Exploring Early Education Programs in Peri-urban Settings in Africa

Accra Report

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Executive summary

Accra has a vibrant private and public education sector at both the primary and preprimary levels. Attendance at preschool is exceptionally high, reflecting both strong parental beliefs in the importance of preschool and the recent government stipulation that two years of preschool should be part of the Free Compulsory Universal Basic Education (FCUBE) structure. Despite the Government's success in expanding public preschool provision, however, the private school industry remains very strong: an estimated 90% of preschool students in the study area of Ashaiman are attending private preschools.

In September and October 2013 Innovations for Poverty Action conducted a data collection exercise in the large slum area of Ashaiman, in the Greater Accra region. A representative sample of 286 household surveys, 30 headmaster surveys and 40 classroom observations were conducted with the aim of discovering the scale, cost and quality and preschool education in this area. This paper details this research and its findings, a summary of which are included here:

- More than 80% of 3 year olds and more than 90% of 4-6 year olds are attending preschool in Ashaiman. These preschools tend to be fairly formal, and parents view them as educational establishments rather than daycare centers.

- This high attendance is achieved despite the fact that an estimated 29% of children aged between 3 -6 live below the poverty threshold of 2.50 dollars per capita at 2005 PPP. Interestingly, we do not find a statistically significant relationship between children's preschool attendance and household poverty indicators, or between their attendance and the educational attainment of adults within the household.

- The overwhelming majority of caregivers view preschools as educational establishments; 80% of the caregivers of preschool-going children said that they their main motivation was that their child should learn skills or be prepared for primary school. Only 12% said that they sent children to school primarily because there was no-one to look after them at home.

- The vast majority of primary schools have attached preschools; only 1 of the 132 primary schools that were attended by children in the household survey sample did not have a preschool school attached, and all private primary schools had a preschool attached. Many private schools seem, in fact, to have started with offering preschool grades and to have gradually introduced primary school grades as children got older. Preschool students tend to make up a higher percentage of the total number of students in private schools than in public schools.

- Children who attend spend a significant period of time at preschools. On average those children attend school 5 days a week and spend 41 hours at preschool per school week. No one attending spends less than 25 hours a week at preschool.

- Parents theoretically have a large set of options when choosing a preschool; the average caregiver in Ashaiman knows of 3.6 preschools that their child could walk to. Amongst the major factors caregivers consider are proximity, teacher quality, and fee level and structure.

- The full cost of sending a child to preschool is $38 per month on average. Nominal fees make up only a little more than a third of this, with books and – especially – food also being major costs.

- Caregivers seem to view private preschools as superior to public preschools. On average parents estimate that attending a low cost private preschool would be associated with higher educational achievement and a 19% greater income at the age of 30 as compared to attending a public preschool. This further indicates that parents seem to value preschool as important both in terms of immediate school readiness and future career prospects.

- We find strong evidence that parents perceive more expensive private schools to be superior to low cost private schools. This, combined with the stated importance of fee level when choosing a preschool, indicates that poverty may be a significant barrier to some measures of quality preschool education. There does not seem, however, to be a straightforward relationship between poverty status and school expenses. This may be due in part to the increased likelihood that those in the lowest poverty quintiles will pay their school fees on a daily basis because of liquidity constraints, which ends up being significantly more expensive than the standard procedure of paying per term.

- A large majority of private schools claim to be registered with the government, and there is a comparatively high level of government oversight of preschools (though this is higher in public schools that in private schools).

- Only 40% of teachers have any ECD-specific training. Children are taught literacy and numeracy, and are assessed through examinations, from the earliest years of preschool. Learning goals at young ages significantly outstrip those in place in Europe or America, and the teaching style of preschools mimics that of primary schools. This might be of concern to education experts, who emphasize the importance of developing a wide range of skills in preschool years, with equal emphasis being placed on social development, creativity, problem solving and emotional development. These factors suggest that investment in teacher training may be appropriate.

- In the study area, teaching was overwhelmingly done in English. Three quarters of the preschool classrooms observed used solely English, or used local languages only to translate individual words or phrases. It seems that the Government's National Literacy Acceleration Plan (NALAP), which stipulates that 90% of instruction time in preschool should be in a Ghanaian language and that students should not begin reading and writing in English until Primary 2, has not been broadly implemented in Kindergarten.

- Most preschool classes sit in forward-facing desks in front of a blackboard, and most classrooms have a decent number of exercise books and textbooks. There is considerable variation, however, in provision of materials within classrooms; the responsibility of buying school books generally rests with parents and within most classes there were a minority of pupils who did not have learning materials. Schools are consistently better provided with learning material than with play material, which is in line with the strong academic emphasis of preschools. Most schools provide health and nutritional facilities.

Ghana is ahead of many other Sub-saharan African countries in terms of both the quality and quantity of preschool services in the urban areas that were studied. Attendance is high, there is a strong government curriculum, preschools are comparatively well-regulated and most schools possess decent infrastructure. Classroom realities, however, do not always reflect the sound pedagogical practices that underlie the government's vision for preschool. The high numbers of untrained teachers, the overwhelming usage of English, and early teaching of advanced numeracy and literacy, are of particular concern. Teacher training is, as a result, the focus of the Government's recently published, comprehensive and ambitious plan to scale-up quality preschool education in Ghana. In addition, the competition that is at play in peri-urban preschool markets as was observed in Ashaiman is such that demand-side interventions aimed at increasing awareness of caregivers on the broader role of preprimary education beyond academic learning, might come as a complement to supply-side interventions by aligning the incentives of preschools with broader children development goals. Further analysis will be presented in future reports on this topic.

Contents

Terminology used in this report:

Preschool	Nursery and KG classes (but not creche)
Nursery	First 2 preschool classes (aimed at age 2-4)
Kindergarten	Final 2 preschool classes (aimed at age 4-6)
Creche	Aimed at age 0-2
ECD Center	Any center offering preschool grades
Ghana Education Service (GES)	Coordinating body for pre-tertiary education policy

1. Sector Background: Early Education in Ghana

1.1. The development of Early Education in Ghana

The Education Act of 1961 declared that basic education (comprising Primary 1 up to and including Primary 6) should be compulsory and free for all children, but made no formal provision. In 1965 the Nursery and Kindergarten Unit was created to develop preschools as well as assist in the evaluation, control, and registration of these institutions. Preprimary education was not part of the formal system until 2002, when the White Paper Report on Educational Reform Review Program stated that kindergarten education should progressively become part of the Free Compulsory Universal Basic Education (FCUBE) structure. A second White Paper in 2007 led to the enactment of the 2008 Education Act, which added formally two years of kindergarten education to free and compulsory education.[1]

The current Early Education Framework

Pre-primary education can be broken down into 3 parts:

1. **Creche:** For children up to 2, or occasionally 3. This is predominantly a daycare facility in which children sing, play games and sleep.
2. **Nursery:** This caters for 2-4 year olds and is often subdivided into Nursery 1 (2-3 year olds) and Nursery 2 (3-4 year olds). There is no official government curriculum for Nursery and it falls under the remit of the Department of Social Welfare.
3. **Kindergarten (KG):** This caters for 4-6 years olds and is subdivided into KG1 (4-5 year olds) and KG2 (5-6 year olds). KG is supervised by the Ghana Education Service (GES), and the 2 KG years are part of the Free Compulsory Universal Basic Education (FCUBE) structure.

Although Nursery and KG are conceptualized by the government as separate, and administered by different departments, parents and teachers do not seem to sharply delineate them. Anecdotally most schools use a watered-down version of the KG curriculum for Nursery, and group KG with Nursery (rather than the primary grades) for administrative purposes. The same convention will be used here; most often Nursery and KG will be looked at together (and referred to as Preschool).

1.2. Early Education in the current policy agenda

Nursery

Nursery education remains outside the formal education system, and oversight of the sector (as well as responsibility for the registration and maintenance of standards for the nursery grades) is the responsibility of the Department for Social Welfare (DSW). The Government has expressed some interest in expanding and formalizing this sector, though this has materialized yet.

Kindergarten (KG)

National Literacy Acceleration Plan (NALAP)

The National Literacy Acceleration Plan (NALAP) used a bilingual English and Ghanaian language approach in an attempt to improve students' ability to read and write in the early grades (from KG to Primary 3).[2] NALAP was based on the

[1] For more information on the historical development of the education legislation in Ghana see Ghana Education Service's 'Development of Education National Report of Ghana', which is available at http://www.ibe.unesco.org/International/ICE47/English/Natreps/reports/ghana.pdf

[2] The baseline report and implementation assessment for NALAP are available at

premise that children will find it easiest to learn to read and write in a language that they understand and speak fluently, rather than in English. The plan therefore mandated that students should be taught to read and write in a national language – their mother tongue where possible- with English introduced only gradually. In KG 90% of instructional time should be in a national language. Students should not begin reading and writing in English until Primary 2. The large scale implementation of NALAP began in the 2009-10. It involved teacher training, distribution of materials and a public advocacy campaign to counteract the widespread belief amongst Ghanaians that the purpose of schooling - even at the earliest ages - is to learn to read and write in English. The USAID implementation report found that by June 2010 one third of the schools had implemented the GES directive to introduce a 90 minute period combining a national language and literacy.[2] Our understanding is that implementation of NALAP has been incomplete, and that many schools continue to focus on teaching children to read and write in English.

Education Strategy Plan 2010-2020

The Ministry of Education's most recent Education Strategy Plan (ESP) provides summary education statistics from 2002 to 2008, and sets out the government's priority for the education sector over the next decade. Government spending on KG has fallen from 7.4% of total education spending in 2002 to 3.4% in 2008, and one of the government's priorities for the period up to 2020 is to expand and improve comprehensive early childhood care and education (ECCE). As part of this commitment KG expenditure should rise to 5.7% of government educational expenditure by 2015.

