OER in Higher Education in Developing Countries

OER - What Actions for Greatest Impact?

Abdul W Khan
Contextualizing OER

The importance of sound in today's world: promoting best practices

Access to knowledge
Access for people with disabilities
Archives
Ethics of Information
Free and Open Source Software (FOSS)
Information literacy
Internet Governance
Libraries
Linguistic diversity and multilingualism on Internet
Open access to scientific information
Open educational resources
- Implementing the Paris Declaration

Open Educational Resources

UNESCO believes that universal access to high quality education is key to the building of peace, sustainable social and economic development, and intercultural dialogue. Open Educational Resources (OER) provide a strategic opportunity to improve the quality of education as well as facilitate policy dialogue, knowledge sharing and capacity building.

Open Educational Resources are teaching, learning or research materials that are in the public domain or released with an intellectual property license that allows for reuse, adaptation, and distribution.

In 2001, the Massachusetts Institute of Technology (MIT), in an unprecedented move, announced the release of nearly all its courses on the internet for free access. As the number of institutions offering free or open courseware increased, UNESCO organized the 1st Global Open Educational Resources (OER) Forum in 2002 where the term Open Educational Resources (OER) was adopted.

With the support of the Hewlett Foundation, UNESCO created a global OER Community in 2005 to share information and work collaboratively on issues surrounding the production and use of Open Educational Resources.

UNESCO is developing a new innovative OER Platform which will offer selected UNESCO publications as OERs and allow communities of practice including teachers, learners, and education professionals to freely copy, adapt, and share their resources.

In partnership with key European institutions, UNESCO is a member of the Open Educational Quality (OQPL) initiative to develop a Framework of OER Practice that improve quality and innovation in education.

2nd World Open Educational Resources Congress

Monday 18 - Wednesday 20 September 2017
Carnival dom, Ljubljana, Slovenia
Some examples of OER in South Asia

- India
- Pakistan
- Afghanistan

India (NROER)

National Repository of Open Educational Resources

http://nroer.gov.in/home/
Pakistan
(e.Learn. Punjab & Virtual University of Pakistan)

Afghanistan
(Darakht-e-Danesh Library)

About the Darakht-e Danesh Library

What is the Darakht-e Danesh Library?

‘Darakht-e danesh’ means ‘knowledge tree’ in Dari, one of the official languages of Afghanistan. The Darakht-e Danesh Online Library for Educators is a repository of open educational resources (OER) for teachers, teacher trainers, school administrators, literacy workers and others involved in furthering education in Afghanistan. These open source resources include lesson plans, pedagogical tools, exercises, experiments, reading texts, workbooks, curricula and other resources for use in Afghan classrooms.

These resources can be freely accessed by registered users, and we encourage users to add to the repository by uploading their own resources and expand this collection for the benefit of Afghanistan’s teachers. The OER movement is fundamentally about sharing, please use the resources in the library, but also consider contributing some of your own resources. It’s easy to add documents to the library, just contact us if you would like to add content. We aim to bring together useful resources for educators into a single location, for easy access and broader use.

How is the Darakht-e Danesh Library Used?

Anyone with internet access can download and use the resources in the collection. Teacher educators can use the site to download resources and then distribute these in print in teacher training colleges, or to use in adapting their own local language resources. Teachers can browse the collection to download or print out resources for their classrooms or their own professional development. These resources can be freely copied and distributed.

Why is an online library needed?

The education system in Afghanistan is experiencing a rebirth. With millions of girls and boys back in school, new teacher colleges opening, and a reformed curriculum in use, there have been many changes since 2001. A National Education Strategy for Afghanistan guides these changes with more to come. Yet, the challenges which remain are significant. Thirty years of war and an ongoing insurgency which has sapped out teachers and girls’ education for attack, makes this a difficult environment in which to teach. Afghan teachers contend with a daunting lack of resources. Most schools do not have libraries or science labs; many students go without textbooks, and teachers have little material provided to them to help cover the curriculum.

The majority of in-service Afghan teachers have no formal teacher training and many have no post-secondary education. Some teachers have not graduated from high school. In particular, it can be difficult to find quality resources for educators in Dari and Pashto. Even when such resources are available, books are expensive and teachers are not well paid. The Darakht-e Danesh Library aims to increase access to quality resources for Afghan educators. Encourage teachers to consult a wide variety of resources in their practice, to use these tools to adapt their own, and to share their own resources with other teachers through this open-source collection. We believe that digitalization can make more out of less and nurtures teachers’ independent learning.

