The AeioTu Early Childhood Longitudinal Study
Progress Report Year 1
Summary of Baseline Data Collection

August 30th 2011

Introduction

In collaboration with aeioTU, NIEER is conducting a 7 year randomized trial in 3 waves comparing the effects of aeioTU's early childhood development (ECD) intervention in 2 aeioTU centers in Santa Marta, Colombia. The study design was formulated to investigate individual child growth and development in social, health, cognitive, and emotional area. The design also allows to accurately estimate the effects of the aeioTU preschool experience on children´s cognitive and non-cognitive outcomes at primary school entry and throughout primary and secondary attendance and attainment. Moreover, it will allow the research team to study the costs and benefits of the aeioTU program for individual and society.

The aim of this progress report is to describe the project's most important developments during baseline data collection from mid-2010 to early-2011. Baseline collection was funded in a 62% by the Jacobs Foundation, 16% by Fundación Carulla and 22% by the IADB.

Summary of project progress

All activities proposed for our baseline year were successfully carried out according to the following timeline:

Table 1

TIMELINE MID-2010 TO EARLY 2011
The aeioTU Early Childhood Longitudinal Study
NIEER, Universidad de los Andes-CEDE, Fundación Carulla

— END OF COLLECTION
— Center scheduled to open

Activity	May 23-28	May30-Jun4	Jun 7-11	Jun 14-18	Jun 21-25	Jun 28-Jul 2	Jul 6-9	Jul 12-16	Jul 19-23	Jul 26-30	Aug 2-6	Aug 9-13	Aug 17-20	Aug 23-27	Aug 30-Sep 3	Sep 6-10	Sep 13-17	Sep 20-24	Sep 27-Oct1	Oct 4-8	Oct 11-15	Oct 19-22	Oct 25-29	Nov 1-5	Nov 8-12	Nov 15-19	Nov 22-26	Nov 29-Dic3	...	Jan 24-Jan 28	Feb1-Feb4	Feb7-Feb11	Feb4-Feb 18	Feb 28-Mar4
Collecting census data for Timayui	X																																	
Tabulate census data		X	X																															
Random assignment of children in Timayui				X																														
Organize material for training sessions					X																													
Construct dataset for Timayui						X																												
Training child instruments							X	X																										
Baseline Timayui									X	X	X	X	X																					
Training delayed gratification															X																			
Baseline Delayed Gratification Timayui																	X																	
Time allocated for inconv. Delayed G																		X																
Collecting census data for La Paz																			X															
Tabulate census data																					X													
Construct dataset for La Paz																						X												
Random assignment of children in Timayui																								X										
Baseline La Paz																									X	X	X	X						
Second wave, baseline collection Timayui																															X			
Randon assignment of children in La Paz																																X		

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Two communities in the city of Santa Marta were included in our study: Timayui and La Paz. Baseline data collection was carried out in both communities. Data collection for quality of care in centers (ECERS) has been postponed to May 2011 in Timayui and July 2011 in La Paz. This is because we need to allow enough time between inauguration of the center and collection of ECERS in order to guarantee that teachers have had time to adapt classrooms and implement all pedagogical activities in the classroom appropriately.

In Table 2, we show a description of total sample size by age and by community. Baseline data in Timayui was collected in two stages, one from mid-July 2010 to early-September 2011, and the second stage in mid-January 2011. This is because an initial census in the community showed few children in age ranges 3 to 4 years, and 4 and 5 years of age, so not all available slots in the center for these groups were covered with the first preregistration lists. In La Paz, total baseline collection was carried out from end-October 2010 to early-December 2010.

Table 2. Baseline sample size by age and by community
(Child's age is parent-reported during census collection)

Age group	Timayui	La Paz	Total sample size
<1	112	54	166
1-2	143	152	295
2-3	143	179	322
3-4	102	161	263
4-5	43	129	172
Total assesed in lottery	543	675	1.218
Assessed not in lottery [#]	71	0	71
Total assessed	614	675	1.289

[#] Pre-assigned slots for children of teachers, hogares comunitarios or demand lower
than supply for certain age range.

