All Things Research in Open Distance and eLearning

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Understanding Open, Distance and eLearning

Status of ODeL research

What research tells us

Way Forward
Understanding Open, Distance and eLearning
Philosophy of ‘Open-ness’

- Open as to people,
- Open as to places,
- Open as to methods, and, finally,
- Open as to ideas

Lord Geoffrey Crowther
First Chancellor to The Open University, UK
‘Open-ness’ in Practice

- Open admission (no entry qualifications)
- Multiple open channels (radio, TV, etc.)
- Open curriculum
- Open access (Anytime, anywhere)
- Open participation
- Open accreditation

(Wedemeyer, 1973)
Distance Education

• separation of teacher and learner
• educational institution plan, designs and delivers learning resources and opportunities
• media used for delivery of learning content
• two-way communication between student and teacher, and student and students
• Limited in person interaction

Source: Keegan, 1996.
Open and Distance Learning

• Synchronous learning not the only option (Anytime, anywhere)
• Duration of learning hours insignificant (outcomes-oriented curriculum)
• Options for work-integrated learning (internships)
• Experiential learning (Recognition of Prior Learning)
Generations of Distance Education: J Taylor

| Models of Distance Education                                                                 | Flexibility |
|--------------------------------------------------------------------------------------------|-------------|
|                                                                                             | Time        | Place | Pace |
| Gen 1: Correspondence model (print)                                                          | Yes         | Yes   | Yes  |
| Gen 2: Multimedia model (print, audio, video, computer-based)                               | Yes         | Yes   | Yes  |
| Gen 3: Tele-learning model (broadcast TV/Radio, interactive TV/ Videoconferencing)           | No          | No    | No   |
| Gen 4: Flexible learning model (Interactive multimedia online, Internet-based courses, computer mediated communications) | Yes | Yes | Yes |
| Gen 5: Intelligent flexible learning model (Gen 4 plus, automated response system, automated portal access) | Yes | Yes | Yes |

Source: Taylor, J. (1998). Flexible Delivery: The Globalisation of Lifelong Learning. Indian Journal of Open Learning, 7(1), 55-66.
Blended Learning

- Face-to-Face Courses
- Blended Courses
- Distance/Online Courses
  - MOOC
  - Mobile learning

ICT integration in teaching and learning
Open and Distance Learning
Status of ODeL Research
Status of Research in ODL

"Massive volume of amateur, unsystematic and badly designed research producing information of very little value"

Moore, M. G. (1985). Some observations on current research in distance education. *Epistolodidaktika*, 1, 35-62.
Status of Research in ODL

“Lack of Theoretical Underpinning”

Saba, F. (2000). Research in distance education: A status report. International Review of Research in Open and Distance Learning, 1(1).

An examination of existing research shows that it is often atheoretical and predominantly descriptive

Perraton, H. (2000). Rethinking the research agenda. International Review of Research in Open and Distance Learning, 1(1).

http://www.irrodl.org/index.php/irrodl/article/view/5/338
Gender & Research in ODL
(based on analysis of 675 articles in 5 Journals from UK, USA, Canada and Australia)

| Method     | Count | Male | Female | Total |
|------------|-------|------|--------|-------|
| Quantitative |      | 119  | 83     | 202   |
| Qualitative |      | 56   | 82     | 138   |
| Triangulation |     | 35   | 55     | 90    |
| Other      |      | 175  | 90     | 265   |
| Total      |      | 385  | 310    | 695   |

“Confirms the stereotypical view that female researchers are more likely to use qualitative methods”.

Olaf Zawacki-Richter, Eva Maria Bäcker, and Sebastian Vogt (2009, Review of Distance Education Research (2000 to 2008): Analysis of Research Areas, Methods, and Authorship Patterns in International Review of Research in Open and Distance Learning Volume 10, Number 6.
Distance Education: 35 years

- **1980–1984**: Professionalization and institutional consolidation
- **1985–1989**: Quality assurance
- **1990–1994**: Emergence of virtual universities
- **1995–1999**: MOOCs and OER
- **2000–2004**: Instructional design and educational technology
- **2005–2009**: Student support and early stages of online learning
- **2010–2014**: Collaborative learning and online interaction

Zawacki-Richter, O., & Naidu, S. (2016) Mapping research trends from 35 years of publications in Distance Education, *Distance Education*, 37:3, 245-269, DOI: 10.1080/01587919.2016.1185079
Research Trends during Covid-19

- 68% **post-secondary focus**, only 10% K-12
- Subject category focus: social science (64%), **medicine and health science** (32%), computer science (31%).
- Over one-third of papers descriptive; 43% adopted quantitative approach

Mishra, S., Sahoo, S., & Pandey, S. (2021). Research trends in online distance learning during the COVID-19 pandemic. *Distance Education, 42*(4), 494-519.
Silver Lining

• 81% of students were learning online
• 68% of students rated the quality of online digital learning as ‘best imaginable’, ‘excellent’ or ‘good’
• 62% also rated the support they received for online learning equally highly.