Table 1. Selected National KG nation-wide Education Indicators 2003-8 (adapted from the Government Education Strategy Plan 2010-2012)[3]

Indicator	*2002*	*2005*	*2008*	*2015 Target*
Gross Enrolment Ratio (%)	46	60	90	100
% Female students	49	49	50	50
% Trained Teachers	29	27	25	95
Pupil/Teacher ratio	24	30	37	25
KG spending as % total educational spending	7.4	3.4	3.4	5.7

The ESP also projects that enrolment in KG will increase from 1.26 million in 2009 to 1.36 million in 2020. Table 2 provides an estimate of the total expenditure that will be necessary to cope with this influx, and to achieve the government's goals on teacher training and pupil teacher ratios.

Table 2. Expenditure necessary to meet education indicator targets (adapted from the Government Education Strategy Plan 2010-2012)

Indicator	*2013*	*2015*	*2020*
Recurrent costs (GHC million)	154.5	188.3	234.1
Capital costs (GHC million)	98	112	172
Total costs (GHC million)	253	300	406

*1 USD=2.16 GHC as of October 2013

Stakeholders in the education sector in Ghana were generally positive about the Education Strategy Plan, but some concerns were expressed that the available funding might not allow for the

http://pdf.usaid.gov/pdf_docs/pnadw581.pdf and http://www.web.net/~afc/download3/Education%20Research/NALAP%20Study/EQUALL%20NALAP%20Implementation%20Study%20Final%20Report.pdf respectively.

[3] The Government of Ghana's 'Education Strategic Plan 2010 to 2020' can be downloaded at http://planipolis.iiep.unesco.org/upload/Ghana/Ghana_ESP_2010_2020_Vol1.pdf and http://planipolis.iiep.unesco.org/upload/Ghana/Ghana_ESP_2010_2020_Vol2.pdf

plan to be fully implemented before 2020, and that the government might therefore have to prioritize further within the areas highlighted.[4]

Operational Plan to Scale-Up Quality KG Education in Ghana

The government's Education Strategy Plan stopped short of providing a detailed plan for the expansion of preschool services, so in 2011 the Ghana Education Service (GES) embarked upon the process of developing a plan to scale up KG in Ghana. The final report, with detailed timeline and costing, was presented to the Director General of GES in August 2013.

The plan was developed in two phases. The Early Childhood Education (ECE) unit within GES first undertook a review of the KG sector to identify both the key challenges and examples of best practice within the sector. The mains areas they identified as problematic were:[5]

- **Teacher training:** The Education Management Information System unit (EMIS) reports for 2011-12 found that there were 41,484 KG teachers nationwide, but that only 12,920 (31%) were trained.

- **The gap between gross and net enrolment rates for KG:** Government data from 2010-11 shows that the Gross Enrolment Rates for KG in Ghana in 98.4% while the Net Enrolment Rate is just 60.1%. The difference is explained by over half a million children who are enrolled in KG but not of KG age. The data suggest that most of these are older children who should be enrolled in primary school.

- **Learning Language:** The review and merging of NALAP and the Teaching and Learning Materials Program (TLMP) into a single approach to provide a set of sustainable resources to support delivery was regarded as essential.[6] TLMP is a program funded by USAID that provides classroom resources to support the national KG curriculum. Unlike NALAP, it is based on learning in the English language. Practitioners have commented that a streamlining of the two approaches would remove confusion in the classroom.

- **Negotiating an appropriate role of the private sector in KG education:** EMIS estimates that private enrolment currently accounts for 19.5% of the total in kindergarten. The Education Strategy Plan identified expansion of the private sector as way to reduce public sector funding and infrastructure costs.

- **A discrepancy between high level pedagogical rhetoric and classroom practices:** The report found that the curriculum was sound, but recognized that "despite the great strides Ghana has made, […] the delivery of kindergarten education remains entrenched in a rote learning style, which is neither child-centered nor activity based".

The 5 year operational plan was developed based on these (and other) findings. **Teacher training is identified as the number one priority**. The plan has three implementation phases:

1. Focus on teacher training, pedagogy and parental involvement;
2. Focus on infrastructure, learning materials and resources, and public awareness;

[4] The Global Partnership for Education and Ghana Development Partner Group conducted a thorough appraisal of the ESP. The resulting report can be downloaded at http://country.globalpartnership.org/sites/default/files/country-docs/Appraisal%20Ghana.pdf

[5] This list is adapted from the 'Programme to Scale-Up Quality Kindergarten Education in Ghana'. Copies of this document and the Operational Plan can be obtained from the Ghana Education Service.

[6] For more information on TLMP see the Final Assessment Report, which is available at: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0CEUQFjAD&url=http%3A%2F%2Fwww.csu.edu%2FTLMP%2Fdocuments%2FTLMPAssessmentReportFinal_000.doc&ei=yyp1UrbYAqTt0gW034GIBw&usg=AFQjCNFUipLluaGWrge6XKG928HfEDyiSA&sig2=Tq3jjwrgxikJYGZ-iBevSw&bvm=bv.55819444,d.d2k&cad=rja

3. Focus on reviewing curriculum, inspection, developing Parent Teacher Associations (PTAs) and strengthening Special Education Needs.

The estimated minimum total cost to implement the entire KG Operational Plan is GHS 823 million.[7] The government is currently engaged in the process of looking for donors and implementing partners.

The Private Sector

There is a large and vibrant private school sector in urban Ghana, though the density of private schools is much lower in rural areas. The NALAP requirements, and the requirement that all primary schools should have a KG attached, also apply to private schools, but there is little comprehensive information on the extent to which these have been implemented.

Recent Ghana Education Services reports - including the KG Operational Plan - have discussed the role of the private sector going forward. There seems to be an increased awareness that a large private sector relieves the burden of service provision on GES, and the Government seems to be making an effort to engage with the private sector on a larger scale. As part of this effort there has been a recent push to locate, assess and register those private schools that are not yet registered with the government.

The initial registration process is decentralized to the district level. A private school wishing to register must first be inspected by the District Coordinator, who will perform some assessment of the provision of basic services and give provisional approval to operate for 1 year. If the school passes a second assessment at the end of the first year they are given a license to operate for a further 3 years. After a final inspection at the end of that period the District Coordinator will recommend the school to GES for a permanent national certificate.[8] According to the head of Private Schools at GES the majority of private schools in urban centers are now registered – something that was verified in the study area.

Communication between the Government and the private sector goes through 2 principle channels. First, there is a 'Circuit Supervisor' within the local District Office who is responsible for the ongoing regulation and monitoring of individual private schools (as well as public schools). Second, the Ghana National Association of Private Schools (GNAPS) acts as a mouthpiece between private schools and the government. They have an executive board at the national level, and have representatives at the district, regional and sub-regional (zonal) levels. GNAPS has over two thousand members, a significant proportion of whom attend monthly meetings. It organizes training for, and communicates policy changes to, private schools, as well as bringing private school grievances to the attention of GES.

[7] This was equivalent to about US$380 million in August 2013, when the report was presented to the Director General.

[8] In the rare case that a school has only a Nursery (ie no KG or Primary) then the final national registration will be done by Department of Social Welfare.

2. Description of the study area: Ashaiman

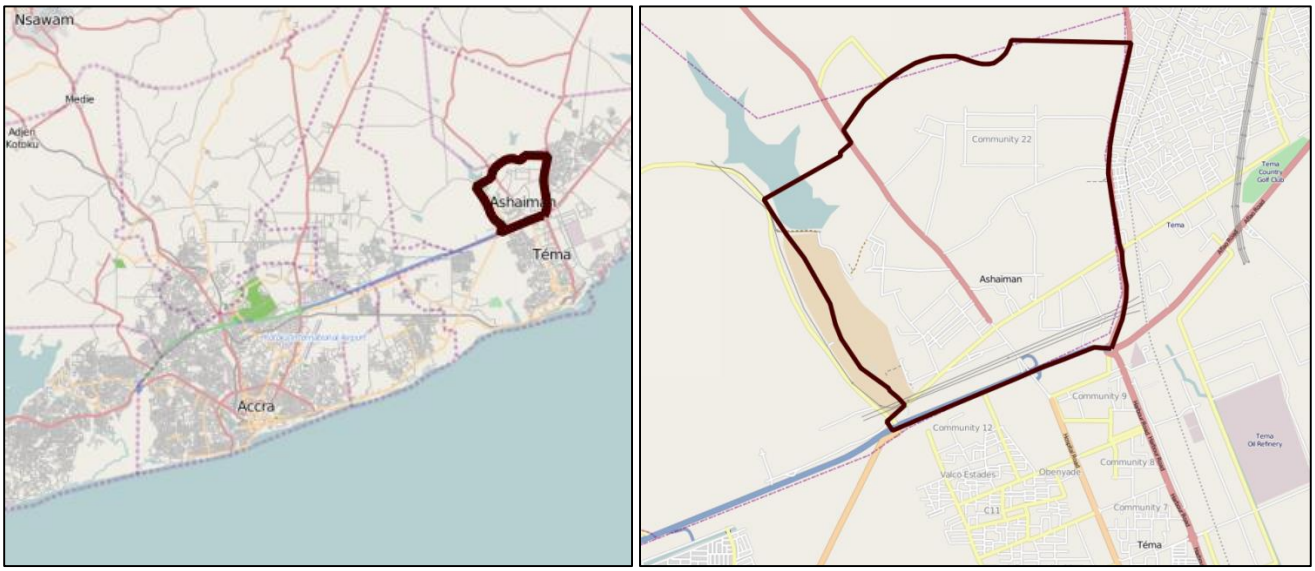


Figure 1 – Ashaiman Town (using 2010 census borders)

Base map: OpenStreetMap

In choosing the specific periurban area of Ghana in which to conduct the study, the criteria included an urban township with at least a population of 150,000 (to be sure we would have at the very least 30 preschools), and diverse enough to encompass a wide range of the realities of urban poverty in Ghana. Given that most slums in the Greater Accra tend to be small and ethnically homogeneous, Ashaiman was among the only few that met all these criteria.

