Purpose of the Study

- Examine efficiency in primary one in Uganda through the collection of enrolment and repetition data, and pre-primary exposure, in a nationally representative sample of pupils.

- Explore, at a macro-level, education sector spending in Uganda.
Overview

1. What is education efficiency?
2. Objectives of the National Study
3. Findings from the National Study
What is Education Efficiency?

- All learners move through years of schooling at an appropriate rate and exit the system with the skills needed to participate meaningfully in the job market or go on to higher education (Lockheed, 1988)

  - Internal efficiency access to and flow through the education system
    - Gross and net enrolment
    - Promotion and repetition
    - Completion and dropout
Indicators of Education Inefficiency

1. Low primary school completion rates
2. Grade-specific enrolment rates well over 100%
3. Repetition rates that are much higher than officially reported
4. Limited or no access to pre-primary education
Low Primary School Completion Rates in Uganda

UPE was adopted by the Government of Uganda in 1997
• Enrolment = 2.5 million (1996)
• Enrolment - 8.2 million (2015)

(Gross Enrollment Ratio and Completion Rate)

(UNESCO, 2015)
Grade-Specific Enrolment Rates Higher than 100%

Enrolment with Population Overlay

- P7
- P6
- P5
- P4
- P3
- P2
- P1

Source: Graphed by RTI from enrollment data sourced from the EMIS 2013 (Ministry of Education 2014) and, for population, World Bank’s EdStats system data (http://datatopics.worldbank.org/education/wDataQuery/QFull.aspx.)
High Repetition Rates

- In Uganda, 2016 pilot study found repetition rates 30% to 40% higher than officially reported in Mbale and Kumi. (Brunette et al., 2016)


- A policy of automatic promotion does not address poor learning outcomes. (Glick & Sahn, 2010)
Limited Access to Pre-primary

- Pre-primary education is not provided by the government in Uganda.

- Official reports suggest that the pre-primary enrolment rate in Uganda is low, at 13% (UNESCO Institute for Statistics, 2016)
Conceptual Framework
RTI Evidence-Based Conceptual Framework

- Inexistence of free/affordable pre-primary
- Leniency in application of age for enrolment
- Use of public P1 in lieu of pre-primary
- Repetition in early grades
- Enrolment bulge in early grades
- High dropout/low completion rates
- High cost per completer
National Study: 2017
School Study: Examination of Internal Efficiency

- Over-enrolment – Who are the pupils in primary 1?
- Repetition – Is there under-reported repetition?
- Pre-primary - What is the role of pre-primary education?

Education Sector: Cost of Internal Inefficiency

- Macro-level regional comparisons
- Policy reviews and interviews
- Cost-projection model
National School Study 2017
Research Questions

1. Age of pupils in primary 1
2. Repetition rates in primary 1
3. Relationship between age and repetition
4. Pre-primary exposure and relationship to repetition
5. Parents’ attitudes and expectations about education
Sample

Sampling Framework

• Nationally representative covering all regions
• Stratified simple random technique with proportional to size sampling

Participants

• 1440 pupils randomly selected from 120 schools across 24 districts
• 1439 teacher interviews
• 1318 parent/guardian interviews

Sample Description

• Mean pupil age 7.6 years
• 50% girls; 50% boys
• 9% reported to have disability
• SES evenly distributed across low, mid-low, mid-high, and high wealth indices
Methodology

Pupil-level Data

- Parent/guardian interviews
- Teacher interviews

School/Classroom-level Data

- Classroom registers
- Head teacher registers
- EMIS forms
Research Questions

1. Age of pupils in primary 1
2. Repetition rates in primary 1
3. Relationship between age and repetition
4. Pre-primary exposure and relationship to repetition
5. Parents’ attitudes and expectations about education
Findings: Enrolment and Age

What is the enrolment pattern and age distribution of pupils enrolled in primary 1, according to school records, teachers, and parents/guardians?

Underage = Under 6 years
Target age = 6-7 years
Overage = 8 years and up

(Education Act of 2008)
Findings: Enrolment and Age

Discrepancy between school records and parent/guardian report

School records show that most pupils are at the appropriate age for primary 1

Parent report shows almost equal percentages of pupils who are at target age and overage.

