Open and Distance Education in India

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Why India Needs Open and Distance Learning

Transition to Secondary: LOW

Secondary Schools: SPARSE

Opportunity Cost: HIGH

Only 63.2% in relevant age-group enrolled
Who are not currently enrolled in the formal schools?

Distribution by Income Quintile, Caste and Sex

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
<th>Male</th>
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<th>Male</th>
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</tr>
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<tbody>
<tr>
<td>ST</td>
<td>Q1</td>
<td>ST</td>
<td>Q2</td>
<td>ST</td>
<td>Q3</td>
<td>ST</td>
<td>Q4</td>
<td>ST</td>
<td>Q5</td>
<td>ST</td>
<td>Q6</td>
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<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td>Q5</td>
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<td>Q5</td>
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<td>Q5</td>
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<td>Q1</td>
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<td>Q4</td>
<td>Q5</td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td>Q5</td>
<td>Q1</td>
</tr>
</tbody>
</table>

Centre for Budget and Policy Studies
Open Schooling in India

ODL In India

Pan-India Presence

National Institute of Open Schooling (NIOS)

Individual State-wide Presence

State Open Schools (SOS)

Features of ODL System in India

Flexibility

- All year Admissions
- Wide Range of Subjects
- Bi-Annual and On-Demand Examinations
- Five Years for completion

Accessibility

- Rural and Urban Centers
- Different languages
- Online resources
Background – enrolment in NIOS

Enrolment in NIOS has grown by 7.6 per cent per year from 2008, mostly driven by higher levels of enrolment in Academic courses. Academic constitutes about 94 percent of enrolment in 2013. Within Academic courses, enrolment in Sr. Sec constitutes 57 percent of total enrolment.
Understanding the practices (NIOS/SOS) and experiences of learners

Primary survey data in two Indian states: Rajasthan and Andhra

• Objective
  ▪ Understanding intended and actual practices of flexibility and accessibility for various stages in Open and Distance Learning (ODL) in India
  ▪ Understanding experiences of learners and tutors in the ODL system in India

• Sample
  ▪ Purposive sample
  ▪ Rajasthan: (1000 Learners) – NIOS: 700 SOS: 300
  ▪ Andhra: (1000 learners) – NIOS: 563, SOS: 437
  ▪ Two states combined: Secondary – 1096; Senior Secondary – 894
Why Rajasthan and Andhra?

- Well-established ODL Systems
- Age-appropriate Enrolment: LOW
- Enrolment in NIOS / SOS: HIGH
- Sex-wise Disparity: High in Rajasthan; Present in Andhra

ODL System Related Reason

Conventional School System Related Reason
### Who accesses the ODL System?

<table>
<thead>
<tr>
<th>Rajasthan</th>
<th>Andhra</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-employed in non-agricultural activities- 3.5%</td>
<td>Self-employed in non-agricultural activities- 11%</td>
</tr>
<tr>
<td>Full time students-33%</td>
<td>Full time students-34%</td>
</tr>
<tr>
<td>32% passed the last class attended (higher for SOS)</td>
<td>71% passed the last class attended (equal for NIOS and SOS)</td>
</tr>
<tr>
<td>Age group %</td>
<td>Age group%</td>
</tr>
<tr>
<td>15 to 18 years - 47.8%</td>
<td>15 to 18 years - 64.36%</td>
</tr>
<tr>
<td>19 to 30 years - 42.4%</td>
<td>19 to 30 years - 13.96%</td>
</tr>
<tr>
<td>31 to 40 years - 6.8%</td>
<td>31 to 40 years - 2.11%</td>
</tr>
</tbody>
</table>
## Reaching Prospective Learners: Design/Intended vs Actual

<table>
<thead>
<tr>
<th>Intended Means of Reach (Source: Institutional documents)</th>
<th>Actual reach (Source: Primary Survey)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass Media (Newspaper / Radio / TV)</td>
<td>NIOS: 6.7% in Rajasthan and 4.5% in Andhra had seen advertisement in national daily</td>
</tr>
<tr>
<td></td>
<td>SOS: 1% in Rajasthan and Andhra</td>
</tr>
<tr>
<td>Awareness drives by Accredited Institutions (AIs)</td>
<td>Teachers (15.95) in AIs acted as important source of information</td>
</tr>
</tbody>
</table>
| Website for Information                                   | NIOS: 30% in Rajasthan and 4% in Andhra  
Rajasthan SOS: 9% 
Andhra SOS: 1.8 % |
Reaching Prospective Learners: Who were the real sources?