Ashaiman is a town located about 30km east of Accra's city center, and 5km north of the busy industrial area of Tema, the main port of the Greater Accra region. The borders of Ashaiman used are those from the most recent census conducted in 2010.[9] The census estimated that the total population of the town Ashaiman is 190,972. The town of Ashaiman is also the capital of Ashaiman Municipal district; whenever we refer to 'Ashaiman' below we are referring to the town and not to the district.

Although Ashaiman is clearly regarded as a 'slum area' by Ghanaians, most of the dwellings are permanent buildings, made from bricks or concrete, not unlike most other 'slums' of the Greater Accra. Provision of infrastructure such as roads and electricity is generally good; respondents in this survey knew an average of 1.7 health facilities that they could walk to, indicating that provision of these services is also good. The north-eastern area of Ashaiman has traditionally been more sparsely populated and more informal, but with the development of upmarket housing projects such as Community 22 there are signs that this is changing.

[9] For more information on the 2010 census please see http://www.statsghana.gov.gh/pop_stats.html

Picture 1 - A typical dwelling in Ashaiman (Photo credit: R. Ayibor)

Picture 2 - A typical street in Ashaiman (Photo credit: L. Watine)

3. Study design

3.1.Sampling design

Data was collected in Accra through household surveys, preschool headmaster interviews and classroom observations. First, a representative sample of households in the study areas was randomly drawn. From the household survey, a list of preschools attended by the corresponding representative set of children (i.e. those from the households that were surveyed) was built. Thirty preschools were sampled from that list to be visited.

As discussed in Part 2, the findings below cannot be generalized as such to other - even seemingly similar - areas, and can only provide general insights on what the situation may be across poor periurban neighborhoods of Ghana in general.

Sampling for the household survey

The sample was drawn to be representative of the study area described above. A 2-stage stratified cluster sampling was used, the clusters being enumeration areas (EAs) from the 2010 national census.

Stage 1: Random sampling of 30 EAs

First a sample of 30 of the 265 EAs was drawn. Those EAs had been defined by and used for the 2010 national census, and are precisely delineated small areas. The average EA in Ashaiman has 721 inhabitants.[10] Any geographical point within Ashaiman (and, indeed, within Ghana) belongs to one and only one EA, irrespective of whether anyone lived there at the time of the census. This means that even structures that were built after 2010 are still included in the sample frame, as they necessarily belong to one EA.

This sample of EAs was drawn using the equivalent of a simple random sampling.[11] In other countries in which data has been gathered for this project, a stratified sampling approach was used, but Ghana Statistical Services do not keep EA level data on income or formal/informal status.

[10] This is the total population of Ashaiman as calculated during the 2010 census (190,972) divided by the total number of EAs (260).

[11] Systematic sampling was used by the Ghana Statistics Service who performed this sampling for us. We wanted 30/265 EAs so a random number generator was used to select the first EA, and then every 8.8th (265/30) EA thereafter.

Stage 2: Sampling of structures/compounds within EAs

In the second stage the sampling was crafted so as to get close to a self-weighting sample: a fixed *ratio* of the number of structures/compounds that were found in the EA were sampled (instead of sampling a fixed number of structures/compounds).

In order to create a sampling frame, each EA was sub-divided into smaller units. To do this we took a recent satellite image of the area, visited it to update the map with new or demolished structures, and then chose the smallest appropriate residential unit. This was most often one single structure, but in more informal areas (consisting of smaller, less formal dwellings made of wood or iron sheets) it was sometimes a compound of up to about five structures.[12]

Based on ex-ante estimates of the number compounds/structures that would be necessary to obtain a total of around 300 surveys, a sample of 9% of the compounds/structures was drawn in each EA (rounded to the closest integer – this rounding being also taken into account when computing sampling weights).

In those compounds or structures, all households with at least one child aged between 3 and 12 years were then visited for the survey. Across the 30 EAs 305 eligible households were found, of which 286 were interviewed. Of the remaining 19 households not interviewed 7 refused to participate and in the remaining 12 a suitable respondent could not be located despite at least two and often three visits (always including one on a weekend day). Of the 286 interviewed 176 households had at least one child aged between 3 and 6 years, or above 3 years and attending preschool. These households were administered a full survey. The remaining 110 households only had children aged 7 to 12 years (and not attending preschool), and were administered a short survey (see details in Part 3.3. below).

Sampling for the headmaster survey and classroom observations

From this sample of 286 households, 79 preschools were identified as being currently attended by children in the household, and located in Ashaiman or its vicinity.[13] The sample frame thus included any type of center welcoming more than 5 children aged 3-6 years, to purposefully include more informal providers. No child, however, was attending a center with more than 5 children that the parents considered to be informal and did not consider to be a preschool: *preschool* and *ECD center* will therefore be used interchangeably in this report. Note that this study is looking at children aged 3-6 years, and our definition of preschool therefore does not include classes aimed at lower age ranges (generally called "creche" by parents).

Out of the 79 preschools attended, 15 were sampled to receive the headmaster survey only, and 15 to receive both the headmaster survey and classroom observations.[14] This sampling was done using a stratification by public/private status, nominal fees (terciles), and whether the preschool (i) had been mentioned by some parents as being the best in terms of quality within a walking distance and never mentioned as being the worst, (ii) had been mentioned by some parents as being the worst in terms of quality within a walking distance and never mentioned as being the best (iii) neither mentioned as one or the other, or

[12] Due to the size of those EAs and the number of structures. we were unable to verify each individual dwelling in these areas, and therefore chose a cluster to be sure that we were not missing any new structures.

[13] Most preschools were in Ashiaman itself, and only those that were further than an approximate 20 minute drive from Ashaiman were excluded from the sample frame.

[14] One school from the original sample was found to be outside of Ashaiman and was therefore replaced with another from the same stratum. Additionally, one school that had been selected for the classroom observations did not wish to allow us access to the classrooms and we therefore instead performed classroom observations in one of the schools from the same stratum that had originally been selected in the 'headmaster only' category.

mentioned by some parents as the best, and by some as the worst, therefore preventing us from a clear classification.

Non-proportional sampling weights were used between strata, so as to have enough observations in strata that we were specifically interested in. In particular, it was decided to oversample public schools by surveying all 6 public schools on the list, so as to be able to have a meaningful comparison with private schools despite the fact that public schools only accounted for less than 10% of the list.

In the 15 schools selected to receive classroom observations in addition to the headmaster interview the observation was conducted in one class per grade: for example, in a preschool with 2 classes for each of 4 different grades (Nursery 1, Nursery 2, KG1 and KG2), we observed one randomly chosen class per grade. In a preschool with one class containing both Nursery 1 and Nursery 2 combined, and one class containing KG1 and KG2 combined, we observed both classes. Up to 4 classroom observations were therefore conducted in each school, and across the 15 schools 40 classroom observations were performed.

3.2. Description of the data collection instruments

The surveys were conducted in September and October 2013. There were 3 different data collection instruments:

The Household Survey

The household survey focuses on costs and priorities around children's education, as well as basic facts about the family, household finances and assets. Specific questions were asked for each child aged 3-12 per household. The questions were largely close-ended with populated answer options which had been pre-tested. The definition of the household used was a group of people eating food purchased from the same budget, and recognizing the authority of one person - the head of household.

The questionnaire was administered to an individual who was the caregiver of at least one child aged between 3 and 12 within the household. If the head of household fell into this category then they were interviewed wherever possible. The only exception to the rule that the respondent had to be a parent/caregiver was if households contained no 3-6 year old children, and no children attending preschool; in these cases the survey was fairly short, and contained predominantly simple and objective questions. In these cases enumerator were therefore allowed to interview any adult in the household who had a decent knowledge of the schooling of children under 12 within the household.

The full survey, which was administered to households containing at least one child aged between 3 and 6, or at least one child attending preschool (for cases where older kids were attending preschool), included objective questions on fees (both basic fees and additional costs) and the schooling schedule, as well as more complex questions about the definition of quality for preschools, expected returns to investment in preschool, and priority ranking of level of education. The survey was administered using a PDA (a smart phone), and most often took place in the household. The full survey took around 40 minutes, while the truncated version (administered to families who only had children outside the 3-6 age bracket) took around 10 minutes. The main objective of the latter was to enable the researchers to also build a representative sample of primary schools so as to look at the proportion of primary schools with a preschool attached.

The Headmaster (or "Principal") Survey

The headmaster survey, lasting about 60 minutes, contained detailed questions about schools finances, class size and school infrastructure, teacher qualifications, and curriculum and goals for

students. It also sought to ascertain the challenges and characteristics distinctive to the school. Some questions related to the whole school, but most were focused on the preschool classes. In all cases the respondent was the Headmaster or Proprietor of the school, though they sometimes sought the assistance of senior preschool teachers where they did not know the answers to the preschool-specific questions. A majority of the survey was close-ended questions with pre-tested and piloted answers, but a selection of broader questions regarding learning goals and challenges were asked as open-ended questions to allow for a full range of possible answers. A few observable infrastructure questions were also recorded by the enumerator for each. The goal of the survey was to capture details on the key quality metrics outlined in a pre-determined analysis plan.

The Classroom Observation Survey

The classroom observations were conducted in half of the 30 selected preprimaries. The instrument focused on supplementing the headmaster interview and covering the remaining key indicators of quality. The 60 minute observation was conducted in 1 classroom for each grade (where applicable) in each of the selected schools.

