Putting Innovation at the heart of ODL: what are the possibilities?

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Plan

• Context
• Innovation in education
• Is ODL a disruptive innovation?
• Status of research in open learning
• Refresh, Rethink, Redesign
Age of Disruptions

COVID-19 PANDEMIC

TECHNOLOGY

CLIMATE CHANGE
Context Today

• Global recession
• Phenomenal adoption of technology
• By 2025, 85 million jobs may be displaced but 97 million more jobs may emerge
• Skills for the green and blue economies
• Life expectancy: half the people born after 1997 could live up to 100

1. Address ‘learning loss’
2. Promote equity and inclusion
3. Achieve digital transformation
4. Review curricula and pedagogies
5. Support psycho-social well-being
Learning Loss during Covid-19

• Learning loss of about three percentile points
• Learners from less educated home 55% more prone to learning loss

Source: https://osf.io/preprints/socarxiv/ve4z7/
AI Revolution

- New essays, short articles, Tweets etc
- Language translation
- Text summarisation
- Image generation from Text
- Microlearning courses from text

## Curriculum and Pedagogy

### Curricular needs
- General education to employment-oriented education
- Any skills to Green skills
- From STEM to STEAM
- From digital literacy to AI fluency

### Pedagogical considerations
- Learnability
- Blended learning design
- Virtual reality
- AI supported teaching
- Feedback and learning analytics
Social Emotional Learning

- Teachers’ social and emotional skills are key.
- Years after students participated in SEL, their academic performance was an average of 13 percentile points higher than students who didn’t participate.

Source: https://casel.org/fundamentals-of-sel/what-does-the-research-say/, retrieved on 1 June 2023
Innovation in education
“Measuring Innovation in Education”
by OECD between 2003-2011

- Increases in innovative pedagogic practices...
- Innovations in assessments and accessibility
- Creation of professional learning communities for teachers and parents
- ‘...countries with greater levels of innovation have seen increases in certain educational outcomes, including higher... mathematics performance, more equitable learning outcomes for students of all abilities and more satisfied teachers’.

Educational Innovations during Covid-19

- Use of TV and Radio (e.g., several countries in the Commonwealth)
- Use of digital platforms (e.g., DIKSHA and SWAYAM in India)
- Free SIM cards and free data to access internet (e.g., St Lucia, Sri Lanka)
- Sharing OER (e.g., Fiji, Nigeria, South Africa)
- Curriculum aligned digital content for K-12 (e.g., Fiji, Samoa, Vietnam)
- Online and alternative examinations (e.g., India (open book examination), South Africa (use of mobile app))

Sources: (i) https://www.gse.harvard.edu/news/22/03/harvard-edcast-global-innovations-education-during-pandemic
(ii) http://hdl.handle.net/11599/3592
Types of Innovation

Incremental Innovation

Within existing demand and within existing technology and framework improving a product or service or practice

Mobile phones, community radio, camera are some of the examples of incremental innovation.
Disruptive Innovation

A new product or service or practice addressing the existing demand with new technology or framework

From campus-based to distance learning
Architectural Innovation

When new products or services or practices with existing technology or framework, address new demand or market.

From Pedagogy to Andragogy to Heutagogy for Lifelong Learning
From e-Learning to MOOCs
Radical Innovation

New products, services or practices with new technology or framework to reach create or reach new demand

Radical Innovation in Education is weak.
Can we reach 773 million illiterates and millions of semi-literates?
Is ODL a disruptive innovation?
Disruptive Innovation

‘...describes a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors.’

C. Christensen

Source: http://www.claytonchristensen.com/key-concepts/
Characteristics of Disruptions

- It is a process, not a product or service
- Perceived lower quality in the beginning
- Takes time to disrupt existing business
- New business model/s emerge
- Not all disruptions succeed
Disruptive Innovation Model

Source: https://hbr.org/2015/12/what-is-disruptive-innovation
Disruption in Higher Education

- Top-tier F2F Higher Education institutions
- Mainstream F2F Higher Education
- Open Universities and Dual-mode institutions
- MOOCs
- Online and blended courses
- ODL as innovation
- Face-to-face teaching: sustaining trajectory

Time

High-end

Low-end
Disruptive Innovations Happen

Demands of a learning society

When new technologies emerge

New providers emerge
Generations of Distance Education

1. Correspondence model (printed-text)
2. Multi-media model (Radio, TV)
3. Tele-learning model (Interactive television)
4. Flexible learning model (WWW)
5. Intelligent flexible learning model (WWW+)

(Taylor, 2001)
ODL in Higher Education

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

ICT integration in teaching and learning
Open and Distance Learning
Inclusion: ODL for Persons with Disabilities
ODL for poverty alleviation

• Targeted to 50,000 rural villagers

• Evidence of increase in income, enterprise profit, employment opportunities

Source: https://www.emerald.com/insight/content/doi/10.1108/AAOUJ-09-2021-0110/full/html

Practices of poverty alleviation by open and distance education: a case report from the Open University of China
Chuanjin Ju, Songyan Hou, Dandan Shao, Zhijun Zhang and Zhangyi Yu

Source: https://www.emerald.com/insight/content/doi/10.1108/AAOUJ-09-2021-0110/full/html
ODL for skilling and reskilling

- Learning to learn online
- Providing just-in-time training for livelihoods
- Learner support essential

