Scaling Schooling for the Secondary Surge: What Are the Options?

Professor Asha Kanwar
President & CEO, Commonwealth of Learning

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This Presentation

- The Context
- Option 1: Open Schooling
  NIOS and NAMCOL
- Option 2: Open Education Resources (OER)
- Option 3: The Uses of ICT
- Key Conclusions
THE CONTEXT
Education for All
(The Dakar Goals)
Demographic Context

Distribution of World Population, 2025

Source: UN World Population Prospects, the 2010 Revision.
400 million children (12-17) out of secondary school

Source: UIS Global Education Database 2010 [http://www.uis.unesco.org/Pages/default.aspx]
# Life after Primary? (2008)

<table>
<thead>
<tr>
<th>Country</th>
<th>Enrolment (GER) Primary</th>
<th>Survival rate to last primary grade</th>
<th>Enrolment (GER) Lower Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>116%</td>
<td>96%</td>
<td>77%</td>
</tr>
<tr>
<td>Pakistan</td>
<td>89%</td>
<td>61%</td>
<td>44%</td>
</tr>
<tr>
<td>Mozambique</td>
<td>114%</td>
<td>59%</td>
<td>21%</td>
</tr>
<tr>
<td>Nigeria</td>
<td>85%</td>
<td>70%</td>
<td>35%</td>
</tr>
<tr>
<td>Uganda</td>
<td>123%</td>
<td>58%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Source: UIS Global Education Database. [http://www.uis.unesco.org/Pages/default.aspx](http://www.uis.unesco.org/Pages/default.aspx)
Survival of a Cohort of Students in Primary and Secondary Education in SSA (2003)

Source: Pole de Dakar / AFTHD, Secondary Education in Africa
Development impact of secondary education

- An extra year of quality schooling lifts annual economic growth by 1% (*DFID website*)
- Educating girls at secondary level results on an average on 1.5 fewer children than those with only primary schooling (*Cohen et al, 2007*)
- cooperation and social responsibility (*Yidan Wang, 2012*)
Secondary education & economic opportunity

- Groups who have attained education beyond primary level in Bangladesh, India, Pakistan & Sri Lanka find employment much faster

(Riboud, Savchenko & Tan, 2007)
I: OPEN SCHOOLING
THE SECONDARY SURGE: OPEN SCHOOLS ARE PART OF THE ANSWER
What is Open Schooling?

- The physical separation of learner from the teacher
- The use of unconventional teaching methodologies, and information and communications technologies (ICTs)
- Flexible approach
Age No Bar
Open Schooling - Why?

- To absorb the tidal wave resulting from UPE
- To provide the transition to postsecondary education
- To provide a ‘terminal’ stage
Open Schooling - How?

- Self-instructional materials
- Local personal support at Study Centres
- State/NGO partnerships
- Operate at scale using technology
Open Schools: Correspondence

- 1898: Sweden, H.S Hermod
- 1908: Calvert school, US
- 1960’s and 70’s: Correspondence Institutes: Botswana, Kenya, Zambia, Malawi, Swaziland
Open Schools: Radio & TV

- Radio: BBC (1925); Voice of Kenya (1960’s); Mauritius College of the Air (1972);
- Television: Tele-Niger (1964)
Mega Open Schools

- Telesecundria, Mexico (1968): 750,000
- Korean Air Correspondence High School (1979): 1.4 million
- NIOS, India (1989): 2.2 million
Models

- Independent School model (Korean Air Correspondence High School)
- Within an existing distance education institution (BOS)
- Part of the Ministry of Education (NAMCOL)
- Part of a Board of Education (NIOS)
NIOS AND NAMCOL
NAMCOL Centres in Namibia
## Enrolments: NIOS, India