The survey started with a number of general questions on observable details such as the number of children in the class, the proportion of girls, and the equipment in the classroom. The bulk of the 60 minutes, however, was spent answering questions relating to the substance of the lesson, and the activities of teachers and pupils. Every 3 minutes the enumerator was instructed to record a 'snap shot' of the class activities by selecting from amongst an extensive pre-recorded list what the teacher was doing, what type of lesson was going on, and the exact activities of three specific children chosen at random at the start of the observation. The enumerator recorded the information silently, not disturbing the class. Observations were conducted only in the first half of the school day in an attempt to capture instructional lessons at similar times across schools, and because children often slept or went home after lunch.

4. Findings

It should be mentioned that with the limited sample size (286 households and 30 preschools), the confidence intervals on all our estimates are relatively large. The 95% confidence intervals are shown on all histograms. Despite this caveat on the level of precision of all our findings, we estimate that this sample size is sufficient for the purposes of this exploratory study.

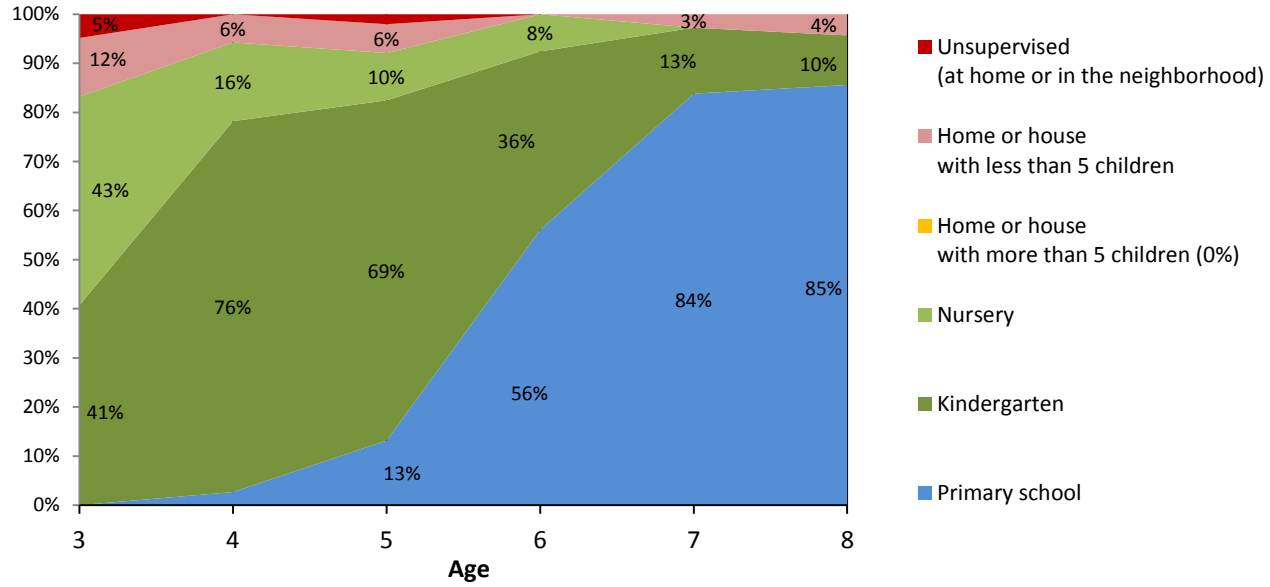
4.1. Participation in ECD centers

4.1.1. General participation statistics

Figure 2: where children spend their day (by age)

Where does ____ generally spend their days?

N = 290



We first analyze where children generally spend the day. As shown on Figure 2, school and preschool participation rates are high across the age range. M**ore than 80% of 3 year olds and more than 90% of 4-6 year olds are attending preschool in Ashaiman.**

In peri-urban areas such as Ashaiman it appears as though the government is close to the target of universal enrolment in basic education (including 2 years of KG). The most common reason given by caregivers as to why children were not attending school was that they were not able to afford the fees. We shall return to this in more details in section 4.2.1 below.

As illustrated in Figures 3a and 3b school participation rates (including preschool and primary school) for children aged 3-6 is estimated at 93%, and the preschool attendance rate for children aged 4 is about 95%.[15]

[15] The vertical bars on the figures provide 95% confidence intervals.

Figure 3a: type of participation
for children aged 3-6
(with 95% confidence intervals)

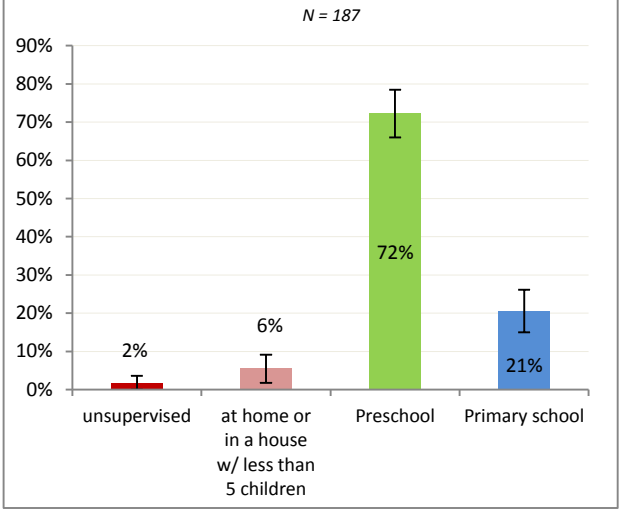
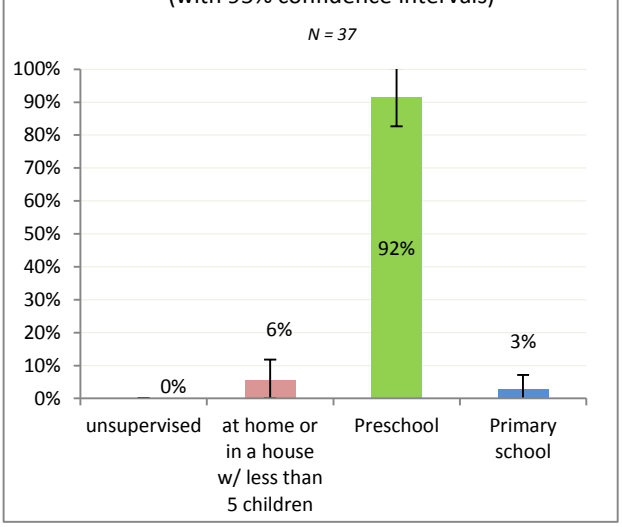


Figure 3b: type of participation
for children aged 4
(with 95% confidence intervals)



- **Participation by gender**

In the sample, 3-6 year old girls exhibit a slightly lower school participation rate than boys (90% versus 95%), but the difference is not statistically significant.

- **Participation by age**

The GES KG operational plan identifies that a major problem in the sector is the gap between gross and net enrolment rates, which is due to children of the wrong ages enrolled in KG. There is strong evidence of this phenomenon here; one third of pupils enrolled in KG are outside of the correct age range of 4-6 years.

In contrast to GES's findings at the national level, however, in Ashaiman the problem seems to be the enrolment of children below the official preschool age range than above it. 8% of KG children are over the age of 6, compared to 24% who are under the age of 4.[16] The reason most commonly given by parents whose children were older than 6 but still attending preschool was that the children had entered preschool late.

As one might expect given the large proportion of young children in KG we also found evidence that some children are repeating school grades. 12% of children who attended preschool are in the same grade as last year. A smaller but still sizable number of pupils are also moving forward early; 13% of 5 year olds were already at primary school and 9% of pupils in Primary 1 were underage.

4.1.2. Breakdown of participation by poverty status

In an attempt to get estimates of poverty and household financial status, which are typically difficult to obtain with short surveys, we estimated poverty status based on the *Progress out of Poverty Index*® (PPI).

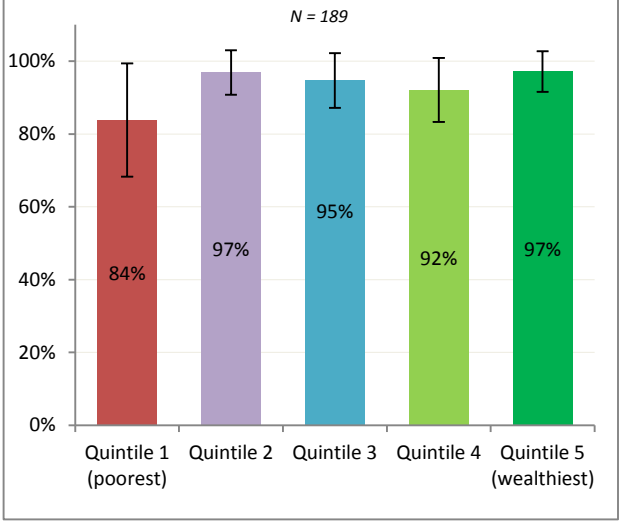
This tool, developed by Mark Schreiner from Microfinance Risk Management L.L.C, is comprised of a country-specific set of 10 simple questions. The majority of these questions relate to asset ownership, but some relate to attributes such as

[16] It should be noted, however, that these figures may underplay the number of older children in preschool; we gathered our data in the first month of the school year and given that KG2 students should be '5 turning 6' it is likely that a considerable proportion of those in KG2 that were already 6 year olds should officially be Primary 1.

family size and family education. It produces a score (the PPI index), which is linked to a probability that the household is below a certain poverty line.[17] Based on this data we estimate that 29% of the 3-6 year-olds in the area live below the level of 2.50 dollars per capita (poverty) and 3% below the conventional threshold of 1.25 dollars per capita at 2005 PPP (extreme poverty).

Looking at school participation for children aged 3 to 6 using PPI score quintiles (see Figure 4), we see that enrolment is consistently high across poverty quintiles. The participation rate is not statistically significantly associated with PPI score.