In sum, we assessed 614 children in Timayui and 675 children in La Paz. However, only 544 children in Timayui actually participated in the lottery. Part of the other 70 assessed children had pre-assigned slots in the school because they were either children of teachers, or beneficiaries of hogares comunitarios whose madre comunitaria was hired as teacher in the center. In addition, 56 children (out of the 70 assessed but not in the lottery) between the ages of 3 and 5 did not participate in the lottery because demand was not higher than supply in two classrooms, one 3 - 4 and one 4 - 5. All 675 assessed children in La Paz participated in the lottery. It is important to note that these ages are calculated based on parent-reported data at census collection, and at the date of assessment. However, the child might have changed to the next age range from that moment to the date of the lottery, and also, to the date of actual enrollment in the center. For this reason, some of the sums by row will not coincide in the following tables where we describe actual registration (compliance).

In Table 2 we summarize the list of instruments that were collected by child's age. The cookie test was only collected in Timayui due to implementation problems and small sample size. In addition, we collected a comprehensive household survey of all parents in our sample, including characteristics of the household, characteristics of adult members of the household, characteristics of other children in the household, the child's child care history, etc.

Table 2. List of instruments by child's age

CHILDREN 0-3 YEARS OF AGE	CHILDREN 3-5 YEARS OF AGE
1) Anthropometric measurements	1) Anthropometric measurements
2) Bayley Scale, 3rd edition	2) Peabody Picture Vocabulary Test (Peabody)
3) Peabody Picture Vocabulary Test (only 2-3)	3) Woodcock-Muñoz broad math battery - subtests
4) Socio-emotional Ages & Stages Questionnaire (Squires et al. 1999)	4) ELSA reading, comprehension and writing.
	5) Self-regulation HTKS (Head, Toes, Knees and Shoulders)
	6) Socio-emotional Ages & Stages Questionnaire
	7) Delayed gratification "cookie test"

The lottery for random assignment of center slots took place on October 24th 2010 and January 25th 2011 in Timayui[1] and February 12th 2011 in La Paz. In Table 3 we show total available slots by center assigned to the study children in Table 1 through these lotteries.

Table 3. Available slots by center randomly assigned during the lotteries
(Child's age at census)

Age group	Timayui	La Paz	Total
<1	38	30	60
1-2	63	56	115
2-3	82	56	133
3-4	57	64	126
4-5	29	69	99
Total slots assigned	269	275	533

The total amount of slots assigned does not add up to 300 by center because
some slots were pre-assigned to children of teachers or beneficiaries of hogares
comunitarios whose madre comunitaria was hired as a teacher.

A total 269 slots were assigned by lottery among study children in Timayui and 275 in La Paz. The number of slots does not add to the maximum capacity of each center (around 300) because some slots were pre-assigned to children of teachers or beneficiaries of hogares comunitarios whose madre comunitaria was hired as a teacher in the center. In addition to lottery winners, we also constructed randomly ordered lists

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[1] Baseline collection was done in two stages: one in July to September 2010 followed by a lottery on October 2010, and a second stage with new preregistered and assessed children for new classrooms in January 2010. The data showed in Tables 1 and 3 adds both.

among lottery losers to form waiting lists in cases in which lottery winners would decline their slots at the center.

In Table 4 we summarize actual registration in Timayui center by group. During the lotteries on October 24th 2010 and January 25th 2010 we assigned a total 269 center slots among 544 baseline children (columns 1 in Table 3). From these, 184 lottery winners actually registered in the center (column 1 in Table 4), and 85 declined their slot (column 5 in Table 4).

Table 4. Registration and group sizes by age in Timayui
(Child's age at registration time)

Age group	Registered from list of lottery winners (1)	Registered from randomly selected waiting lists (2)	Total winners and waiting lists registered (3)	Lottery losers not registered (4)	Lottery winners declined slot (5)	Pre-assigned slots[1] (6)	Assessed not in lottery registered[2] (7)	Other non-study registration[3] (8)	Total enrollment (9)
<1	13	2	15	65	13	0	0	0	15
1-2	36	4	40	76	13	0	0	1	41
2-3	43	13	56	45	21	1	0	2	59
3-4	54	5	59	35	17	2	21	13	95
4-5	38	4	42	26	21	17	25	13	97
Total	184	28	212	247	85	20	46	29	307

[1] Children of teachers or beneficiaries of hogares comunitarios whose mother was hired as teacher in the center.

