Disruptive Change in an Age of Disruption

Professor Asha Kanwar
President & CEO
Commonwealth of Learning

Anadolu University | September 28-30, 2022
Plan

- Disruptive Innovations
- Covid-19 Pandemic
- Technology
- Climate Change
- Refresh, Rethink, Redesign
DISRUPTIVE INNOVATIONS
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
- Online and blended courses
- MOOCs
- Face-to-face teaching: sustaining trajectory
- ODL as innovation

Time

High-end

Low-end
Disruptive Innovations Happen

- Demands of a learning society
- When new technologies emerge
- New providers emerge
COVID-19 Pandemic
Closure of campuses

220 million Higher Education students globally affected

Impact of Covid-19: Institutions

- Transition to emergency remote teaching
- Drop in international students (20% in Germany; 16% in US—applications for student visas in Australia dropped by 80-90%)
- Lack of technology infrastructure
- Adverse impact on research—practical and collaborative
- Drop in revenues from fees/budget cuts

Teachers’ perspective

- Live-streamed lectures synchronously (74.6%)
- Presentations sent to students (44.5%)
- Asynchronous pre-recorded video lectures available online (32.1%)
- Asynchronous pre-recorded audios (20.6%)

Teachers needed more assistance during pandemic

Students’ perspective

• Heavy workloads
• 50% felt their performance had declined
• Inequitable access to tools and internet
• Psychological and emotional well-being

Learning Inequality 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/
What emerged: new online courses

- Universities started many online courses
- Increased adoption of online distance education
- Increased acceptability of online training for professional development.

<table>
<thead>
<tr>
<th>Platform</th>
<th>2019</th>
<th>2020</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coursera</td>
<td>8M</td>
<td>31M</td>
<td>76M</td>
</tr>
<tr>
<td>edX</td>
<td>5M</td>
<td>10M</td>
<td>35M</td>
</tr>
<tr>
<td>Future Learn</td>
<td>1.3M</td>
<td>5M</td>
<td>15M</td>
</tr>
<tr>
<td>Class Central</td>
<td>350k</td>
<td>800k</td>
<td>2.3M</td>
</tr>
</tbody>
</table>

Source: https://www.classcentral.com/report/the-second-year-of-the-mooc/
Positive quality rating

- 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.

https://repository.jisc.ac.uk/8338/1/DEI%20P1%202021%20student%20data%20for%20HE-FINAL.pdf
Key Technology Trends and Practices

- Artificial intelligence
- Blended and hybrid course models
- Learning analytics
- Micro-credentialing
- Open educational resources
- Quality online learning

Each Hype Cycle drills down into the five key phases of a technology’s life cycle. Roll over the phases in the graphic above for more information.

Source: https://www.gartner.com/technology/research/methodologies/hype-cycle.jsp
Fourth Industrial Revolution

1st: Mechanization, water power, steam power
2nd: Mass production, assembly line, electricity
3rd: Computer and automation
4th: Cyber Physical Systems

CC BY-SA Source: https://commons.wikimedia.org/wiki/File:Industry_4.0.png (User: ChristophRoser)
<table>
<thead>
<tr>
<th>1&lt;sup&gt;st&lt;/sup&gt; Industrial Revolution</th>
<th>2&lt;sup&gt;nd&lt;/sup&gt; Industrial Revolution</th>
<th>3&lt;sup&gt;rd&lt;/sup&gt; Industrial Revolution</th>
<th>4&lt;sup&gt;th&lt;/sup&gt; Industrial Revolution</th>
<th>5&lt;sup&gt;th&lt;/sup&gt; Industrial Revolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanisation</td>
<td>Electrification</td>
<td>Automation and Globalisation</td>
<td>Digitalisation</td>
<td>Personalisation</td>
</tr>
<tr>
<td>Occurred during the 18&lt;sup&gt;th&lt;/sup&gt; and 19&lt;sup&gt;th&lt;/sup&gt; centuries, mainly in Europe and North America</td>
<td>From the late 1800s to the start of the First World War</td>
<td>The digital revolution occurred around the 1980s</td>
<td>Start of the 21&lt;sup&gt;st&lt;/sup&gt; century</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; decade of the 21&lt;sup&gt;st&lt;/sup&gt; century</td>
</tr>
<tr>
<td>Introduction of mechanical production facilities driven by water and steam power</td>
<td>Division of labour and mass production, enabled by electricity.</td>
<td>Automation of production through electronic and IT systems</td>
<td>Robotics, artificial intelligence, augmented reality, virtual reality</td>
<td>Deep, multi-level cooperation between people and machines. Consciousness.</td>
</tr>
</tbody>
</table>
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)
Influence of ODL on Higher Education

- Face-to-Face Courses
- Blended Courses
- Distance/Online Courses

ICT integration in teaching and learning

Open and Distance Learning

- MOOC
- Mobile learning
33 Commonwealth Open Universities
(2021)