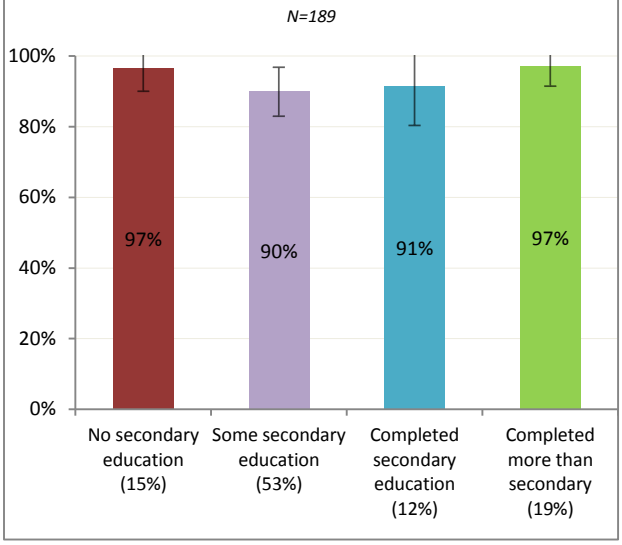
Figure 4: Participation in school (preschool or primary school) for the 3-6 yrs old, *by poverty quintile (based on PPI score)*



4.1.3. Breakdown of participation by level of education of parents

In the survey area around 85% of the children aged 3 to 6 have at least one member in their household who completed some level of secondary school. The breakdown below (Figure 5) shows that higher education level in the household is not associated with larger participation rates and that, analogous to what we found in section 4.1.2, preschool attendance is strikingly high across the different education levels.

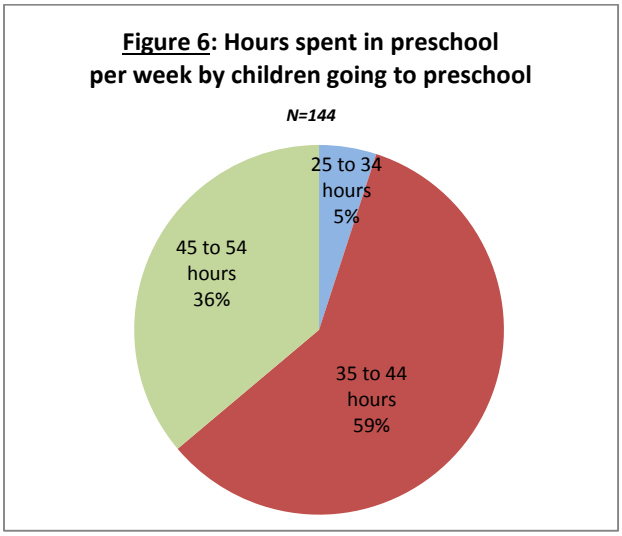
Figure 5: Participation in school (preschool or primary school) for the 3-6 yrs old, *by highest level of education in the household*



4.1.4. Absenteeism and time spent in preschool

According to the household survey data, 100% of the children in preschool attend school for 5 days in a "typical week". All children attending preschool are reportedly there for longer than 25 hours, and over a third are spending 45 hours or more at preschool (as demonstrated in Figure 6).

Figure 6: Hours spent in preschool per week by children going to preschool



[17] "Progress out of Poverty Index: A Simple Poverty Scorecard for Ghana", Mark Schreiner and Gary Woller, 2010

4.2. Description of the demand for ECD services

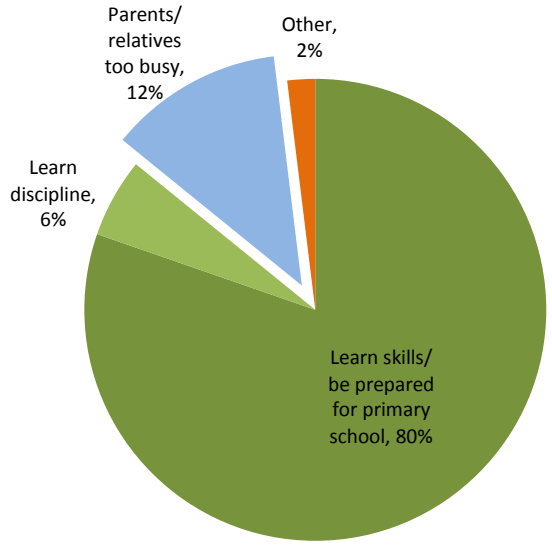
4.2.1. Parents value preschool education highly

Estimating the demand function for preschools cannot be done in a fully satisfactory way with an observational study (i.e. without imposing an exogenous variation on prices). However, one can (i) try to understand the nature of the demand for preschool services to get a sense of whether willingness to pay is likely to be high, and (ii) estimate parents' expected returns to preschool education for their children.

- **Nature of the demand for preschool services**

To approach this question, caregivers of preschool students were asked the main reason they send their child to preschool. Their responses were categorized by the enumerators, and the results are shown on Figure 7.

Figure 7: Main motivation for sending the child to preschool
N=144



For a large majority of respondents the main motivation was for the child to learn skills or be prepared for primary school. Only 12 percent view preschool primarily as a daycare service.

In our sample of 190 preschool-aged children, only 14 were going to neither preschool nor primary school. We asked the caregivers of these children to detail the most and second most important reasons why they did not send their child to school. Among this small group the most common reason (42%) was that they could not afford the fees. All caregivers who cited financial constraints as the main reason stated that there was no second reason that they were not sending the child to school. This may indicate that despite high attendance rates there may still be financial barriers to attendance for some children.The second most common reason given for why a preschool-aged child was not in preschool was that the caregiver did not consider that the child was ready for preschool.

Overall, there seems to be a clear education-related motivation, which points toward a likely demand for academically-oriented preschool services (as opposed to simple daycare services). That being said, during the headmaster survey, we did find that the average school, attended by students from within our sample, makes provision for children to be able to arrive about 60 minutes before the school day officially starts. Anecdotally headmasters told us that many parents do make use of this facility, which indicates that desire for daycare is likely also to be at least a subsidiary motivation.

- **3-6 year old children not attending preschool or primary school generally have little access to learning materials**

To build a proxy for the amount of educational opportunities at home, parents of 3-6 year old

children were asked about the educational materials that they have at home.

Of all children between 3 and 6 years of age, 63% (whether attending to preschool or not) live in households with at least 1 textbook and 73% have access to paper and pens. However amongst the subset of children that do not attend school or preschool only 35% had textbooks, and this difference is statistically significant. This indicates that children not attending school may also be more disadvantaged than their school-attending peers in terms of learning materials available at home.

- **High expected returns to preschool education**

To get at the subjective concept of expected returns to different types of preschool, and thus the rank in terms of perceived quality and expected skill-generation, we asked respondents to estimate both short- and long-term returns for each child who was either in the 3-6 age range or going to preschool.

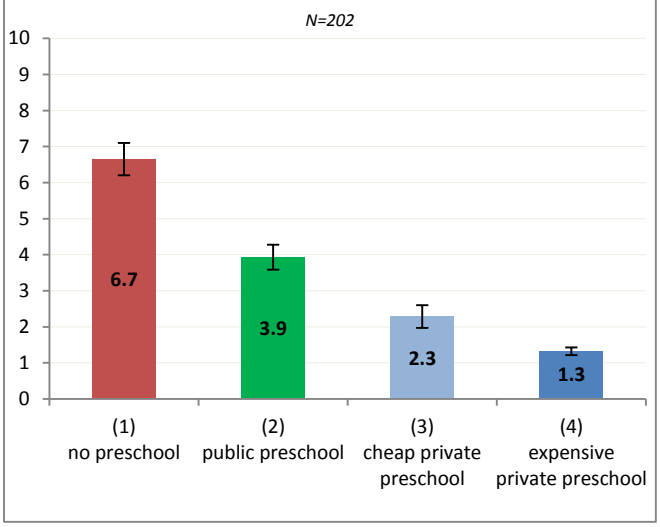
(i) Short-term returns: preparation for primary school

We first asked caregivers to assess how their child would rank in grade 1 under four distinct hypothetical scenarios:

1. If they had not been to KG (going straight to Basic 1 with no prior schooling);
2. If they had been to a public KG
3. If they had been to a private KG charging less than 100 Cedi (~ 50 USD) per term;
4. If they had been to a private KG charging more than 200 Cedi (~100 USD) per term.

In each of the scenarios, the respondent was invited to rank the child between 1st and 10th (1st being the best student in the class, and 10th the weakest). Figure 8a shows the average ranking in each of the four scenarios. This clearly indicates that caregivers do understand preschool as an important preparation for success in primary school.

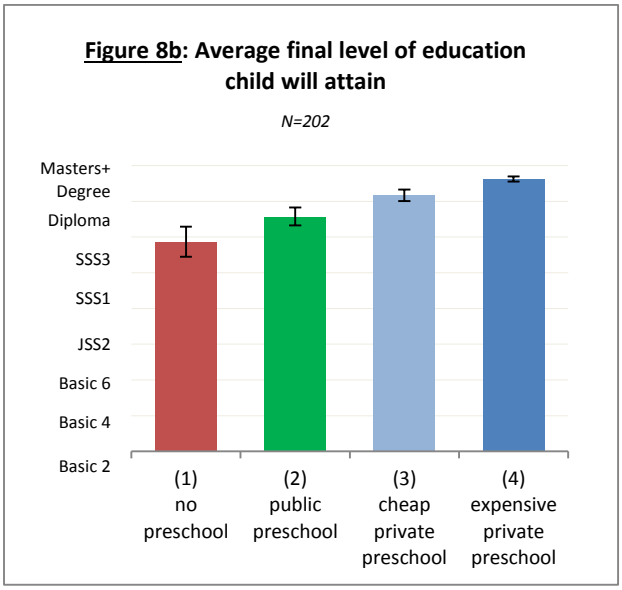
Figure 8a: Average expected ranking grade 1 (ranking from 1st-highest to 10th-lowest) under the different hypothetical scenarios



(ii) Medium-term returns: Highest education level attained

We then asked caregivers what they thought the highest level of education their child would go on to attain in each of the 4 scenarios. Respondents indicated that they thought their child would drop out of school earliest if they had no preschool education (scenario 1), and that they would remain in education the longest if they attended a comparatively expensive preschool (scenario 4).