<table>
<thead>
<tr>
<th>Year</th>
<th>Academic</th>
<th>Vocational</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>267,026</td>
<td>21,294</td>
<td>288,320</td>
</tr>
<tr>
<td>2004</td>
<td>238,069</td>
<td>20,985</td>
<td>259,054</td>
</tr>
<tr>
<td>2003</td>
<td>321,010</td>
<td>24,194</td>
<td>345,204</td>
</tr>
<tr>
<td>TOTAL</td>
<td>826,105</td>
<td>66,473</td>
<td>892,578</td>
</tr>
</tbody>
</table>
## Enrolments: NAMCOL, Namibia

<table>
<thead>
<tr>
<th>YEAR</th>
<th>JUNIOR SECONDARY</th>
<th>SENIOR SECONDARY</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>13,308</td>
<td>11,807</td>
<td>25,115</td>
</tr>
<tr>
<td>2005</td>
<td>13,317</td>
<td>13,384</td>
<td>26,701</td>
</tr>
<tr>
<td>2006</td>
<td>13,577</td>
<td>15,413</td>
<td>28,990</td>
</tr>
<tr>
<td>TOTAL</td>
<td>40,202</td>
<td>40,604</td>
<td>80,806</td>
</tr>
</tbody>
</table>
Learner Profile

- NIOS and NAMCOL: 15-25
- NAMCOL: female: 65%
- NIOS: female: 31%
- NAMCOL: 1% have a paid job
NAMCOL Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Graded</th>
<th>Failed</th>
<th>Incomplete/Absentees</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>88%</td>
<td>12%</td>
<td>8%</td>
</tr>
<tr>
<td>2005</td>
<td>90%</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>2006</td>
<td>87%</td>
<td>13%</td>
<td>8%</td>
</tr>
</tbody>
</table>
Formal Secondary School System and NAMCOL (based on 2007-08 budget)

Unit Costs per Student (ZAR)

<table>
<thead>
<tr>
<th></th>
<th>FORMAL SECONDARY SCHOOL SYSTEM</th>
<th>NAMCOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per Student</td>
<td>5,346</td>
<td>1,262</td>
</tr>
</tbody>
</table>
# NIOS Cost per Student when compared with KVs

<table>
<thead>
<tr>
<th>Institution</th>
<th>Cost Per Student Per Course (INR)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002-03</td>
</tr>
<tr>
<td>NIOS</td>
<td>1,189</td>
</tr>
<tr>
<td>KVs</td>
<td>15,732</td>
</tr>
</tbody>
</table>
The Study indicates that open schools:

- can address the challenges of increased demand
- are more cost-efficient than formal education
- have high retention rates: 86-90%
- offer materials in print & audio, modest introduction to CD ROMs and video
- need to work on learner support
2: OPEN EDUCATION RESOURCES (OER)
What are Open Education Resources (OERs)?

Materials that are
- Free and freely available
- Suitable for all levels
- Reusable
- Digital
OER4OS

Developing high quality educational resources for use in secondary schools worldwide

Commonwealth of Learning

The William and Flora Hewlett Foundation

Flags of Botswana, Lesotho, Seychelles, Namibia, Zambia, and Trinidad and Tobago.
Learning materials are available as OERs in multiple formats to suit as wide a range of users as possible.
### Available Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Downloads</td>
<td>Section where all courses available in this site is downloaded in .zip form.</td>
</tr>
<tr>
<td>English 10</td>
<td>Welcome to English 10 for Open Schools. This course is intended for people who want to develop their communicative skills for meaningful interaction in a multi-lingual, multi-cultural and knowledge-based society.</td>
</tr>
<tr>
<td>Entrepreneurship 10</td>
<td>This is the Entrepreneurship Grade 10 course for Open Schools. Within this course we will look at the basic concepts of Entrepreneurship with the intent to equip learners with entrepreneurial skills that will enable them to create jobs for themselves as well as for others in future.</td>
</tr>
<tr>
<td>Life Science 10</td>
<td>Life Science as an applied science encourages curiosity and the development of skills in problem solving through investigation. This course is part of a series of teaching and learning materials in the Natural Sciences learning area.</td>
</tr>
<tr>
<td>Physical Science 10</td>
<td>Welcome to Physical Science 10. This course is divided into 2 parts, namely Chemistry and Physics. It places strong emphasis on the learners' understanding of the physical and biological world around them and promotes practical and experimental skills.</td>
</tr>
</tbody>
</table>
Skills for the knowledge economy