COL-Coursera Workforce Recovery Programme
National University for the Aged, China
Status of research in open learning
<table>
<thead>
<tr>
<th>Year Range</th>
<th>Key Themes</th>
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<tbody>
<tr>
<td>1980-84</td>
<td>Professionalization and institutional consolidation</td>
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<tr>
<td>1985-89</td>
<td>Instructional design and educational technology</td>
</tr>
<tr>
<td>1990-94</td>
<td>Quality assurance</td>
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<tr>
<td>1995-99</td>
<td>Student support and early stages of online learning</td>
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<tr>
<td>2000-04</td>
<td>Emergence of virtual universities</td>
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<tr>
<td>2005-09</td>
<td>Collaborative learning and online interaction</td>
</tr>
<tr>
<td>2010-14</td>
<td>MOOCs and OER</td>
</tr>
</tbody>
</table>

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
Key Research Trends (2014-2019)

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

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.
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

Critical Issues in Open and Distance Education (ODE) Research

• Scarcity of longitudinal research
• Preference for success over failure
• Lack of socio-cultural sensitivity
• Scant attention for the disadvantaged
• Insufficient research on ODE policy
• Disinterest in revisiting ODE theories
Research on AI in online distance education

• Data mining, Learning analytics for adaptive and personalized learning
• Algorithmic online spaces, ethics, human agency
• Recognising and predicting student behaviours

Murat Ertağ Dogan, Tulay Gör Döğer, Aras Bozkurt
The use of AI in online learning and distance education processes: a systematic review of empirical studies
Special Issue Artificial Intelligence in Online Higher Educational Data Mining
Applied Sciences/Vol 13/Issue 5 27Feb, 2023
## Themes and innovations 2019-2023

### Article Details

<table>
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<tr>
<th>Title</th>
<th>Abstract Views</th>
<th>Title</th>
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<tbody>
<tr>
<td>Alam Effect of Community Factors on Primary School Learners’ Achievement in Rural Bangladesh</td>
<td>10794</td>
<td>Lambert Changing our (Dis)Course: A Distinctive Social Justice Aligned Definition of Open Education</td>
<td>12767</td>
</tr>
<tr>
<td>Erdem et al. A Meta-Analysis of the Effect of Parental Involvement on Students’ Academic Achievement</td>
<td>1578</td>
<td>Miglani et al. Mobile learning: readiness and perceptions of teachers of Open Universities of Commonwealth Asia</td>
<td>619</td>
</tr>
<tr>
<td>Bozkurt et al. Social Networking Sites as Communication, Interaction, and Learning Environments: Perceptions and Preferences of Distance Education Students</td>
<td>1481</td>
<td>Ranjan Is Blended Learning Better than Online Learning for B.Ed Students?</td>
<td>946</td>
</tr>
</tbody>
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Recent journal themes

Technology and Pedagogy for Learning and Capacity Building
Capacity Building for New Modes of Learning and Teaching
Lessons from Diverse Contexts and Perspectives
Research on Technology-Enabled Learning
Learning for Development – Discourse and Practice
Researching Technology-Enabled Teaching, Learning and Training
Technology-Enabled Learning: OER, MOOCs, and other TEL Designs
The fundamental problem lies in educational research... not much concerned with learning productivity and efficiency.

(Serdyukov, 2017)

Educational Technology – is it alone a sine qua non of innovation?

ODL Research – where is the discourse on innovation theories?

## Taking ODL Research to the next level

<table>
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<tr>
<th>Technologies</th>
<th>Implications</th>
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<tr>
<td>Artificial</td>
<td>Big data supported learning analytics to customize and improve student</td>
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<tr>
<td>intelligence</td>
<td>learning</td>
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<tr>
<td>Blockchain</td>
<td>Tamper proof certification of skills for mobility</td>
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<td>AR/VR</td>
<td>Master skills using technology before actually applying in real life.</td>
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<tr>
<td>Robotics</td>
<td>Teaching assistants to scale training</td>
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Refresh, Rethink, Redesign
Innovation happens...

- Involve stakeholders like communities, parents, teachers and labour market
- Foster participation
- Transform creativity into innovation
Innovations are not about technology alone but relate to:

- Products
- Processes
- Models
- Methods
- Workplace organisation

In addition, we need to ask:

• Innovations for whom?
• Innovations for what?
• How will scale be achieved?
• How ethical are the innovations?
• What will be the impact?
Skills for Innovation

• Questioning
• Observing
• Networking
• Experimenting
Refresh: Towards Lifelong learning

• Simply reforming current education systems ...to meet future skills requirements is not going to be enough....

• Ageing countries ...will need wholesale reskilling of existing workforces throughout their life
“To enhance access to high quality, affordable and relevant education...and ensure lifelong learning opportunities to face challenges in a knowledge society.”

"To widen access to quality education and provide lifelong learning opportunities by leveraging on technology...providing a conducive...learning environment at...affordable cost"

Sukhothai Thammathirat Open University aims to be a world-class open university utilizing a distance education system to provide lifelong learning for all
Rethink: Employability

- Balance between theory and practice; hard and soft skills
- Engage industry: internships; apprenticeships
- Link QA to employability
- Career support
- Measure capability rather than number of hours

Credit Hour ➔ Range of skills
Rethink: Green learning agenda

Skills for green jobs
Skills aimed at fulfilling the requirements of green jobs and supporting the transition to a low-carbon green economy

Green life skills
Cross-cutting skills that serve both technical, instrumental, and adaptive, transformative ends

Skills for a green transformation
Adaptive skills aimed at transforming unjust social and economic structures

Redesign: Assessment

• New methods
• Recognition of prior learning
• Transnational qualifications frameworks for mobility
Redesign: Learner Support

- Online support hubs
- Use of learning analytics
- Keep the human touch
- One Chatbot per learner?
Towards an Innovation Mindset

- Regard every challenge as an opportunity
- Take risks and learn from failure
- Adopt collaboration as a strategy

Source: http://www.claytonchristensen.com/key-concepts/
Thank you