Figure 8b: Average final level of education child will attain

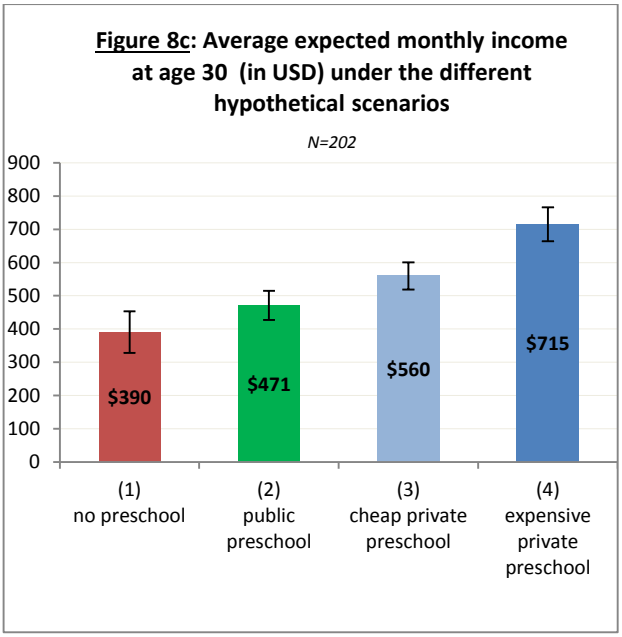


Respondents generally seem to be confident that their child will complete secondary school in all the different scenarios, but there is still a noticeable difference in expected attainment levels between scenario 1 and scenario 4. This seems to indicate that the learning benefits of preschool are seen as enduring beyond the early years of primary.

(iii) Long-term returns: Income at 30

Finally, we used the same four scenarios and asked parents how they thought their child would go on to earn per month when they are 30 years-old. Figure 8c shows the average expected monthly salary.[18,19]

Figure 8c: Average expected monthly income at age 30 (in USD) under the different hypothetical scenarios



We cannot, of course, be sure that some of these responses are not driven by what the respondent thought the interviewer was expecting to hear. We saw above, however, that enrollment rates are high and that parents do seem to view preschool as being an important investment for learning, which is in line with our findings here.

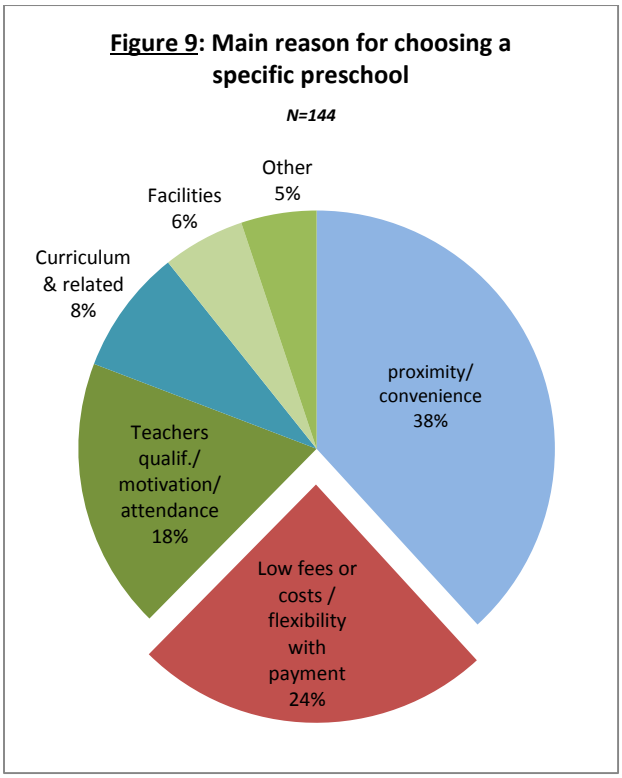
These results seem to indicate that parents do value preschool as important for a child in terms of immediate school readiness, eventual educational attainment and income in the future.

We find no significant difference in expected income for girls versus boys in any scenario.

4.2.2. Low ability to pay

Having established that parents profess to place significant value on a preschool education, we now investigate further how parents choose where to send their child, and how much of a factor cost is in making this decision. We asked parents whose children attend preschool to give the main reason they chose that particular school, and the results are given in Figure 9.

Figure 9: Main reason for choosing a specific preschool



The reason mentioned most often was related to convenience and proximity (38%), but cost (or

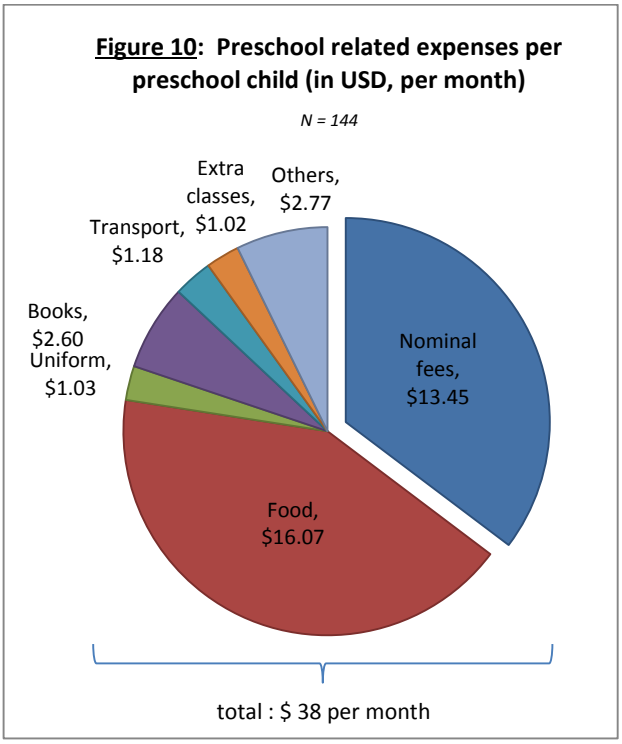
[18] We asked for income ranges only instead of actual figures. Therefore, to calculate those averages, we assigned to each range its middle value. For the last range –namely "2850 Cedi per month or more", we assumed that the average would be 3000 Cedi.

[19] Exchange rate used: 1 USD = 2.157 GHC

flexibility with the schedule of payment) was mentioned by 24% of the caregivers of preschool students as the main reason for choosing a specific preschool. A further 23% mentioned cost as the second most important reason, which means that cost is a strong consideration when choosing a preschool for at least 47% of the households.

To further investigate the financial burden that preschool imposes, we turn now to preschool-related expenditures. In Figure 10, we show the various preschool related expenditures. By these we mean the expenses that would not have been incurred if the child was not going to preschool. Some are fees charged directly by the school (such as nominal fees or school feeding fees), others are expenses that are not paid to the school but would not have been incurred if the child was not going to preschool (such as uniform and books). The sum of all those different costs is the total monetary cost of sending the child to preschool, which is about $38 per month per child on average.

Figure 10: Preschool related expenses per preschool child (in USD, per month)

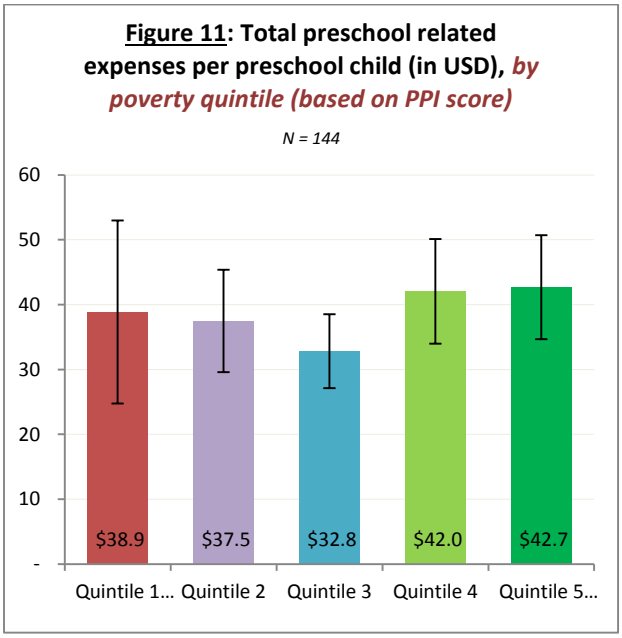


Two things are striking from Figure 10. First, nominal fees are a comparatively small portion – about 35% - of total preschool related costs. Second, and relatedly, caregiver are paying more for food than they are in nominal fees. Fees are most often paid in a lump sum every term. Food, on the other hand, is generally paid for on a daily basis; children will be sent to school with money for lunch every day.[20] Given these comparatively small regular payments, caregivers may not be fully aware that they are spending more on food than on nominal fees.

It also indicates, however, that preschool services are in fact expensive compared to other services, especially when considering educational costs of multiple children.[21]

Figure 11 looks at the variation in preschool expenses across the different poverty quintiles (again, based on PPI®).

Figure 11: Total preschool related expenses per preschool child (in USD), *by poverty quintile (based on PPI score)*



Contrary to what one might expect there does not seem to be a straightforward relationship between poverty status and preschool expenses. Indeed, there is no statistically signficant association

[20] Although food costs were supposed to capture what was paid over and above what would have been paid had the child not been a preschool it was not always straightforward to calculate the counterfactual, and it is therefore possible that this figure is an over-estimate of additional food costs.

[21] Within our sample households with at least 1 three to six year old child had an average of 1.3 children in the age range.