- Intelligence
- the ability to sit still and focus
- to listen carefully
- communicate openly
- work in teams

Hanna Rosin, TED Talk
What employers want

- **Non-cognitive skills**: leadership, honesty/ethics, teamwork and flexibility
- **Cognitive skills**: analytical and critical thinking and the ability to learn

Burnett, 2012
Language skills: Indian survey

- Being fluent in English increases hourly wages of men by 34%
- Being able to speak a little English increases male hourly wages by 13%

Azam, Chin, Prakash, 2010
3: USES OF ICT
The Digital Divide (Commonwealth countries)

Source: International Telecommunications Union
From digital divide to digital dividend

- The emergence of mobiles
- Use of appropriate technologies that are affordable, accessible, and available
Expansion in Mobile Phones

MOMATH: South Africa

- To access the service, learners can:
  - use their own mobile phones
  - borrow a mobile phone from a friend or family member
- use a mobile phone provided by their school
- use the internet Momaths website

Photo source: Nokia Momaths
https://projects.developer.nokia.com/Momaths
Open Access College: Australia

- Blended approach: study online, seek clarification from teachers at contact sessions
- Teachers teach online, students connected through teleconference at multiple sites
- Saba Centra to share work/present portfolios/general class group discussions with teacher & peers (vocational subjects)
- Video Conferencing (music lessons)
Device setup

A tablet used as a server can host an LMS or CMS such as Moodle or Wordpress pre-loaded with learning materials.

An external battery can power the wireless router off-grid for up to 12 hours.

A portable wireless router can broadcast a network that students can connect to.
Multiple students can access the materials hosted on the server using their own tablets or mobile devices.

The Classroom Without Walls is off-grid and offline; it can be set up anywhere without need for access to electricity or the internet.
## Device Specifications

<table>
<thead>
<tr>
<th>Device</th>
<th>Details</th>
<th>Connectivity/Power Description</th>
<th>Price (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Trent External Battery</td>
<td>Used as off-grid power source</td>
<td>5200mAh; Approx. 12 hours power for wireless router</td>
<td>35</td>
</tr>
<tr>
<td>ASUS Portable Wireless Router + Micro USB Cable</td>
<td>Used to host local network</td>
<td>30 meter connection radius</td>
<td>39</td>
</tr>
<tr>
<td>Google Nexus 7</td>
<td>Used as server</td>
<td>4325 mAh; Approx. 10 hours of power</td>
<td>199</td>
</tr>
</tbody>
</table>
KEY CONCLUSIONS
Commonwealth Open Schooling Association

21 countries attended inaugural meeting in Delhi

...In view of our conviction that open schooling has the capacity to expand access, to promote equity, to deliver high-quality and effective services, and to reduce the unit costs of education at all levels; and

Recognising the importance of partnerships in meeting the need for a dramatic expansion in access to all levels of schooling...
Open Schooling - Impact?

- Address issues of equity and social justice
- Establish centrality of TVET in the conventional curriculum
- Foster innovation (e.g. on-demand exams; uses of ICT)
Lessons

- Political will necessary
- An enabling policy and implementation plan required
- Adequate resources critical: human, financial and technical
- Training
- Partnerships essential
- Harnessing the potential of OER and ICT
Professor Asha Kanwar
President & CEO, Commonwealth of Learning

Dr. S.S. Jena
Chair of India’s National Institute of Open Schooling

Frances J. Ferreira
Education Specialist, Open Schooling, Commonwealth of Learning
Thank you

www.col.org