OER and Global Citizenship Education: Using OERs to Achieve SDG4

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15 Global Challenges

Millenium Project: Improve humanity’s prospects for building a better future

http://www.millennium-project.org/millennium/15-GC.jpg
https://4.bp.blogspot.com/-G_7jxxJWib8/UNxXZppA5I/AAAAAAAAIM/IBXoOo54slk/s1600/the_flat_world.jpg
Millennium Challenge: Flat World

Expect disruptions
The move towards a fully interconnected world is quickly becoming a reality ...

Kevin Dallas, General Manager, Microsoft
Expect disruptions

Millennium Challenge: Globalized World

• globalizing world, needs tolerance and understanding of different cultures
• teaching of cross-cultural and cross-religious
• social benefits from early recognition of different cultures
## Open Movement

### Table 1: Educational generations in higher education

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Education 1.0</th>
<th>Education 2.0</th>
<th>Education 3.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary role of professor</td>
<td>Source of knowledge</td>
<td>Guide and source of knowledge</td>
<td>Orchestrator of collaborative knowledge creation</td>
</tr>
<tr>
<td>Content arrangements</td>
<td>Traditional copyright materials</td>
<td>Copyright and free/open educational resources for students within discipline, sometimes across institutions</td>
<td>Free/open educational resources created and reused by students across multiple institutions, disciplines, nations, supplemented by original materials created for them</td>
</tr>
<tr>
<td>Learning activities</td>
<td>Traditional, essays, assignments, tests, some groupwork within classroom</td>
<td>Traditional assignment approaches transferred to more open technologies; increasing collaboration in learning activities; still largely confined to institutional and classroom boundaries</td>
<td>Open, flexible learning activities that focus on creating room for student creativity; social networking outside traditional boundaries of discipline, institution, nation</td>
</tr>
</tbody>
</table>
Open Movement

‘The Internet has unleashed an extraordinary possibility for many to participate in the building and cultivating a culture that reaches far beyond local boundaries’

(Lawrend Lessig)

Anyone can learn at any time, at anywhere, from anyone!
Open Education Initiative

- OER, OCW, edX

Web 1.0 – 2.0 – 3.0

Accomplish an educational goal
Change their lives

Learner

Open Educational Contents

Disruption

Open Education Initiative

Culture of Open Sharing
Open Movement

Concept of OER/OCW

Open Education

OER

Open Courseware

Open Contents
(images, videos, academic articles, music)

Open Access Publication
Open Movement

Open Sharing of Knowledge
Content derives meaning from within 3 factors

One-way communication
- Passive
- Providers publish
- Providers-centric

Multi-way communication
- Active
- People participate
- Community/interest-centric

Movement rooted in the concept of sharing in Web 2.0
Open Movement

Future Curriculum Changes by 2030

- Teaching of morals, ethical considerations
- Measurement of characteristics rather than intelligence
- Teaching of wisdom much more seriously.
- Emphasis on the need to learn how to learn, Training in rational scientific thinking, future-oriented, goal-oriented.
- Globalizing world, consideration for tolerance and understanding of different cultures, teaching of cross-cultural and cross-religious teachings
- Social benefits related to the early recognition of different cultures
- Develop at least 2 languages in their first 2 years of life, natural multi-lingualism

Report Future Issues on Education: Curriculum Methods and Tools Administration and Institutions Students

http://www.millennium-project.org/millennium/Education-2030.html
Open Movement

Technology allowed new methods of dynamic teaching

1. Learning as more mobile
2. Learning as more flipped
3. Learning as more video-based
4. Learning as more visual
5. Learning as more Touch sensored
6. Learning as more game-based
7. Learning as more immersive
8. **Learning as more collaborative**
9. Learning as more social
10. Learning as more adventurous
11. Learning as more direct from experts
12. Learning as more synchronous
13. Learning as more digital
14. **Learning as more resource rich**
15. Learning as more informal
16. Learning as more competency-based
17. Learning as more on demand
18. Learning as more personal
19. **Learning as more communal**
20. Learning as more online
21. Learning as more modifiable
22. Learning as more comfortable
23. **Learning as more ubiquitous**
24. Learning as more instantaneous
25. Learning as more self-directed
26. **Learning as more open**
27. Learning as more massive.
SDG 4 as Global Responsibility

- Millennium Development Goals of 2000: limited to basic education
  - Sustainable Development Goals for 2030 have targeted to ensure equal access for all to affordable and quality technical, vocational and tertiary education including university education.
  - Indicate the global consensus on the importance of openness. Education must offer greater curricular diversity.
- Online learning is a powerful tool for opening up institutional reach
Exemplary Case: MOOC

http://www.kmooc.kr/courses/course-v1:KHUk+KH101+2017_KH101/about
Exemplary Case: MOOC

http://www.e-learn.nl/2015/10/15/moocs4d-sustainable-development-goals-and-moocs
Exemplary Case: MOOC

https://courses.sdgacademy.org/
Exemplary Case: OCW

IHE Delft is instrumental in the strengthening of efforts by other universities and research centres in increasing knowledge and skills of professionals working in the water sector. The knowledge and services of IHE Delft in human and institutional capacity-building are vital to the achievement of Sustainable Development Goals, especially SDG 6 (providing access to clean water and sanitation).