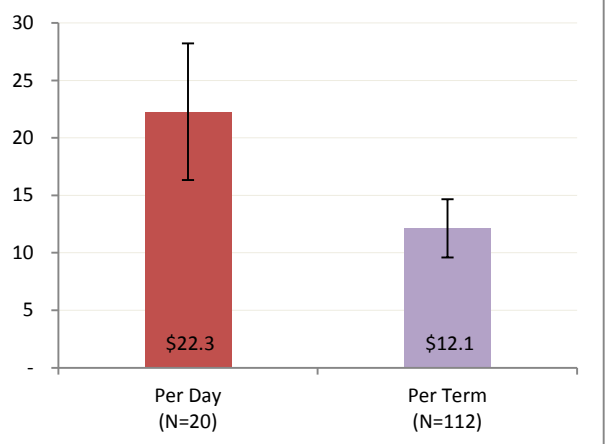
between preschool related expenses and PPI score using a binary regression model. In other words, there is no evidence that preschool students from poor households are spending less on preschool-related items than students from richer households within Ashiaman. This is also true if one looks at nominal fee expenses only. While the relative imperfection of the poverty measurement tool we were able to use (an index based on 10 questions) may explain part of this finding, another possible reason for this is described in the next paragraph.

- **Fee units and paying per day**

The majority of caregivers pay fees on a monthly basis, but 14% pay daily. Parents with lower PPI scores are more likely to pay per day, and this association is statistically significant at the 10% level.

Parents who pay per day also pay significantly more in nominal fees. Parents who pay per day end up paying about 22 USD per month (48 Cedis) on average, compared to parents who pay per month who pay about 12 USD (26 Cedis) per month on average (see Figure 12).

Figure 12: Monthly nominal fees (in USD), ***by how often fees are paid (% of sample)***



It seems that those who pay school fees per day are more likely to be poor, and actually pay higher nominal fees on average, which may partly explain that we didn't find a significant relationship between poverty level and preschool expenses. Many of those who pay per day said that they do so because finding relatively small amounts of money per day is easier for them than finding a lump sum at the end of the month; many commented that they might not be able to find the full fee when they needed to pay it, and therefore worry that their child would be refused entry to the school. *A savings account or loan to assist the poor in switching from paying fees per day to paying fees per term could assist in significantly decreasing what they have to pay in nominal preshool fees.*

- **Further evidence of parents compromising on quality because of costs**

We asked caregivers of preschool students to name the preschool they thought was of best quality among those that they knew of within walking distance for their child. We found that, among preschool children who walk to preschool, 60% are not going to the school that their caregiver considers to be the best preschool within walking distance. 75% of those who send their child elsewhere stated that their main reason was that the best preschool in the area was too expensive.

- **Discounts ans scholarships**

Within our sample the incidence of scholarships or fee reductions is very low. Only 3% of prechool children (constituting just 5 children in total) receive a fee discount from the school they send their child to, and the average discount is only around $5 per month. These discounts seem to be given on an ad hoc basis and seem to be due to family circumstances, rather than academic merit. Only 1 child was receiving a scholarship or bursary from an organisation other than their school. It seems, therefore, that caregivers or extended families are bearing the cost of preschool expenses by themselves.

Overall, preschool choice is certainly affected by poverty level; ability to pay seems to act as a significant constraint when choosing a preschool.

4.3. Description of the supply of preschool ECD services

This section of analysis draws on the headmaster survey data more intensely than previous sections. We will therefore first provide more information about this data to assist the reader in putting the quantitative claims below in perspective.

The relatively small sample size produces large confidence intervals and it is therefore especially important to remember that the information provided below can only provide an indication of actual figures across Ashaiman; it should not be considered precise.

Second, two different types of claim will be made here, using two different sampling weights systems. Sometimes it will be stated that "x% of preschool students attend a preschoolschool that have/do…", in which case larger weights are being put on preschools that were attended by multiple children in the sample. In other instances it will be stated that "x% of the preschool preschool attended by our sample of children have/do…", in which case all schools that were in the preschool sampling frame are given equal weight. We are using the weight system that is most relevant in each instance and adapting the language accordingly.

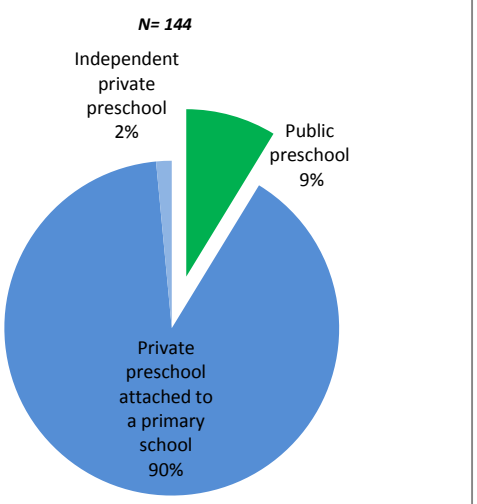
Last and overall, due to the nature of the data we will draw more heavily on qualitative than quantitative analysis. Quantitative supporting data will not always be available or appropriate.

4.3.1. Typology of Preschools in Ashaiman

- **Most children attend a private preschool attached to private primary school**

An estimated 91% of preschool students in Ashaiman go to a private preschool (Figure 13). In absolute numbers, out of the 85 preschools attended by children from the sample, 76 are private.

Figure 13: Type of preschool attended (by percentage of preschool students)



The prevalence of private schools is also visible at the primary level; in the study area only 23% of primary school children are attending a public school. In absolute numbers, we found 104 private primary schools that were attended by children from our sample, but only 28 public primary schools.

It appears that the large and vibrant private school sector plays a major role in educating both preschool and primary school students.

- **Most preschools are attached to a primary school**

As Figure 13 demonstrates, the majority of preschools are attached to a primary school. Amongst the 76 private preschools in our sample we found just 2 standalone preschools; the remaining 74 are attached to primary schools. In total 90% of pupils attending preschool are attending a private preschool attached to a primary school.

The converse is also true; all 104 of the private primary schools attended by children in our sample are attached to a preschool offering both KG and Nursery grades. Anecdotally a number of headmasters told us that they had actually started with a preschool and gradually added the primary school grades as their students got older. All bar 1 of the 28 public primary schools offer KG, and all bar 3 also offer Nursery.

The preponderance of schools offering both primary and preschool grades suggests that KG – and even Nursery – is already an integral part of the basic education system.

- **Public schools tend to be older and larger than private schools**

Of the 30 schools within the sample, 6 were public and 24 were private. On average public schools attended by children within our sample had been in existence for 30 years (and none had been in operation for less than 21 years). Private schools tended to be younger; the average school was started 15 years ago and 30% have been in operation for 10 years or less.

Public schools are more focused on KG than Nursery, which is likely to be related to the fact that KG is under the purview of GES, while Nursery is not. 90% of private schools offer all 4 preschool grades (Nursery 1, Nursery 2, KG1, KG2), compared to 50% of public schools.

Despite having fewer grades, however, public schools tend to be larger. On average public schools attended by children within our sample had 362 pupils in the whole school, while private schools had an average of 295. The difference is more marked at the preschool level; the average preschool in public school had 111 pupils, compared to 71 in a private school.

Public schools within the sample were founded a number of decades ago to cater to primary school students, while many private school head teachers and proprietors told us that they had started their school with preschool classes only, and added on primary school and junior secondary grades at the rate of one per year as their original preschool cohort progressed. A number of private schools said that they expected their primary and secondary schools would expand significantly over the coming years. This is a reminder of the comparative youth of the private school sector in general in Ashaiman.

- **A large majority of private schools claim to be registered with the government, but public schools seem to be inspected more often than private schools**

Only 1 of the 24 private schools surveyed stated that they were not registered with the government.[22] This indicates that the Government Education Service's recent drive to identify and register unregistered schools has been successful in the area.

There also seems to be comparatively high level of government oversight of preschools, though there was significant disparity between public and private schools in this respect. All public schools had been visited by the government in the last year, compared to just over half of the 21 registered private schools. Among those visited by the government public schools were visited more often; on average public schools were visited 12 times in the last year while those private schools that had been visited had an average of 5 visits.

Over 70% of private schools also claimed to be a member of the Ghana National Association of Private Schools, a body which acts as an intermediary between Private Schools and the Ghana Education Service. Membership generally seems to be fairly active, with the average member claiming to have attended 3 meetings of the association in the last 12 months.

[22] Respondents in two additional schools stated that they did not know the registration status of the school.

- **Chains of preschools are not a major feature of the Ashaiman landscape - most private preschools are standalone schools started by individuals living within the community**

The majority of private schools – 20 out of 24 - were started by and are owned by individuals, with the remainder being mostly schools owned by religious organizations. Of the 24 only 3 belong to chains, and of these 1 had a sister-school and 2 had 5 sister schools. It seems, therefore, that most schools are standalone schools owned by a private proprietor.

These individuals tend to have strong connections with the communities in which they have started their schools; only 2 out of the 20 have never lived in the community and all bar 1 of the remainder have lived there for more than 5 years.

Around two thirds of these individuals said that being a proprietor was their main profession, but 3 owned other businesses and 2 were in salaried jobs. The initial professional background of proprietors is quite diverse: about a third had previously been teachers or headteachers, a third had owned another business and a third had been in a salaried job. The overwhelming majority started the school with their own money or family money; only one had taken a loan from the bank.

4.3.2. Quantity considerations

To investigate the scale of preschool options, we asked caregivers how many preschools they knew in the area that their children could walk to (including the one their child was attending, if relevant).

The average caregiver of a child aged 3-6 knows 3.6 preschools that their child could walk to, and 93% know 2 or more. It may be, of course, that for a number of parents a proportion of the schools they know will be out of reach for cost reasons, but it does seem that most parents do have a number of preschool options from which to choose. Given this, and the fact that the most common reason given for picking a school was its proximity to the house, it is not surprising that 87% of preschool children walk to school. The average commute is 14 minutes. Amongst those who do not walk, most take a minibus, taxi or school bus. Amongst non-walkers the average length of commute is 19 minutes.