Main Sources of Information:
- Teachers of Previous Schools
- Friends/Family who had enrolled
- Agents / Middlemen
## Flexibility in the ODL System

<table>
<thead>
<tr>
<th>INTENDED</th>
<th>ACTUAL PRACTICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-year Round</td>
<td>✓</td>
</tr>
<tr>
<td>Transfer for Credits</td>
<td>✓</td>
</tr>
<tr>
<td>Different Streams for those who passed/failed previous class</td>
<td>✓</td>
</tr>
<tr>
<td>Wide Range of Subjects without pre-categorisation</td>
<td>✓</td>
</tr>
<tr>
<td>Minimal fee with concessions for disadvantaged groups</td>
<td>✓</td>
</tr>
<tr>
<td>No Maximum Age specified</td>
<td>✓</td>
</tr>
<tr>
<td>Easy Availability of Prospectus</td>
<td>✓</td>
</tr>
<tr>
<td>Easy-to-fill Form</td>
<td>10% in Rajasthan</td>
</tr>
<tr>
<td></td>
<td>50% in Andhra self-filled forms</td>
</tr>
</tbody>
</table>
# Academic Support

<table>
<thead>
<tr>
<th>INTENDED</th>
<th>ACTUAL PRACTICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-learning materials</td>
<td>Available but learners find it difficult to understand on their own</td>
</tr>
</tbody>
</table>
| Contact Classes at registered Accredited Institutions | NIOS: Not conducted in both states.  
Rajasthan SOS: Not conducted  
Andhra SOS: Regular contact classes                 |
| Website for different resources                    | NIOS: 23% (Raj); 20% (AP): 23%  
Rajasthan SOS: 16.7%                                 |
| Tutor-Marked Assignments                           | No uniformity across Rajasthan AIs  
APSOS learners – at least submitted one assignment                                    |
| Special Tutor Training for ODL classes             | None of the Tutors interviewed had attended any such training                  |
ODL System: Deviations

- Role of Agents/Middlemen prominent in
  - Accessing prospectus
  - Filling out forms
  - Selection of subjects

- High Out-of-Pocket expenditure despite low fees – due to
  private tuitions for academic support, books, transport and stationary

<table>
<thead>
<tr>
<th></th>
<th>Fee</th>
<th>Out of Pocket Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Max. INR 2,200</td>
<td></td>
</tr>
<tr>
<td>NIOS</td>
<td>INR 5,153</td>
<td>INR 6,332</td>
</tr>
<tr>
<td>SOS</td>
<td>INR 3,119</td>
<td>INR 5,512</td>
</tr>
<tr>
<td></td>
<td>Rajasthan (INR)</td>
<td>Andhra (INR)</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>Tution</td>
<td>1443.95 (0 --40000 )</td>
<td>890.534 (0--3200)</td>
</tr>
<tr>
<td>Examination</td>
<td>1474.267 (0--80000)</td>
<td>1030.95 (0 --12000)</td>
</tr>
<tr>
<td>Other</td>
<td>1126.76 (0--74000)</td>
<td>1145.65 (0--7700)</td>
</tr>
<tr>
<td>Books</td>
<td>134.437 (0--6600)</td>
<td>273.16 (0--5000)</td>
</tr>
<tr>
<td>Stationary</td>
<td>103.1128 (0--1900)</td>
<td>554.46 (0--5000)</td>
</tr>
<tr>
<td>Uniform</td>
<td>30.78698 (0 --3000)</td>
<td>11 ( 0--4000)</td>
</tr>
<tr>
<td>Transport</td>
<td>19.17306(0--7000)</td>
<td>2022.7 (0--6000)</td>
</tr>
<tr>
<td>Private tuition</td>
<td>19.17306 (0--6000)</td>
<td>47.4 (0--5000)</td>
</tr>
</tbody>
</table>
## Conducting Examinations

<table>
<thead>
<tr>
<th>INTENDED PRACTICES</th>
<th>ACTUAL PRACTICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bi-Annual Public Examinations</td>
<td>✅</td>
</tr>
<tr>
<td>Weekly On-Demand Examinations for NIOS</td>
<td>✅</td>
</tr>
<tr>
<td>Can appear for as many number of subjects per public examination</td>
<td>✅</td>
</tr>
<tr>
<td>Five years / Nine attempts per subject to complete the course</td>
<td><strong>Probability of completion is highest in Year 1; declines sharply in next 4 years</strong>&lt;br&gt;<strong>(Paper presented by CBPS in PCF)</strong></td>
</tr>
<tr>
<td>Local Language allowed for writing examinations</td>
<td>✅</td>
</tr>
<tr>
<td>Examination center close to the learner</td>
<td>NIOS: Learners reported that they had to travel longer distances</td>
</tr>
<tr>
<td>Strict and rigorous monitoring</td>
<td>Accredited Institute Management officials hinted at non-substantial monitoring</td>
</tr>
<tr>
<td></td>
<td><strong>Agents had guaranteed completion</strong></td>
</tr>
</tbody>
</table>
Profiles of Learners who access NIOS

Logit model

\[ Y_i = \alpha + \beta_1 \text{Location} + \beta_2 \text{Sex} + \beta_3 \text{Employment} + \beta_4 \text{marital status} + \beta_5 \text{Religion} + \beta_6 \text{Age} + \epsilon_i; \]

where, \( Y = \) whether a learner is enrolled in NIOS and SOS, and \( \epsilon = \) error variable.