The great aim of education is not knowledge but action. — Herbert Spencer

Impact

- Access
- Cost
- Quality
- Equity
- Relevance
- Learner Attainment
- Skills Development
- Retention

Image source: https://library.cit.ie/research/measuring-impact
## World Internet Usage

### WORLD INTERNET USAGE AND POPULATION STATISTICS

**JUNE 30, 2017 - Update**

<table>
<thead>
<tr>
<th>World Regions</th>
<th>Population (2017 Est.)</th>
<th>Population % of World</th>
<th>Internet Users 30 June 2017</th>
<th>Penetration Rate (% Pop.)</th>
<th>Growth 2000-2017</th>
<th>Internet Users %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>1,246,504,865</td>
<td>16.6 %</td>
<td>388,376,491</td>
<td>31.2 %</td>
<td>8,503.1%</td>
<td>10.0 %</td>
</tr>
<tr>
<td>Asia</td>
<td>4,148,177,672</td>
<td>55.2 %</td>
<td>1,938,075,631</td>
<td>46.7 %</td>
<td>1,595.5%</td>
<td>49.7 %</td>
</tr>
<tr>
<td>Europe</td>
<td>822,710,362</td>
<td>10.9 %</td>
<td>659,634,487</td>
<td>80.2 %</td>
<td>527.6%</td>
<td>17.0 %</td>
</tr>
<tr>
<td>Latin America / Caribbean</td>
<td>647,604,645</td>
<td>8.6 %</td>
<td>404,269,163</td>
<td>62.4 %</td>
<td>2,137.4%</td>
<td>10.4 %</td>
</tr>
<tr>
<td>Middle East</td>
<td>250,327,574</td>
<td>3.3 %</td>
<td>146,972,123</td>
<td>58.7 %</td>
<td>4,374.3%</td>
<td>3.8 %</td>
</tr>
<tr>
<td>North America</td>
<td>363,224,006</td>
<td>4.8 %</td>
<td>320,059,368</td>
<td>88.1 %</td>
<td>196.1%</td>
<td>8.2 %</td>
</tr>
<tr>
<td>Oceania / Australia</td>
<td>40,479,846</td>
<td>0.5 %</td>
<td>28,180,356</td>
<td>69.6 %</td>
<td>269.8%</td>
<td>0.7 %</td>
</tr>
<tr>
<td><strong>WORLD TOTAL</strong></td>
<td><strong>7,519,028,970</strong></td>
<td><strong>100.0 %</strong></td>
<td><strong>3,885,567,619</strong></td>
<td><strong>51.7 %</strong></td>
<td><strong>976.4%</strong></td>
<td><strong>100.0 %</strong></td>
</tr>
</tbody>
</table>

NOTES: (1) Internet Usage and World Population Statistics updated as of June 30, 2017. (2) CLICK on each world region name for detailed regional usage information. (3) Demographic (Population) numbers are based on data from the United Nations Population Division. (4) Internet usage information comes from data published by Nielsen Online, by ITU, the International Telecommunications Union, by GfK, by local ICT Regulators and other reliable sources. (5) For definitions, navigation help and disclaimers, please refer to the Website Surfing Guide. (6) Information from this site may be cited, giving the due credit and placing a link back to www.internetworldstats.com. Copyright © 2017, Miniwatts Marketing Group. All rights reserved worldwide.

http://www.internetworldstats.com/stats.htm
# Percentage of Internet Users in Asia

## ASIA INTERNET USE, POPULATION DATA AND FACEBOOK STATISTICS - JUNE 2017

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Afganistan</td>
<td>34,169,169</td>
<td>1,000</td>
<td>4,005,414</td>
<td>11.7 %</td>
<td>0.2 %</td>
<td>2,600,000</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>164,827,718</td>
<td>100,000</td>
<td>73,347,000</td>
<td>44.5 %</td>
<td>3.8 %</td>
<td>21,000,000</td>
</tr>
<tr>
<td>China *</td>
<td>1,388,232,693</td>
<td>22,500,000</td>
<td>738,539,792</td>
<td>53.2 %</td>
<td>38.1 %</td>
<td>1,800,000</td>
</tr>
<tr>
<td>India</td>
<td>1,342,512,706</td>
<td>5,000,000</td>
<td>462,124,989</td>
<td>34.4 %</td>
<td>23.8 %</td>
<td>241,000,000</td>
</tr>
<tr>
<td>Indonesia</td>
<td>263,510,146</td>
<td>2,000,000</td>
<td>132,700,000</td>
<td>50.4 %</td>
<td>6.8 %</td>
<td>126,000,000</td>
</tr>
<tr>
<td>Malaysia</td>
<td>31,164,177</td>
<td>3,700,000</td>
<td>24,554,255</td>
<td>78.8 %</td>
<td>1.3 %</td>
<td>19,000,000</td>
</tr>
<tr>
<td>Maldives</td>
<td>375,867</td>
<td>6,000</td>
<td>270,000</td>
<td>71.8 %</td>
<td>0.0 %</td>
<td>270,000</td>
</tr>
<tr>
<td>Myanmar</td>
<td>54,836,483</td>
<td>1,000</td>
<td>13,747,506</td>
<td>25.1 %</td>
<td>0.7 %</td>
<td>11,000,000</td>
</tr>
<tr>
<td>Nepal</td>
<td>29,187,037</td>
<td>50,000</td>
<td>6,400,000</td>
<td>21.9 %</td>
<td>0.3 %</td>
<td>6,400,000</td>
</tr>
<tr>
<td>Pakistan</td>
<td>196,744,376</td>
<td>133,900</td>
<td>44,608,065</td>
<td>22.7 %</td>
<td>2.3 %</td>
<td>27,000,000</td>
</tr>
<tr>
<td>Philippines</td>
<td>103,796,832</td>
<td>2,000,000</td>
<td>57,607,242</td>
<td>55.5 %</td>
<td>3.0 %</td>
<td>54,000,000</td>
</tr>
<tr>
<td>Singapore</td>
<td>5,784,538</td>
<td>1,200,000</td>
<td>4,699,204</td>
<td>81.2 %</td>
<td>0.2 %</td>
<td>4,100,000</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>20,905,335</td>
<td>121,500</td>
<td>6,700,160</td>
<td>32.1 %</td>
<td>0.3 %</td>
<td>4,200,000</td>
</tr>
<tr>
<td>Thailand</td>
<td>68,297,547</td>
<td>2,300,000</td>
<td>57,000,000</td>
<td>83.5 %</td>
<td>2.9 %</td>
<td>57,000,000</td>
</tr>
<tr>
<td>Vietnam</td>
<td>95,414,640</td>
<td>200,000</td>
<td>64,000,000</td>
<td>67.1 %</td>
<td>3.3 %</td>
<td>64,000,000</td>
</tr>
<tr>
<td><strong>TOTAL ASIA</strong></td>
<td><strong>4,148,177,672</strong></td>
<td><strong>114,304,000</strong></td>
<td><strong>1,938,075,631</strong></td>
<td><strong>46.7 %</strong></td>
<td><strong>100.0 %</strong></td>
<td><strong>736,003,000</strong></td>
</tr>
</tbody>
</table>

