Open solutions to a 'national crisis': the impact of OER on teacher education in India.

Conference Item

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Open solutions to a ‘national crisis’: The impact of OER on teacher-education in India

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India: an ‘alarming degeneration in learning quality’ (ASER, 2012)

- 1.3 million shortfall in teachers


Children gain slowly in skills even as they progress through grades—75% of children who do not acquire reading or arithmetic mastery at the “grade appropriate” level don’t acquire it in the following year either.
Why the ‘alarming degeneration’?

▶ Student attendance in school has always been an issue in primary schools with close to about **one-third** of the class was found absenteeing from school.

![Graph showing % students found present in class](#)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>73.4%</td>
<td>74.3%</td>
<td>72.9%</td>
<td>70.9%</td>
</tr>
</tbody>
</table>

▶ More than **half** the classes are conducted with students from more than one grade sitting together.

![Graph showing % classes held with more than one grade together](#)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>47.6%</td>
<td>51%</td>
<td>49%</td>
<td>53.1%</td>
</tr>
</tbody>
</table>

▶ Every student has to compete with **41** other students in a class for the teacher’s attention in primary schools.

▶ **25%** students go to a school where the language of instruction is different from what they speak at home.
Teacher education in India

- An insufficient supply of teachers
- Limited capacity for teacher training
- Disparities in pupil-teacher ratios
- Large numbers of unqualified teachers
- Inadequate continuing professional development...

... inadequate access to education and poor standards of learning for those already in the education system
Teacher education in India

2013: **99%** of Bachelor of Education (BEd) graduates failed to pass the Central Teacher Eligibility Test (CTET) - mandatory for becoming a teacher in any central government school... Many were already elementary school teachers.

Are OER the answer?
2008: ‘national e-content and curriculum initiative’ to stimulate the creation, adaptation and utilization of OER by Indian institutions, in addition to leveraging globally-produced OER. [http://knowledgecommission.gov.in](http://knowledgecommission.gov.in)
• Creating OER for training new & existing teachers
• Leadership development units + teacher development units
• Delivered in 7 states & 4 languages
• Face-to-face, then web, CD/DVD, SD
• Engages school leaders, teacher educators and state administrators in understanding/applying effective management strategies, such as school self-review
• Engage teachers in learner-centered, activity based pedagogy
• www.TESS-India.edu.in
Localisation of OER

“Localization unlocks the power of OER and must involve locals.”
The potential for OER in India’s teacher education system

“Teacher-educators need exposure to good practices from here and abroad, but in most instances they don’t get it. If they were connected, and used the Internet and OER...they would have a direct link with the rest of the world and with new ideas and ways of teaching.”
OER could…

- Contribute to ICT-focused professional development for teachers and teacher-educators;
- Broaden the range of the curriculum;
- Allow teachers to make lessons more engaging for hard-to-retain pupils;
- Encourage teachers and teacher-educators to reflect on their practice in the light of information about pedagogies that are different from their own habitual approach. **But…**
Barriers to OER use in Indian teacher education

1) Lack of ICT equipment and skills

“We are very limited in the computers and resources we have available. The faculty have very limited ICT capabilities too and have many professional development needs for ICT training. The Lecturers here are very well qualified, many with PhDs, but I don’t think many of them are using the Internet.”

Photo credits: Leigh-Anne Perryman CC-BY
Lack of ICT equipment and skills

“There is a great need for CPD in using OER. Almost half the teacher-educators here are not using email, despite persuasion...Basic capacity building is highly required allowing teacher-educators to choose and evaluate OER according to their needs and the needs of their students, to reuse and adapt, and to feel ownership.”

Photo credits:
Leigh-Anne Perryman
CC-BY
Barriers to OER use

‘A change of attitude towards ICT is needed’

“Some of the teachers have the ICT skills but don’t use them for professional development. They need to look beyond Facebook and email and social networking...before we can realise the potential of OER here and elsewhere.”
“The true openness associated with OER adaptation may not align well with India’s hierarchical caste-based culture where there are quite rigid notions about who owns (and should own) the knowledge and who should share it. The adaptation possibilities offered by OER bring the pedagogical approach to life...but it remains to be seen whether educators from all levels of the Indian education system will buy into the full potential of OER.”
Barriers to OER use

A deficit view of India’s teachers

Photo credit: Leigh-Anne Perryman CC-BY
“Building a culture of sharing’ is a key challenge as sharing is not embedded in Indian society…OER are more likely to work in India if we focus on developing communities of practice within the education sector, especially amongst teacher-educators in the DIETs, as the basis for resource-generation, ICT skills-development and other forms of CPD.”

Sanjaya Mishra, CEMCA
http://www.cemca.org.in
Pilot: 2011 – 2012
800+ high schools with government-provided ICT facilities
14 districts of Karnataka
‘Enhanced cascade’ model: state level workshops developed 240 Maths, Science & Social Science high school teachers as ‘resource persons’
Subsequently trained 2,000 teachers/800 schools, using DIET ICT labs. Workshops: ICT skills, the use of public educational software tools and discussions about educational policy and digital pedagogy.
Complemented by mailing groups + web portal through which teachers discussed their discipline in addition to creating and sharing OER.
STF project is now being extended to cover additional disciplines and schools.
• More intensive
• 20 primary schools
• Working with **all** teachers in those schools on ICT skills development, the creation of OER and the integration of ICT into the classroom.
• 2010 - 2011 IT for Change implemented online learning communities for teachers in these schools - opportunity to network with/support each other, to share resources, and to critically engage with education policy and practice.
Take home message...

- OER can help in training new and existing teachers and teacher-educators in India
- BUT, there’s a need for:
  - ICT equipment
  - ICT skills development
  - Change of attitude to ICT use for work purposes
  - Resources localized in language and content
  - A communities of practice approach that gives teachers autonomy and access to peer support and reputation management