- Model estimated separately for Rajasthan and Andhra Pradesh
## Learner Profiles: NIOS vs SOS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Rajasthan</th>
<th>Andhra</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>No difference</td>
<td>No difference</td>
</tr>
<tr>
<td>Sex</td>
<td>NIOS: Male; SOS: Female</td>
<td>NIOS: Male; SOS: Female</td>
</tr>
<tr>
<td>Employed</td>
<td>NIOS: No; SOS: Yes</td>
<td>No difference</td>
</tr>
<tr>
<td>Economic status</td>
<td>NIOS: Higher; SOS: Lower</td>
<td>No difference</td>
</tr>
<tr>
<td>Marital status</td>
<td>NIOS: Unmarried; SOS: Married</td>
<td>NIOS: Unmarried; SOS: Married</td>
</tr>
<tr>
<td>Religion</td>
<td>NIOS: Minority; SOS: Hindu</td>
<td>NIOS: Hindu; SOS: Minority</td>
</tr>
<tr>
<td>Age</td>
<td>NIOS: Younger; SOS: Older</td>
<td>NIOS: Older; SOS: Younger</td>
</tr>
</tbody>
</table>
## What’s Being Used and What’s Not?

### What’s Being Used
- On-Demand Examinations
- Subject-choice – however for different reasons

### What’s Not Being Used
- Flexibility for completion
- Contact Classes
- Tutor-Marked Assignments
- Technology focus
- Awareness campaigns
- Use of Reading Materials
MAJOR CONCLUSIONS

Wide Information Gaps

Education vs Certification

Challenging Technology

Rise of Agents / Middlemen due to Technology and Information Gaps

Lack of Access to Computers & Internet

Lack of Skills to Maneuver Websites

Complexity of the Design

Inaccessibility due to ALL ONLINE processes

Less focus on education

Motivation for Certification

Doesn’t encourage Girls to break cultural barriers

Higher Enrolment of Boys

No Bridge-course Element

Never-Enrolled Not Reached
Thank You!
Does flexibility increase the probability of completion?

• Ordinal Logit Model Estimation

\[ Y_{i,d,s,t} = \alpha_{i,d,s,t} + \beta_1 \text{Caste} \times \text{Sex}_{i,d,s,t} + \beta_2 X_{i,d,s,t} + \beta_3 \text{state dummies} + \beta_4 \text{time dummies} + \epsilon_{i,d,s,t} \]

• Y (Dependent Variable)
  - 0 – Not completed;
  - 1 – Completed in one year
  - 2 – Completed in 1.5 years
  - 3 – Completed in 2 years
  - 4 – Completed in 2.5 years
  - 5 – Completed in 3 – 5 years.
Does flexibility increase the probability of completion?

• X includes
  ▪ Age group (Categorical Variable)
  ▪ Education qualification before enrolling with NIOS (Categorical Variable)
  ▪ Mother’s Education (Categorical Variable)
  ▪ Transfer of credit (Dummy Variable)
  ▪ Total number of subjects taken (Continuous Variable)
  ▪ Medium of Instruction (Dummy Variable)
  ▪ Sector (Dummy Variable)
  ▪ Income (Categorical Variable)
Predicted Probabilities

Male

Female

- General#Male
- SC#Male
- ST#Male
- OBC#Male
- Others#Male

- General#Female
- SC#Female
- ST#Female
- OBC#Female
- Others#Female
Predicted Probabilities

- Sector
- Medium of Instruction
- Income
- Mother's Education
- Learner's Previous Education
- Learner's Age Group

- Sector Graph:
  - Rural
  - Urban

- Medium of Instruction Graph:
  - Non-English
  - English

- Income Graph:
  - Less than Rs 50,000 HH income
  - 50,000 to 1,00,000 HH income
  - 1,00,000 to 1,50,000 HH income
  - Above 1,50,000 HH income

- Mother's Education Graph:
  - No Education
  - Primary
  - Upper Primary
  - Secondary

- Learner's Previous Education Graph:
  - No Education
  - Primary
  - Upper Primary
  - Secondary

- Learner's Age Group Graph:
  - 14-15 years
  - 16-17 years
  - 18-20 years
  - 21-25 years
  - 26-30 years
  - 31 years and above