To further understand the extent of parental choice we asked headmasters whether their preschools accepted all students, to verify whether preschools were saturated. About 3 out of 4 preschools attended by children in our sample claim that they accept all children in the appropriate age group. Of those that do not, only 1 mentioned that their reason for not doing so was that they were full; the rest claimed to screen children to assess some aspect of academic, physical or developmental readiness. This seems to indicate that relatively few preschools are saturated. This figure is not significantly different when restricting the calculation either to just public or just private schools.

Caregivers seem to have significant choice when choosing a preschool option. Few schools consider themselves to be too full to turn away additional pupils, though they do officially stipulate that children must be of an appropriate age and development level.

- **Children change preschool relatively frequently**

Of children in Ashaiman who attended preschool in both the last and current academic year, 20% are at a different school this year from the one they were at last year. A third of these had relocated from another area, which indicates that movement of children to and from or within Ashaiman is a fairly common phenomenon. Around 30% of caregivers say that they changed the school their child attended due to dissatisfaction with the quality of teaching at the previous school, and 15% said that the change was due to cost considerations.

4.3.3. Quality considerations

- **The preschools in Ashaiman generally have decent infrastructure and materials, though there is considerable variation in materials between classrooms, and even between students**

The basic classroom setting appeared to be geared to a fairly formal academic style of learning rather than learning through play.

- Most classrooms had children at desks and chairs; Only 1 classroom observed had any children sitting on the floor;
- Children, and particularly KG children, spent the majority of their time sitting in rows of desks facing the front, rather than in more participatory classroom settings;
- In three quarters of the classes, 100% of children were wearing uniforms. Only 3 of the 40 classrooms contained no children in uniform, and they were all nursery 1 classrooms (age 2 to 3).

Materials in classrooms were geared towards formal learning rather than play:

- All schools in the sample claimed to have both textbooks and exercise books owned by the school in all preschool classrooms. Over half the preschool children in Ashaiman are attending a school that has more than one exercise book per child, though textbook are less prevalent: around three quarters of students are attending a preschool that has one textbook or fewer per child.
- During classroom observations we found that although almost all classrooms did contain textbooks and exercise books, the provision of materials varied significantly between students within classrooms. The responsibility of buying school books generally rests with parents, and within most classes there were a minority of pupils who did not have any learning materials and therefore sat unoccupied while their peers completed written exercises.
- 60% of children attend schools that have no storybooks provided by the school in the classrooms. Of those attending schools that do have storybooks, there is an average of 1 storybook per 5 children. Private school children have, on average, slightly more storybooks supplied by the school in the classrooms.
- 74% of children attend schools that reported that they had no toys for preschool use.
- Fewer than half the classrooms we observed contained any play materials.

Wider school infrastructure was generally satisfactory. All bar 1 school had latrines on the premises and electricity at least some of the time. All bar two had a playground for the children, and a fence around the school.

- **An academically oriented teaching style**

More detailed analysis of the classroom observation will appear in our final report, but provisional basic indicators suggest that teaching style in preschools is very academically-oriented. We saw above that in most classrooms children sit in rows facing the front. Lesson content and structure also seems to be more academically focused:

Exams

27 of the 30 schools surveyed conduct exams with preschool children, though there is considerable variation across year groups. 43% of the relevant schools hold examinations for Nursery 1 students, while 90% of relevant schools examine KG2 students.

Exams are generally conducted once a term. All schools conduct exams in English and share results with parents[23].

[23] 3 schools in the sample conduct exams in local languages as well as in English.

Homework

29 out of 30 schools gave homework for preschool students. Almost 60% start giving homework in the nursery classes, and within schools attended by children in our sample the average age at which homework beings is 3.5 years. This is younger than we found in Soweto, Johannesburg, South Africa, where the average age is 5.

Learning Goals

According to the average headmaster in the sample, children should know both the numbers from 1-9 by age 3.6, the full alphabet by age 3.7. These goals are more ambitious than those set in many other countries.

- **Local languages are seldom used for either content or instruction, and a large majority of children are not learning in the language they speak at home**

Of the 40 classrooms we observed, half used 100% English for both language and instruction during the one hour of the observation, and about an additional quarter used local languages only to translate words or phrases that children clearly had not understood in English. It seems that the National Literacy Acceleration Plan (NALAP), which stipulates that 90% of KG instructional time should be in a Ghanaian language and that students should not begin reading and writing in English until Primary 2, has not been broadly implemented at the KG level.[24]

This conclusion is reinforced by data from the household survey. Ashaiman is a particularly heterogeneous community linguistically; we asked caregivers about the main language they use to communicate with the child at home. Although 60% of children speak Twi or Ewe at home, 20 different languages were recorded in total.[25] This level of diversity may be atypical = Ashaiman is sometimes referred to as 'the United States of Ghana'. We also asked caregivers to list all the languages they thought their children were being taught in at school; 85% thought their children were being taught in English and 36% thought their child was being taught exclusively in English. 31% thought their children received some teaching in their local language.

Given the linguistic diversity in Ashaiman it is perhaps not surprising that many children do not attend a school in which teaching is done in their first language, but the remarkably low frequency of teaching in any local language indicates that in order to even get close to NALAP targets a concerted effort needs to be made to change teacher behavior in the classroom.

- **Student-teacher and student-classroom ratios vary considerably**

On average across all schools the preschool teacher/pupil ratio is 1:23 and the average number of pupils per classroom is 34. Multi-grade classes are not the norm: around three quarters of the classrooms we observed contained only one class level.[26]

[24]One headmistress we talked to in more details about languages actually explained us that it was English literacy that was taught in her preschool classes, and that it was only in primary school that students started learning literacy in the mother tongue. This order is in clear contradiction with the spirit of NALAP. This case is likely to not be an exception, given the anecdotal evidence that NALAP is actually applied in primary schools, while we are finding that almost all preschools where we conducted classroom observations use English exclusively. However, there is a chance that this is exacerbated by the fact that Ashaiman is a particularly multi-ethnic community. However, the application of NALAP in KG classes generally would certainly deserve careful consideration.

[25] 32% of children speak a language at home that was not offered by any school within our sample.

[26] Only 1 classroom contained 3 year groups: Creche, Nursery 1 and Nursery 2.

There is no significant difference between these figures for public and private schools, but there is considerable variation from school to school; we found student teacher ratios as low as 1:5 and as high as 1:50 across schools.

- **Profile of teachers**

Gender

An overwhelming majority of preschool teachers are female: they are an estimated 9 out 10 teachers in the preschools attended by children in our sample.

Qualifications

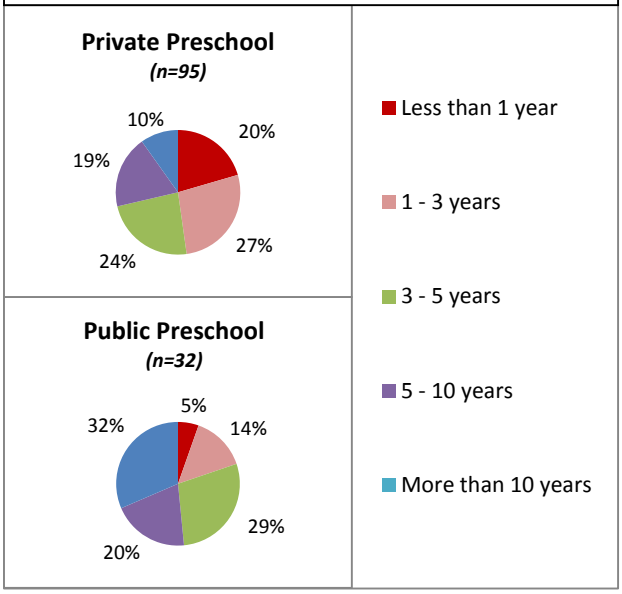
According to their headmasters 91% of preschool teachers had finished secondary school, and only 7% had completed a degree.[27] Headmasters report that 40% of teachers have any ECD-specific training. This breaks down into 63% of public school teachers, and 37% of private school teachers (a statistically significant difference).

The number of untrained teachers suggests the Government's emphasis on teacher training in the KG Operational Plan is well placed.

Teaching Experience

Across the preschool sector teachers have on average 5.4 years of teaching experience. In the public sector the average was 7.7 years, compared to 5.1 in the private sector. Figure 14 shows the difference in teacher experience between private preschool teachers, private preschool teachers and public preschool teachers.

Figure 14: Breakdown of years of teaching experience by teacher type

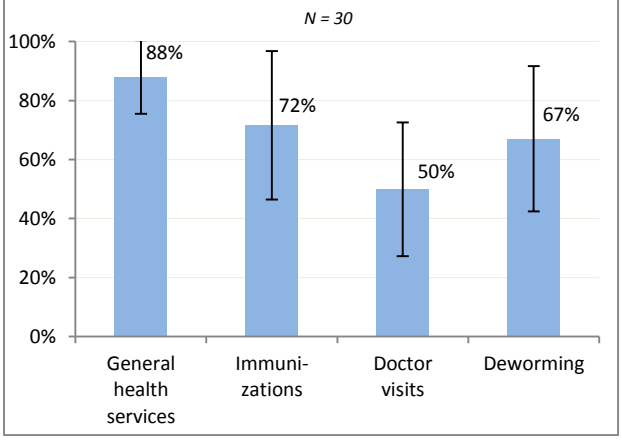


- **Health and nutrition**

90% of children in our sample attend schools that provide lunch for pupils. Of these 26 schools, 17 charge extra for this food, and as seen above 9 food costs tend to be substantial.

Health service coverage is the norm rather than the exception, as detailed in Figure 15. All schools within the sample offer some health service.

Figure 15: Percentages of Ashaiman preprimary children receiving different types of health services in preprimary



[27] This information is missing for 8 of the 127 preschool teachers from sample schools.

Appendix

Pictures of preschool settings in Ashaiman: