Designing Integration of OER and OEP

Karunanayaka, S.; Naidu, S.;

© 2018, Karunanayaka, S.

This work is licensed under the Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/legalcode), which permits unrestricted use, distribution, and reproduction, provided the original work is properly credited.

Cette œuvre est mise à disposition selon les termes de la licence Creative Commons Attribution (https://creativecommons.org/licenses/by/4.0/legalcode), qui permet l'utilisation, la distribution et la reproduction sans restriction, pourvu que le mérite de la création originale soit adéquatement reconnu.

IDRC Grant/ Subvention du CRDI: 107311-001-Research into Open Educational Resources for Development
Designing Integration of Open Educational Resources (OER) and Open Educational Practices (OEP)

Shironica Karunanayaka¹ & Som Naidu²

The Open University of Sri Lanka¹; Monash University, Australia²
Introduction

• **Context** - Faculty of Education, OUSL

• **Initiatives** - Integration of OER by Practitioners

• **Challenge** - Adopting OER & OEP in the teaching-learning process requires significant changes in educators’ pedagogical thinking and practices. Planning/designing for the integration of OER and OEP is very challenging.

• **Focus** - How a designed process supported enacting changes in practitioners’ thinking and practices in the integration of OER and adoption of OEP.
Open Educational Resources (OER)

- **Open Educational Resources (OER)** are;
  teaching, learning and research materials
  in any medium, digital or otherwise,
  that reside in the public domain or
  have been released under an **open license**
  that permits no-cost access, use, adaptation and redistribution
  by others with no or limited restrictions.

  (UNESCO, 2012)
The 5R Permissions of OER

- **Retain**: Make and own copies
- **Reuse**: Use in a wide range of ways
- **Revise**: Adapt, modify, and improve
- **Remix**: Combine two or more
- **Redistribute**: Share with others

Creative Commons Licenses
Open Educational Practices (OEP)

• OEP, “…constitutes the range of practices around the creation, use, and management of OER…to improve quality and innovate education”
  
  (Ehlers, 2011)

• OEP would encompass several aspects:
  
  • production, management, use and reuse of OER;
  • developing and applying open pedagogies in teaching practice;
  • gaining access to open learning opportunities;
  • practicing open scholarship, open sharing of teaching ideas and using open technologies

  (Beetham, Falconer, McGill & Littlejohn, 2012)
Challenges in the integration of OER and OEP by practitioners

• The opportunity to adopt varying degrees of ‘openness’ in the use of OER, empower educators to become more creative and innovative in their educational practices.

• The adoption of OER & OEP by educators can be truly effective only if it reflects a ‘change’ in their thinking and actions.

• Design of effective, efficient, and engaging experiences based on innovative pedagogical models would offer a feasible solution to support changes in thinking and practices among practitioners (Naidu & Karunanayaka, 2015).
Initiatives Implemented at the OUSL

- Integrating ICT & OER in Teacher Education Programmes (OERTE)
  - supported by COL (2013/14)
- Implementing an OER-based e-Learning Online Course (OEReL)
  - supported by CEMCA (2014/15)
- Impacts of OER integration in Teacher Education (OERTL)
  - IDRC supported ROER4D Project (2015/16)
Design-Based Research (DBR) Approach

(Adapted from Reeves, 2006, p.59)
## Analysis

Analysis of practical problems by researchers & practitioners in collaboration

<table>
<thead>
<tr>
<th>Analysis methods used:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire survey</td>
</tr>
<tr>
<td>Concept mapping</td>
</tr>
<tr>
<td>Lesson plan observations</td>
</tr>
<tr>
<td>Focus group interviews</td>
</tr>
<tr>
<td>Self-reflections</td>
</tr>
</tbody>
</table>

Analysing current thinking and practices of practitioners in relation to their use of instructional methods and materials in the teaching-learning process.
## Solutions

**Development of solutions informed by existing design principles & technological innovations**

<table>
<thead>
<tr>
<th>Designing a sequence of experiences to enhance OER &amp; OEP adoption, pedagogical thinking and pedagogical practices.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactive workshops</td>
</tr>
<tr>
<td>Online environment (LMS) to support</td>
</tr>
<tr>
<td>- Awareness raising</td>
</tr>
<tr>
<td>- Capacity building</td>
</tr>
<tr>
<td>- Monitoring &amp; Supporting</td>
</tr>
<tr>
<td>- Reviewing &amp; Evaluation</td>
</tr>
</tbody>
</table>
Testing & Refinement

Iterative cycles of testing and refinement of solutions in practice

<table>
<thead>
<tr>
<th>Capacity building, support, monitoring, motivating adoption of OER through:</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Interactive workshops</td>
</tr>
<tr>
<td>➢ Online environment (LMS)</td>
</tr>
</tbody>
</table>

- Hands-on individual and group activities to search, identify, select and integrate OER in lessons
- Encouraging teachers to share OER found/reused/revised/remixed/created
- Motivate sharing of good practices
- Promote reflective practice
Reflection

Reflection to produce design principles and enhance solution implementation

Use practitioners and researcher’s reflections to find and implement solutions to authentic problems.

- Reflective writing by practitioners and researchers based on their experiences
- Compilation of “Stories” based on the reflections
- Publishing and sharing the stories
Design Frameworks to Enact Change

|-------------|-------------------|-------------------|-------------------|
Scenario-based Learning (SBL)

- A model of situated learning that is grounded in constructivist pedagogy where learners are placed in authentic learning scenarios that will provide the context and the anchor for all learning and teaching activities (*Naidu, 2006*).

