Early Childhood Development: A Solid Investment in Uganda’s Future

Background

This brief summarises a study looking at the benefit-cost analysis of proposed investments in pre-primary schooling in Uganda. The analysis focuses on the benefits of early childhood education, the possible benefit-cost ratios of investments in Early Childhood Development (ECD); and a concrete and realistic scenario for scaling up pre-schooling in Uganda in the coming years.

Why pre-primary education?

Providing pre-primary education to all children needs no argumentation in Uganda. The Early Childhood Development Policy of 2007 underscores that “Learning begins at birth and that whatever experiences a child goes through during these formative years will impact on a child’s learning in later years positively or negatively”. In fact, the impact of pre-primary education can even be seen within a lifecycle framework as the figure below shows. Pre-primary education does not only facilitate the progression of children through the education system but it also strengthens their position on the labor market; their productivity and their income generation capacity; their parenting skills; etc. Many studies from all over the world have shown that even at a later age, individuals with pre-school experience fare better than those without, leading to important benefits for society and Government as well.

Benefits of early learning in a lifecycle framework

What does all this mean for Uganda? Can we simply assume that the favorable benefit-to-cost ratios\(^1\) shown in studies apply to Uganda? And if so, is there a feasible way to accelerate the expansion of pre-primary education now, even if many of the benefits will occur later?

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\(^{1}\) This is the sum of all the benefits that eventually flow from an investment in ECD, divided by all of the money that was spent to make that investment. If the benefit-to-cost ratio is higher than one, the investment is worthwhile economically, especially if the ratio also exceeds that of alternative investments that can be made.
A solid investment

The table below summarises the benefit-to-cost ratios for ECD investments in Uganda. It shows that even at very moderate assumptions in all respects, the benefit-to-cost ratio for ECD in Uganda is 1.6. This means that eventually all the money invested in pre-primary education will eventually pay itself back (in terms of higher income, more productivity, better health, less crime, et cetera) with an additional “profit” of 60% of that investment.

The benefit-to-cost ratio rises to 1.8 (yielding an 80% profit) if we make a less modest assumption regarding the extent to which participation in pre-primary education increases the number of years that children spend in further education. The benefit-to-cost ratio rises even further to 2.7 (i.e. almost a threefold return) when we are less modest in our estimation of the influence of the number of years that children spend in education on economic productivity. Almost as high is the benefit-to-cost ratio when we assume that the costs of pre-primary education are lower than previously assumed, and when we assume a lower discount rate. The ratio rises from 1.6 to 1.9 when we assume stronger externalities. Finally, when we combine all these effects and make the most optimistic assumptions in all five respects, the benefit-to-cost ratio would be as high as 8.6.

<table>
<thead>
<tr>
<th>Benefit-to-cost ratios for investment in ECD in Uganda</th>
<th>Benefit-to-cost Ratio</th>
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<tbody>
<tr>
<td>On the most modest assumptions in all respects</td>
<td>1.6</td>
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<tr>
<td>On the most modest assumptions except that we assume:</td>
<td></td>
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<tr>
<td>- a higher impact of pre-primary education on further schooling</td>
<td>1.8</td>
</tr>
<tr>
<td>- a higher economic impact of schooling on productivity</td>
<td>2.7</td>
</tr>
<tr>
<td>- lower costs of pre-primary education that previously assumed</td>
<td>2.6</td>
</tr>
<tr>
<td>- a discount rate of 3% instead of 6%</td>
<td>2.6</td>
</tr>
<tr>
<td>- a bigger impact of pre-primary education in other areas, e.g. crime, health</td>
<td>1.9</td>
</tr>
<tr>
<td>On the most optimistic assumptions in all respects</td>
<td>8.6</td>
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Some of the benefits mentioned will occur quite soon after the initial investment, such as the reduction of the unacceptably high drop-out rates in primary education. But other will take more time to materialise. For example, children are between 3-5 years old when they attend pre-primary education, but they will not make their main economic contribution until adulthood. Given this, how can Uganda expand pre-primary education in an affordable manner, knowing that a part of the “profit” will come later?

Proposed strategies to expand pre-primary education

Strategy 1: Upgrade the existing capacity and observe age limits

Official data indicates that 6.6% of all children of ages 3-5 years old were officially enrolled in 2011 (Net Enrolment Ratio), but a household survey in the same year found that 23.4% of the children of these ages were actually attending (Net Attendance Ratio). This difference suggests that a large number of nurseries and community-based ECD centres are not
captured in the data. So to begin with, Uganda can substantially increase pre-primary enrolment at relatively low costs by assisting all nurseries and centres to meet the quality criteria, get registered, and obtain a license. Furthermore, the household survey found a Gross Attendance Ratio of 41.4% which means that many children enter below the age of 3 (this may concern young children who are brought along to the centre by their older siblings) or above the age of 5. The latter group may concern children who stay too long in a nursery or centre because they failed the (illegal) test. This indicates that pre-primary education in Uganda already has the capacity to provide a place for 41.4% of all children, if only all nurseries and centres are made part of the system and admit only children of the proper age.

**Strategy 2: A Pact for Pre-Primary Education in Uganda**

All actors involved in pre-primary education face limited resources. Thus, utmost efficiency is required and this can be achieved by a good division of tasks and responsibilities. This can take the shape of a **Pact for Pre-Primary Education in Uganda**. The framework summarises this Pact and each of the points are discussed below.