BANGLADESH
Bangladesh Open University

INDIA
Dr. Babasaheb Ambedkar Open University
Dr. B.R. Ambedkar Open University
Indira Gandhi National Open University
Jagat Guru Nanak Dev Punjab State Open University
Karnataka State Open University
Krishna Kanta Handiqui State Open University
Madhya Pradesh Bhoj University
Nalanda Open University
Netaji Subhas Open University
Odisha State Open University
Pandit Sundarlal Sharma (Open) University
Sree Narayana Guru Open University
Tamil Nadu Open University
Uttarakhand Open University
Uttar Pradesh Rajarshi Tandon Open University
Vardhman Mahaveer Open University
Venkateshwar Open University (Private)
Yashwantrao Chavan Maharashtra Open University

MALAYSIA
Open University Malaysia
Wawasan Open University

PAKISTAN
Allama Iqbal Open University

SRI LANKA
Open University of Sri Lanka

NEW ZEALAND
Open Polytechnic of New Zealand

BOTSLOWA
Botswana Open University

MAURITIUS
Open University Mauritius

NIGERIA
National Open University of Nigeria

SOUTH AFRICA
University of South Africa

TANZANIA
Open University of Tanzania

ZAMBIA
Zambian Open University

UNITED KINGDOM
The Open University

CANADA
Athabasca University

CYPRUS
Open University of Cyprus
The no significant difference phenomenon

as reported in 355 research reports, summaries and papers

a comparative research annotated bibliography

on technology for distance education

1999

compiled by
Thomas L. Russell
Office of Instructional Telecommunications
North Carolina State University
## Cost Per Unit Effectiveness

<table>
<thead>
<tr>
<th>Training modes</th>
<th>Cost per completing participant</th>
<th>Total effectiveness points per completing participant (total 300 points)</th>
<th>Cost per unit Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to Face</td>
<td>US$1,614</td>
<td>244</td>
<td>US$6.7</td>
</tr>
<tr>
<td>Online</td>
<td>US$ 901</td>
<td>242</td>
<td>US$3.7</td>
</tr>
</tbody>
</table>

Inclusion: ODL for Persons with Disabilities

CONVENIENT
- Study at your own pace, place, time
- Don't require to travel to campus or accommodation

FLEXIBLE
- Option to listen, watch or read lecture in different formats

AFFORDABLE
- Costs less than F2F

ANONYMOUS
- Engage with professors and classmates without feeling discriminated
ODL for poverty alleviation

• Targeted to 50,000 rural villagers

• Evidence of increase in income, enterprise profit, employment opportunities
ODL for skilling and reskilling

- Learning to learn online
- Providing just-in-time training for livelihoods
- Learner support essential
CLIMATE CRISIS
At the current rate there will be larger and more frequent climate related disasters

Source: The Commonwealth Secretariat. 'Climate Change'. https://thecommonwealth.org/climate

Temperatures in Canada and north-west US reached record highs on 29 June

Source: BBC Weather


Coquihalla on fire - BC Ministry of Transport

https://commons.wikimedia.org/wiki/File:Meritt_BC_Flooding_November_2021.png

https://www.flickr.com/photos/tranbc/51382748573
Impact of the climate crisis on education

- Infrastructural damage
- Damage to resource and materials
- Loss of data and records
- Collapse of systems = Out of school youth
Education: Impact on Climate

**DIRECT**
- Emissions from construction of schools/infrastructure
- Emissions from energy use in schools
- Learner emissions

**INDIRECT**
- Emissions from ‘development’ and economic growth associated with higher levels of education in a country
Stakeholder Consultations

• Urgent action required
• Need for behavioural change for climate action
• Engage and empower youth
• Promote disaster response and recovery through education and lifelong learning
• Promote collaboration especially with the private sector
Recommendations

• Resilient infrastructure
• Skills for the blue and green economies
• Promote climate justice
Climate Justice: addressing inequalities

• Countries with harmful gender norms, gender discriminatory education policies are also countries with low levels of climate resilience and high levels of vulnerability to climate disasters.
• Women and girls more vulnerable to disasters
• Girls typically excluded from technical fields and STEM required by the green economy
Lower carbon footprint

3x less carbon emissions

Travel – greatest contributor

Mode of delivery - determinant

REFRESH, RETHINK, REDESIGN
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 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.

Open University Sri Lanka
"To enhance access to high quality, affordable and relevant education ...and ensure lifelong learning opportunities to face challenges in a knowledge society."
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
Employability Pathway in HE

- Sensitisation
- Career Counselling
- Evaluation Drills
- Career Support

Before Admission → After Induction → Penultimate Year → Upon Graduation
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: Pedagogy

- Adopt blended approaches
- Integrate pedagogy, andragogy and heutagogy
- Continuous feedback and recognition
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
Disruptive innovation happens...

- Involve stakeholders like communities, parents, teachers and labour market
- Foster participation
- Transform creativity into innovation
Technology an invention—when technology is ‘domesticated’, innovations happen
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?
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