Low levels of children who are underage for grade.
Research Questions

1. Age of pupils in primary 1
2. Repetition rates in primary 1
3. Relationship between age and repetition
4. Pre-primary exposure and relationship to repetition
5. Parents’ attitudes and expectations about education
Findings: Repetition Rate

What is the repetition rate in primary 1, according to school records, teachers, and parents/caregivers?

Percentage of Repeaters by Source

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents*</td>
<td>51.5</td>
</tr>
<tr>
<td>Teachers*</td>
<td>41.2</td>
</tr>
<tr>
<td>Classroom Register</td>
<td>15.2</td>
</tr>
<tr>
<td>Head Teacher Register</td>
<td>9.9</td>
</tr>
<tr>
<td>EMIS Records</td>
<td>10.5</td>
</tr>
</tbody>
</table>

* Responses regarding randomly selected pupils, not the whole class population
### Findings: Reasons for Repetition

#### Parent/guardian- and teacher-report of reasons for child repeating

<table>
<thead>
<tr>
<th>Parent/guardian report</th>
<th>Percentage(^a)</th>
<th>(n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child did not learn enough</td>
<td>18.8%</td>
<td>218</td>
</tr>
<tr>
<td>Child failed class</td>
<td>11.1%</td>
<td>133</td>
</tr>
<tr>
<td>Child is too young</td>
<td>4.4%</td>
<td>57</td>
</tr>
<tr>
<td>Child missed exams due to illness</td>
<td>3.0%</td>
<td>36</td>
</tr>
<tr>
<td>Child missed too much school</td>
<td>2.5%</td>
<td>32</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teacher report</th>
<th>Percentage(^a)</th>
<th>(n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher or school didn’t think child learned enough</td>
<td>22.8%</td>
<td>284</td>
</tr>
<tr>
<td>Child was sick or absent too often</td>
<td>6.9%</td>
<td>118</td>
</tr>
<tr>
<td>Child started too young</td>
<td>6.2%</td>
<td>92</td>
</tr>
<tr>
<td>Parent/guardian did not think child learned enough</td>
<td>4.4%</td>
<td>61</td>
</tr>
</tbody>
</table>

\(^a\) Does not include pupils in hidden pre-primary.

\(^a\) The reasons listed do not constitute all reasons given by parents/guardians and teachers; therefore, the percentages do not sum to 100%.
Mean Repetition Rate by District

Mean = 51.5%
### Table 6. Parent/guardian-report of expectation of next year

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary 1 (child is expected to repeat primary 1)</td>
<td>19.4%</td>
<td>216</td>
</tr>
<tr>
<td>Primary 2 (child will progress to next grade)</td>
<td>77.1%</td>
<td>1059</td>
</tr>
</tbody>
</table>

### Table 7. Teacher-report of expectation of next year

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary 1 (pupil is expected to repeat primary 1)</td>
<td>40.9%</td>
<td>568</td>
</tr>
<tr>
<td>Another primary 1 stream/classroom</td>
<td>14.7%</td>
<td>181</td>
</tr>
<tr>
<td>Same primary 1 stream/classroom</td>
<td>26.2%</td>
<td>387</td>
</tr>
<tr>
<td>Primary 2 (pupil will progress to primary 2)</td>
<td>57.1%</td>
<td>844</td>
</tr>
</tbody>
</table>
Research Questions

1. Age of pupils in primary 1
2. Repetition rates in primary 1
3. Relationship between age and repetition
4. Pre-primary exposure and relationship to repetition
5. Parents’ attitudes and expectations about education
Findings: Age Group and Repetition

Percentage of Repeaters in Each Age Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Parent-Report</th>
<th>Teacher Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underage</td>
<td>5.4</td>
<td>8.4</td>
</tr>
<tr>
<td>Target Age</td>
<td>40.1</td>
<td>41</td>
</tr>
<tr>
<td>Overage</td>
<td>54.5</td>
<td>50.6</td>
</tr>
</tbody>
</table>

Underage: 5.4% in Parent-Report, 8.4% in Teacher Report
Target Age: 40.1% in Parent-Report, 41% in Teacher Report
Overage: 54.5% in Parent-Report, 50.6% in Teacher Report
Findings: Underage at Time of Enrolment

26% of parents/guardians enrolled their child in primary 1 before the age of 6 years.