- a. Obtaining land and space are serious hurdles for building a centre. The three main religious communities (Catholic, Muslim and Protestant) have already agreed to make land and structures available near most of the churches and mosques. Village chiefs and elders, civil society organizations, private companies and others are encouraged to do the same.
- b. Community mobilisation is a 4-5 year process where NGOs start a dialogue with a community about creating an ECD centre, and train people to make it happen. Only a handful of NGOs can do this which is a serious bottleneck. The Pact suggests that these NGOs transfer other tasks (see below) to focus more on community mobilisation, while sharing their expertise in this field with others, such as civil society and faith-based organizations.
- c. There is a gap between the limited amount of training that most NGOs provide for caregivers in the community-based centres, and the training provided in formal teacher training institutions for the for-profit nurseries. The formal institutions should develop accessible courses that are more tuned to the practical needs of communities and of the people who aspire to become caregivers.
- d. Refresher training should also be progressively transferred to the teacher training institutions. Supervision should eventually be in the hands of the official who is accountable to the Government which is the District Inspector. These developments will contribute to making community-based ECD centres less dependent on the NGOs. Furthermore, local and national government should take ownership of community-based ECD by bringing it under their structures for monitoring and evaluation and governance.
- e. The last element of the Pact takes us to the third strategy.

<table>
<thead>
<tr>
<th>Task or responsibility</th>
<th>Actor</th>
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<tbody>
<tr>
<td>a. Land, space, classrooms</td>
<td>Communities, local chiefs and elders, private sector, faith-based organizations</td>
</tr>
<tr>
<td>b. Community mobilization</td>
<td>NGOs to share their expertise in this field with other NGOs, CSO, FBOs etcetera.</td>
</tr>
<tr>
<td>c. Initial Training</td>
<td>From just NGOs to Teacher Training Institutions and any others with accreditation</td>
</tr>
<tr>
<td>d. Refresher training, supervision, M&amp;E, governance</td>
<td>From NGOs to Teacher Training Institutions, District Education Offices, and Government</td>
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<tr>
<td>e. Recurrent financial contribution</td>
<td>Government</td>
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**A Pact for Pre-Primary Education in Uganda**

<table>
<thead>
<tr>
<th>Net and Gross Enrolment and Attendance Ratios in Pre-primary Education in Uganda (2011)</th>
<th>Net</th>
<th>Gross</th>
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<tbody>
<tr>
<td>Enrolment (official statistics)</td>
<td>6.6</td>
<td>8.6</td>
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<tr>
<td>Attendance (household survey)</td>
<td>23.4</td>
<td>41.4</td>
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**Strategy 3: A Modest Government Contribution of 3000 Shilling per Child per Month**

The expansion of pre-primary education is severely constrained by parents' limited ability to pay fees as observed in field visits. If the Government would maintain its position that financing pre-primary education is a matter for parents and the private sector, universal access would remain far off. But the governmental contribution can remain modest: 3,000
shillings per child per month – during nine months per year - of which 500 Shillings is for stationary and other materials, and 2,500 Shillings for the teacher. In most regions this contribution will not be enough to provide a living for the teachers so parents and communities must continue to contribute. But based on an in-depth analysis of the costs and funding of community-based centres in various places it was estimated that the 3,000 Shillings per child per month will lessen the parents’ burden sufficiently for an acceleration of the expansion process.

Moreover, the contribution per child will not be necessary for all children. First, a large and probably increasing number of families can afford the fees charged by the nurseries that operate on a for-profit basis. By 2020, this may concern 40% of the estimated 5 million children aged 3-5 that will then live in Uganda. Second, some regions of Uganda are already well on their way towards high coverage, as the figure below shows.

**Coverage of pre-primary education (%) in the poorer regions (left) and richer regions (right)**

![Coverage of pre-primary education](image)

If the per child contribution would be implemented in the two poorest regions Karamoya and West Nile, the annual costs for the Government would eventually be 15.2 billion shillings, by the year 2020. Adding North and Eastern would bring total costs to 33.4 billion shillings annually. Finally, after adding East Central and the Western region, the costs for the six poorest regions together would be 55 billion shillings annually. To put these figures into perspective, the 33.4 billion shillings that are needed to serve the four poorest regions will be in the order of 2.5% of the budget for primary education and hardly more than 1% of the entire education budget. The cause of these low percentages lies partly in the extremely efficient nature of the community-based ECD centres where much is done with very little resources, and partly in the fact that parents continue to pay; the per child contribution lessens their burden but does not replace the fee. With an average real GDP growth rate of more than 5% between 1999 and 2011, an annual cost requirement of about 1% of the education budget cannot be insurmountable for the government.

But can we readily apply the favourable benefit-to-cost ratios that we found for Uganda to the community-based ECD centres? The answer would be negative if we look at some of the centres as they function now. In extreme cases, some of the staff are illiterate and received no more than a few days of initial training. But we will see a much brighter picture if the Pact for Pre-primary Education in Uganda improves classrooms; strengthens pre- and in-service training; enhances supervision; and provides a per child contribution that should make it easier for communities to attract and retain motivated and able caregivers. If all actors in the Pact deliver their contribution, it is more than likely that the subsidy of 3,000 Shillings will pay itself back entirely to say the least.

This briefing is based on a report titled *Ex-Ante Benefit-Cost Analysis of Individual, Economic and Social Returns from Proposed Investment Scenarios for Pre-Primary Schooling in Uganda*, dated 24 May 2013 and written by Professor Jere R. Behrman of the University of Pennsylvania in Philadelphia and Jan van Ravens of Yale University in New Haven. The report was commissioned by a partnership consisting of the Ministry of Gender, Labour and Social Development, Ministry of Education and Sports, National Council for Children, Plan International Uganda, Aga Khan Foundation Uganda, Save the Children Uganda, and UNICEF Uganda. For more information, please contact xxxxx.