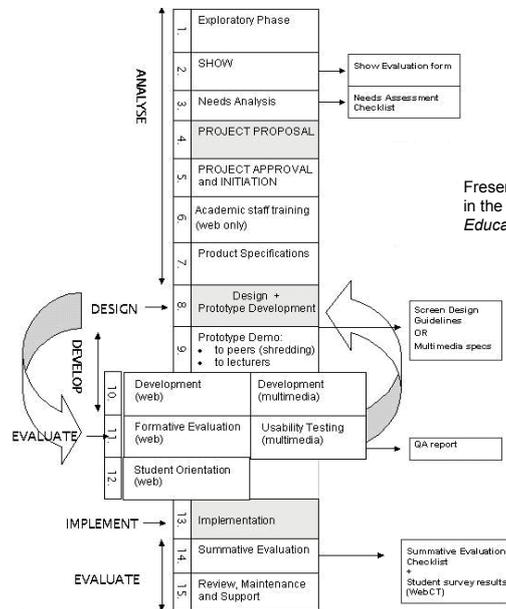

Instructional design

- Instructional design is a systematic approach to the planning, design, implementation and evaluation of educational interventions.
- Team approach vs. lone ranger approach
- ADDIE model:
    o Analyze
    o Design
    o Develop
    o Implement
    o Evaluate

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Instructional design process

Fresen, J. W., & Boyd, L. G. (2005). Caught in the web of quality. *International Journal of Educational Development, 25*(3), 317-331.

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Thank you for your attention!

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