41% of those parents/guardians sent their child to school early so that their child could learn.

56% of those parents/guardians reported that they knew the child would repeat primary 1.

61% of those parents/guardians expected that their child would learn less in the first year.
Research Questions

1. Age of pupils in primary 1
2. Repetition rates in primary 1
3. Relationship between age and repetition
4. Pre-primary exposure and relationship to repetition
5. Parents’ attitudes and expectations about education
Findings: Pre-primary Exposure and Repetition

What is the enrolment rate in pre-primary education and its relationship with primary 1 repetition?

- Percentage of pupils who attended pre-primary = 34%
- No significant differences by gender or age
- Pre-primary exposure was significant by SES
Findings: Determinants of Repetition and Pre-primary

- Pupils who did not go to pre-primary school were 3.8 times more likely to repeat than those who did.

- Pupils who were underage at time of enrolment were 1.65 times more likely to repeat than pupils who were at target age.

- Pupils reported having a disability were 2.11 times more likely to repeat than pupils who were not reported as having a disability.

- Pupils from low SES households were less likely to have attended pre-primary than pupils from high SES households.
Research Questions

1. Age of pupils in primary 1
2. Repetition rates in primary 1
3. Relationship between age and repetition
4. Pre-primary exposure and relationship to repetition
5. Parents’ attitudes and expectations about education
What are parents/guardians’ attitudes and expectations about pre-primary education and repetition in primary 1?

- Parents/guardians’ expectations of learning in pre-primary school are primarily academic in nature although other types of learning are also expected.
- 75% of parents/guardians reported that the reason for sending their child to pre-primary school is to learn, followed by the child is ready and the child was the right age.
- 60% of parents/guardians did not send their child to pre-primary school due to financial reasons.
- Most parents/guardians reported that a child should start pre-primary school at 3 or 4 years of age.
- 38% of parents/guardians reported that a child should start primary 1 at 6 years of age, and 23% reported at 7 years.
Education Sector Review
Regional Comparisons of Inefficiency

- Common characteristics
  - Low official repetition, but higher hidden repetition in primary 1
  - Higher than 100% official gross intake ratio
  - Low primary school completion rates
  - Low gross enrolment ratio to pre-primary

<table>
<thead>
<tr>
<th>Efficiency Parameters</th>
<th>Uganda</th>
<th>Madagascar</th>
<th>Ethiopia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated official repetition in primary 1</td>
<td>4%</td>
<td>23%</td>
<td>29%</td>
</tr>
<tr>
<td>Alternative estimation of primary 1 repetition*</td>
<td>34%</td>
<td>48%</td>
<td>40.2%</td>
</tr>
<tr>
<td>Official gross intake ratio*^</td>
<td>138%</td>
<td>184%</td>
<td>124%</td>
</tr>
<tr>
<td>Primary school completion rate</td>
<td>56%</td>
<td>70%</td>
<td>55%</td>
</tr>
<tr>
<td>Gross enrolment ratio pre-primary</td>
<td>11%</td>
<td>15%</td>
<td>19%</td>
</tr>
</tbody>
</table>

*EMIS data on enrolment by age and grade, sourced directly from countries;
*^combination of courses;
no symbol is World Bank data.
Regional Comparisons of Efficiency

Regional Differences
- Higher primary school completion rates
- Higher pre-primary gross enrolment rates
- Lower ratio of primary 1 pupils to the appropriate population
- Lower estimates of excess cost of primary school
- Lower expenses on primary school as a percentage of total education expenses

<table>
<thead>
<tr>
<th>Country</th>
<th>Primary School Completion Rate</th>
<th>Pre-primary Gross Enrolment Rate</th>
<th>Gross Enrolment Ratio for Primary 1</th>
<th>Excess Cost of Primary School</th>
<th>Expenditure on Primary as % of Ed Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uganda</td>
<td>56%</td>
<td>11.1%</td>
<td>1.6</td>
<td>114%</td>
<td>58%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>76%</td>
<td>32.0%</td>
<td>1.0</td>
<td>29%</td>
<td>49%</td>
</tr>
<tr>
<td>Kenya</td>
<td>104%</td>
<td>75.0%</td>
<td>1.1</td>
<td>9%</td>
<td>36%</td>
</tr>
</tbody>
</table>