IHE DELFT is committed to solving the world’s water crisis by educating the water leaders of the future, particularly those from developing countries and countries in transition. The demand for water education by far exceeds the number of professionals that the Institute can train.

IHE DELFT bridges this gap by making education available. We present you - in the course frame as we use it - quality educational materials, including lectures and supporting materials such as course notes, PowerPoint presentations, exercises, tools, models and public domain software to be freely available and easily retrievable.

http://ocw.unesco-ihe.org/
Exemplary Case: OER

Thinking IT Global

- At TakingITGlobal for Educators (TIGed), we empower classrooms to understand and act collaboratively on the world’s greatest challenges.
- We do this by supporting educators to utilize technology to create transformative learning experiences for their students. Through this work, classrooms everywhere become actively engaged and connected in shaping a more inclusive, peaceful, and sustainable world.

Young Masters Programme on Sustainable Development (YMP)

- Young Masters Programme (YMP) is a global web-based distance education on sustainable development, aimed at high school students and their teachers.
- The course is offered free of charge to all schools worldwide. Thus far, over 20,000 students from more than 110 countries have been educated through the YMP-course. The teacher network consists of 1500 active teachers from all over the world. Since 2006 the programme has been growing at particular speed in China.

http://www.tigweb.org/about/
http://www.goymp.org/en/site/about_ymp
Exemplary Case: GoodPlay

Digital Citizenship:
The ethics piece from Harvard’s GoodPlay Project

Safety and Efficacy
(Helping our children navigate the unmapped whitewater of a networked world and grow up at the same time!)

Anne Collier
Co-director, ConnectSafely.org
Founder & writer, NetFamilyNews.org

- Consequence thinking
  - Impact on oneself
    (the focus of Online Safety field’s first 15+ yrs)
- Moral thinking
  - Impact on one’s relationships
- Ethical thinking
  - Impact on everybody

Citizenship in user-driven, social media communities not possible if focused solely on impacts for individuals.
Needs for Innovative Pedagogy

Essential & Contributing Conditions:

1. Teachers
2. Principals
3. Students

+ Innovative Champions
+ Supportive Plans & Policies
+ Funding

“Sustainable Innovative Pedagogical Practices of Technology use in Schools”
1986 “Nation at Risk”

- Change of perspectives on teacher education and professional development
- Need to change from how teachers' subject knowledge and pedagogy were taught as a separate subjects or exclusive of each other (Shulman)

Pedagogical Content Knowledge: Integration of Subject & Pedagogical Knowledge
Teachers for 21st Century Learning Environment

Teacher Competency: TPACK (2009)

Technology embedded in all contents in teaching, learning, and creating.
Teachers for 21st Century Learning Environment


Innovative Pedagogy

Real World Context

Technology

CK

PK

TK

Data Driven

Connections

Design for Learning

Design for Thinking

Online or Virtual Context
Framework for Teachers

Design for Learning
Design for Thinking
Design with Technology

Innovative Pedagogy
Digital Connection

Pedagogy drives learning and thinking
Innovative Teachers
Technology mediates & support processes
Smart Learning Environment
Design Learning and Thinking

**Physical Space**
- Design for Learning
  - Context, Situated, ZPD
  - Subjects, Open Contents, MOOC
  - Theme: 21st Century, Global
  - E-Learning & Flipped Learning
  - Learning by Doing
- Design Technology
  - Gamification, Game-based Learning
  - Project-Based Learning
  - Design Thinking to Problem Solve
  - Collaborative skills
  - Critical Thinking Skills
  - Communication Skills
  - Creativity
  - Digital Literacy
- Innovative Pedagogy
  - Discussion
  - Data Analysis
  - Assessment
  - Predictions
  - Learning Management System
  - Social Networking
- Digital Connection
  - Virtual Space
  - Voice Recognition
  - Tactile technology
  - Sensors & Wearable technology
  - AI & Predictive technology

**Virtual Space**
- Contextual environment
- Virtual Reality, Augmented Reality

**Design for Thinking**
- What
- Why
- How
- Where
- When
- Who
Thank you!
감사합니다!

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