**Basic Attributes:**
- **A Learning Scenario**
  Learners are situated in authentic learning scenarios.
- **Learning Activities**
  Learners assume key roles, and face various challenges.
- **Assessment Tasks**
  Learners will demonstrate developed competencies, and enable teachers to assess the achievement of the intended learning outcomes by learners.
A “Learning Engine” framework to design learning experiences

Steps:
• Develop learning outcomes
• Articulating the learning context
• Develop relevant learning activities and scenarios
• Integrate OER in the learning experience

(Naidu & Karunanayaka, 2014)
OPAL Framework

Focus on OER extends beyond mere ‘access' to engagement in 'innovative open educational practices' (OEP), with different degrees of openness in the usage and creation of OER.

- Includes two matrices providing
  1.) a structure to analyze the degree of implementation of OEP by individuals within a given context, and
  2.) a structure for analyzing the extent to which OEP is embedded within the environment

Constitutive Elements of OEP (Source: OPAL, 2009; Ehlers, 2011)
‘Learning Engine’ in Action – Matrix of different ways and levels of OER integration horizontally and vertically in the learning experience of the OEReL course

(Karunanayaka, Naidu, Rajendra & Ratnayake, 2015)
OEP through DBR – Framework

(Karunanayaka & Naidu, 2016)
<table>
<thead>
<tr>
<th>Initiative/s</th>
<th>Challenges</th>
<th>Strategies</th>
<th>“Changes”</th>
</tr>
</thead>
<tbody>
<tr>
<td>OERTE</td>
<td>Non-conversant with technology; Non-awareness of openly-licensed online learning resources (OER)</td>
<td>Hands-on experiences to integrate technology in course design, development and delivery; Search, identify and integrate various types of OER available online as sources of subject matter content, in the learning experiences.</td>
<td>Capacity development in ICT and OER integration in course design, development and delivery; Shifts in mindsets and changes in practices.</td>
</tr>
<tr>
<td>OEREL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OERTL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initiative/s</td>
<td>Challenges</td>
<td>Strategies</td>
<td>“Changes”</td>
</tr>
<tr>
<td>--------------</td>
<td>------------</td>
<td>------------</td>
<td>-----------</td>
</tr>
<tr>
<td>OERTE, OEREL, OERTL</td>
<td>A key focus on ‘delivery of content’ by experts; Exam-oriented knowledge transmission</td>
<td>Adoption of Scenario-based learning (SBL) – a situated learning approach; Adoption of a ‘Learning Engine’ framework with OER as essential fuel;</td>
<td>Shifts in mindsets and changes in practices -from content-centric to more context- and learning-centric -from conventional to more innovative/creative ways</td>
</tr>
<tr>
<td>Initiative/s</td>
<td>Challenges</td>
<td>Strategies</td>
<td>“Changes”</td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>OERTE</td>
<td>Coping with (new) technology and (new) pedagogy at the same time;</td>
<td>“Teachers as Designers” approach; A sequence of carefully structured hands-on activities to design technology-enhanced, constructivist, situated learning experiences; Compelling motivation.</td>
<td>Capacity development in designing and developing technology-enhanced constructivist, situated learning environments; Development of understanding in technological affordances for pedagogical requirements</td>
</tr>
<tr>
<td>OEREL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OERTL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initiative/s</td>
<td>Challenges</td>
<td>Strategies</td>
<td>“Changes”</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>OERTE</td>
<td>Resistance to “change” from the conventional thinking and practices</td>
<td>Designing OER-integrated e-learning environments using SBL;</td>
<td>Significant changes in thinking, perspectives and practices towards OEP; Backbone practitioners;</td>
</tr>
<tr>
<td>OEREL</td>
<td></td>
<td>Use of DBR approach with a carefully designed intervention in stages;</td>
<td>Application of new knowledge/experiences;</td>
</tr>
<tr>
<td>OERTL</td>
<td></td>
<td>Researchers working collaboratively with the practitioners, promoting adoption of OER/OEP.</td>
<td>Impact on institutional policy development.</td>
</tr>
</tbody>
</table>
Conclusions & Implications

• The change process during the three initiatives at OUSL comprised:
  1) Professional development of practitioners in the integration of OER in teaching and learning (design and development of OER-integrated online modules);
  2) A robust model (using situated cognition and scenario-based learning) for the integration of OER in professional development programs at OUSL; and
  3) A rigorous approach (using design-based research methods) to the evaluation of the impacts of OER integration and adoption of OEP.

• The key challenges faced during the ‘change’ process were successfully addressed through carefully designed interventions.

• This provides valuable insights for improved design solutions for future interventions in similar contexts.
Dreams, Dreamers, and Dreamweaving

Educators are in the habit of weaving dreams. These include the dreams of school teachers who are aspiring to become better teachers as well as the dreams of teacher educators about building teacher capacity in relation to teaching and supporting their students’ learning.

The work captured here is about helping dreamers realize their dreams and weaving these dreams into a coherent picture of the impacts of the integration of open educational resources and the adoption of open educational practices by teachers in the Sri Lankan school system.

https://oerlousl.wordpress.com/
Acknowledgements

• The project work that is reported in this paper have been supported by the Commonwealth of Learning (COL), the Commonwealth Educational Media Centre for Asia (CEMCA), and Research on Open Educational Resources for Development (ROER4D) Project, under the International Development and Research Centre (IDRC).

• Contributions of the Senior Management and all Stakeholders at OUSL are much appreciated.