Source: JISC (2021). Student digital experience insights survey 2020/21. https://repository.jisc.ac.uk/8338/1/DEI%20P1%202021%20student%20data%20for%20HE-FINAL.pdf
### UBC’s pivot to ERT

#### Faculty and Student response on satisfactory transition to ERT

|       | Disagree | Neutral | Agree |
|-------|----------|---------|-------|
| Faculty | 1.9      | 9.4     | 88.7  |
| Students | 10.8     | 8.4     | 82.0  |

#### Faculty and Student response on “lower quality of learning experience”

|       | App Sc/ Science | Arts |
|-------|-----------------|------|
|       | Faculty | Students | Faculty | Students |
| Disagree | 17      | 20      | 09      | 19 |
| Neutral  | 22      | 21      | 23      | 19 |
| Agree    | 44      | 59      | 69      | 62 |
Key Research Trends (2014-2019)

- Issues related to open education
- Implementation and use of educational technology, media, and digital tools
- Design, support, and quality assurance of online DE

Bozkurt, A., & Zawacki-Richter, O. (2021). Trends and Patterns in Distance Education (2014–2019): A Synthesis of Scholarly Publications and a Visualization of the Intellectual Landscape. The International Review of Research in Open and Distributed Learning, 22(2), 19-45. http://www.irrodl.org/index.php/irrodl/article/view/5381/5517
What ODeL research tell us
Increased Access and Equity

**India:** 4.2 million (11.1%) enrolment in distance higher education in 2020: 44.5% female

**South Africa:** 34.5% students study through distance education in 2019: 68.5% female
Cost Per Unit Effectiveness

| Training modes     | Cost per completing participant | Total effectiveness points per completing participant (total 300 points) | Cost per unit Effectiveness |
|--------------------|---------------------------------|---------------------------------------------------------------------|-----------------------------|
| Face-to Face       | US$1,614                        | 244                                                                 | US$6.7                      |
| Online             | US$ 901                         | 242                                                                 | US$3.7                      |

Source: Jung, I. (2005). Cost-effectiveness of online teacher training. *Open Learning: The Journal of Open, Distance and e-Learning*, 20(2), 131-146..
Using OER for Improving Learning Outcomes

• Students saved between 75 to 88 ECD per semester

• OER improved student performance by 5.5%
Effective Learning: 3 interactions

Source: Bernard, R. M., Abrami, P. C., Borokhovski, E., Wade, C. A., Tamim, R. M., Surkes, M. A., & Bethel, E. C. (2009). A meta-analysis of three types of interaction treatments in distance education. Review of Educational research, 79(3), 1243-1289.
Technology and Learning: meta-analysis

- **In-Class Technology Integration**: estimated 11.5% improvement in knowledge/skills
- **Online Learning**: “as good as” studying in-class; 2.4% improvement in learning outcomes.
- **Blended Learning**: 10.7% average improvement in learning outcomes compared to face-to-face instruction.

Source: Technology Application in Teaching and Learning: Second-Order Review of Meta-analyses. (In press)
Research on Emissions and ODL

- **3x less carbon emissions**
- **Travel – greatest contributor**
- **Mode of delivery - determinant**

Source: Carr et.al. Delivery Mode and Learner Emissions: Comparative Study from Botswana. W. Leal Filho and S. L. Hemstock (eds.), Climate Change and the Role of Education, Springer Nature. In Production.
Taking ODeL Research to the next level

| Technologies      | Implications                                                                 |
|-------------------|-----------------------------------------------------------------------------|
| Artificial        | Big data supported learning analytics to customize and improve student learning |
| intelligence      |                                                                             |
| Blockchain        | Tamper proof certification of skills for mobility                            |
| AR/VR             | Master skills using technology before actually applying in real life.         |
| Robotics          | As teaching assistants to scale training                                      |
Missing links
Missing links

- Social role of distance education
- Inadequate training
- Channels for disseminating research
OUUK: Mission Statement

“
We promote educational opportunity and social justice by providing high quality university education.... Through academic research, pedagogic innovation and collaborative partnership we seek to be a world leader in the design, content and delivery of supported open learning.
"
Inadequate capacity
COL’s Journal of Learning for Development
Research on ODeL
the missing link
Way forward
What drives research and innovation in industry?

What drives innovation

- Corporate culture
- Innovation processes
- Adequate resources
- Visible sponsorship
- The right people

|                      | Managers | C-level |
|----------------------|----------|---------|
| Corporate culture    | 34       |         |
| Innovation processes | 18       | 14      |
| Adequate resources   | 19       | 23      |
| Visible sponsorship  | 21       | 26      |
| The right people     | 24       | 46      |

http://www.arcusgroup.ca/CEO_view_strategic_planning.html
Research Through Mentoring

Panda, Santosh (2005). Research as Professional Development in Distance Education, *Indian Journal of Open Learning*, 14(3)
Institutional Characteristics for Promoting Research - **German model**

- Importance of collegiality
- Sufficient time for research
- Identify and build on existing strengths
A culture of research:

• Fosters an environment of creativity and innovation
• Values and rewards research
• Research informs both policy and practice
Way Forward

Govt policy and financial support critical for research
Technology infrastructure and connectivity key
New research required in curriculum and pedagogy for ODeL
Targeted research on social inclusion and sustainable development
Thank you