NOTES: (1) The Asian Internet Statistics were updated in June 30, 2017. (2) The Facebook subscriber data was also updated for June 30, 2017. (3) CLICK on each country name to see detailed data for individual countries and regions. (4) The demographic (population) numbers are based mainly on data contained in United Nations Population Division and local official sources. (5) The usage numbers come from various sources, mainly from data published by Facebook, ITU, and other trustworthy sources. (6) For navigation help, definitions and methodology, please see the site. (7) Data may be cited, giving due credit and establishing an active link back to Internet World Stats. (*) China figures do not include SAR Hong Kong, SAR Macao and Taiwan, which are reported separately for statistical purposes. Copyright © 2017, Miniwatts Marketing Group. All rights reserved worldwide.
How Youth are using Internet

Proportion of youth (15-24) using the Internet, 2017*

Note: * Estimates.
Source: ITU.

Barriers to Produce and Use of OER in 9 Asian Countries

Survey findings from 9 Asian countries:
• Lack of awareness
• Lack of skills
• Lack of time
• Lack of hardware and software
• Lack of access to computers
• Lack of ability to locate specific, relevant, and quality OER for their specific teachings
• No reward system for staff members devoting time and energy
• Lack of interest in pedagogical innovation amongst staff members
• No support from management level

(Dhanarajan & Porters, 2013)

https://www.slideshare.net/citehku/cite-symposium-open-education-open-educational-resources-and-moocsopen-ed-oer-and-mooc
Challenges: Uniform across region

https://www.slideshare.net/oeconsortium/a-study-on-awareness-of-oer-among-content-creators
Interest in reducing the cost of curriculum development and improving the quality of teaching and learning were relatively dominant.

Awareness of OER as well as its usefulness is still not as widespread.

Actual benefits of adopting OER realised until now, is somewhat modest.

OER are created for all Subjects like hard sciences, engineering, humanities and liberal arts or adopted under various forms of licence.
Academic staff using OER in their course development indicates a positive shift in attitudes. There was also a sense of being “liberated” from the restrictions that textbooks impose.

The quality of the curriculum and the teaching and learning experience was not compromised because of the use of OER.

A marginal improvement noted in the performance of students in examinations and improvement in retention rates of those studying especially in the open universities.
There is a recognised need for higher levels of skills and competencies in those who work with OER.

There is some, though modest, evidence of active collaboration amongst institutions or individuals.

There was no evidence to support enhancement of access to higher education directly.
Measures for Greatest Impact

- Provide free online and low-cost in print
- Promote Open pedagogy
- Integration of OER in curriculum at all levels of education
- Completion of Primary Education
- Enhance the Digital literacy of teachers / incentives
- Adoption of OER models, practices, assessments
- Revisions of OER
- Mobile Devices to increase access to OER

By Giulia Forsythe@bccampus #OERforum @opencontent
Why Open Education? [visual notes] CC BY-NC-SA 2.0.
Available at http://blogs.leeward.hawaii.edu/prls/oer/
“I discovered over six years ago that I could make my courses more accessible to students if I used OER materials and removed the onus of purchasing an expensive textbook. ... As an OER early adopter, I got the chance to review College Physics while it was still in production. It was the best physics textbook I’d seen, and better than some $300 books, in my opinion. Since adopting College Physics, my class enrollments have increased and my students’ scores on the national physics benchmark exam have improved by 30 percent.”

- Erik Christensen, Professor of Physics at South Florida State College and OpenStax College’s first user

http://www.oer.arizona.edu/content/impact-oer

Thank You!