Average of last 5 years of World Bank education data.
Indicators of Internal Efficiency of Primary Schooling and Access to Pre-Primary Schooling

- **Uganda**
  - Primary School Completion Rate
- **Tanzania**
  - Pre-primary Gross Enrolment Ratio
  - Exp. on prim. % of ed. exp.
- **Kenya**
  - Ratio Grade 1 to Approp. Pop.
  - Excess Cost of Primary School
Demographically-driven Cost Projection Model

- The **cost of the inefficiency** in education to the GOU in 2015 is estimated to be $177.1M, which is 43% of the total estimated GOU expenditure on primary education that year. Over 12 years, the cost adds up to almost $3B.

- The **cost of investments** to pre-primary and primary education adds up to approximately $941M
  - GOU subsidies to private pre-primary providers for the expansion of quality pre-primary,
  - Improved book provision,
  - In-service teacher education,
  - Teacher support or coaching,
  - Improved school management and governance, and
  - Systems improvements

- These investments have the potential to pay for themselves in 12 years through the reduction of repetition and increase in completion rates.
Costing Model

Dollars in Millions

Current Cost of Inefficiency
Cost with Investments
Cost of Interventions
Themes from policy documents and interviews

1. Options for provision of pre-primary education continue to be under discussion.

2. There is a tendency to underestimate the possible financial benefits of improved foundation years policy affecting learning and performance.

3. Policies could benefit from quantitative goals for state subsidization, or the precise mix and type of public-private partnerships that are desired.
Policy Recommendations
Policy Recommendations

Prioritize support for vulnerable children.

- Pupils with the lowest SES had a higher likelihood of not attending pre-primary and that pupils with disabilities had a higher likelihood of repetition.
- Parents/guardians reported that financial reasons and access were drivers of lack of enrolment, and other studies have found that poorer areas have fewer pre-primary services.
Revisit current policy around automatic promotion.

- School leaders, as well as teachers and parents/guardians, were not adhering to the policy of automatic promotion.
- It is likely that schools are reporting inaccurate enrolment and repetition data to MoES in order to be seen as compliant with the policy.
- Investments in quality pre-primary and early primary would likely lead to the working of automatic promotion as it was intended.
Consider remedial support to struggling learners as a short-term measure.

- Investments made in quality pre-primary and early primary education will take time to achieve the desired efficiency outcomes, as shown in our cost projection model.

- Meanwhile, remedial services could be used to increase learning achievement of pupils who are struggling.

- Remediation services would naturally be needed less and less as the improvements in pre-primary and primary manifest over time.
Invest to expand high-quality pre-primary as well as to improve the quality of primary education.

- Stated another way, investing in pre-primary education may not make a difference if attention is not paid to the quality of the education that children receive in the early primary years.

- Investments might encompass the following ways:
  - subsidies to private pre-primary providers,
  - more and better books for primary schools,
  - in-service teacher education,
  - teacher support or coaching,
  - improved school management and governance, and
  - systems improvements.
Set minimum standards of quality and strengthen quality assurance.

- Defining a clear vision and a strong mandate for pre-primary education would create an incentive for quality and intensify the appetite for reform.
- It is important to creating an environment which supports various approaches to high-quality pre-primary education, provided by multiple partners, as noted by Cambridge Education (2017).
- The GOU could define minimum standards of quality and enhance regulation.
Policy Recommendations, continued

- Guide head teachers to prioritize support to teachers of early primary grades.
- School leadership should be concerned with classrooms with high pupil to teacher ratios and the use of appropriate school assignment processes for teachers.
- Head teachers and school staff should recognize the importance of the foundational years in children’s later academic achievement.
Special Thanks

-GOU
-Participating schools
-DRASPAC
-DFID

This presentation references the following report:


References