[2] Assessed children registered in center without participation in lottery due to lower demand than supply in two age groups.

[3] Other children not in the study that registered during the last month.

Apart from these 269 winners, we randomly constructed ordered lists from the total lottery losers, to call in cases in which lottery winners declined their slots. The number of registered children called from these randomly assigned waiting lists is reported in column (2), for a total of 28. That means that a total 212 children, either lottery winners or children in the waiting list from the study, were actually registered in the center.

In addition to these 212 children, 20 children of teachers or beneficiaries of hogares comunitarios whose madre comunitaria was hired as teacher had pre-assigned slots at the center, 46 children were assessed during baseline but did not enter either lottery because demand was lower than supply in age groups 3-4 and 4-5 so they were all registered[2], and finally a total 29 additional children *not* in the study were registered after calling insistently lottery winners and waiting lists for at least five weeks. That adds up to a total 307 children in the center. In sum, 212 are registered winners and children in waiting lists, 85 are winners that declined the slot, and 247 lottery losers not registered in the center are part of our study, for a total 544 children.

In addition, we report compliance rates in Table 5. Close to 68% of lottery winners actually registered in the center, while the other 32% did not. This success rate varies

[2] Since these 46 did not make part of the lotteries, they are excluded from the count of our baseline sample size in Timayui reported in Table 1.

somewhat by age, with the youngest children having a compliance rate of only close to 50% and children between the ages of 3 and 4, about 76%. It is important to note that ages in Table 1 do not necessarily coincide with ages in Tables 4 and 5. This is because the child's age might have changed from assessment to lottery and then to actual registration. That means that some lottery winners were registered in an age group that did not correspond to their initial assessment (Table 1). This is captured in Tables 4 - 5.

Table 5. Compliance rates by group in Timayui

Age group	Registered winners / winners	Winners declined / winners	Registered waiting list / Control group	Other non-study / Registration
<1	0.50	0.50	0.03	0.00
1-2	0.73	0.27	0.05	0.02
2-3	0.67	0.33	0.22	0.03
3-4	0.76	0.24	0.13	0.14
4-5	0.64	0.36	0.13	0.13
Total	0.68	0.32	0.10	0.09

A total 10% of control children (randomly assigned to waiting lists) were registered in the center. And finally, close to 9% of total enrollment was assigned to other children not in our study after a very careful try to reach all our lottery winners.

Finally, in Tables 6 and 7 we report registration and compliance results in La Paz. The lottery in La Paz took place in February 12th 2011. Out of total 675 children assessed by the end of 2010, 275 won the lottery. The distribution by age is described in Table 3. The remainder 20 slots in the center were pre-assigned to children of teachers or beneficiaries of hogares comunitarios whose madre comunitaria was hired as teacher. From these 275, 185 lottery winners actually registered in the center (column 1 in Table 6), and 89 declined their slot (column 5 in Table 6).

Table 6. Registration and group sizes by age in La Paz
(Child's age at registration time)

Age group	Registered from list of lottery winners (1)	Registered from randomly selected waiting lists (2)	Total winners and waiting lists registered (3)	Lottery losers not registered (4)	Lottery winners declined slot (5)	Pre-assigned slots[1] (6)	Other non-study registration[2] (8)	Total enrollment (9)
<1	21	17	38	7	9		2	40
1-2	39	14	53	82	17	3		56
2-3	39	17	56	106	17	2		58
3-4	44	20	64	78	19	3	1	68
4-5	42	26	68	34	27	2	2	72
Total	185	94	279	307	89	10	5	294

[1] Children of teachers or beneficiaries of hogares comunitarios whose mother was hired as teacher in the center.

[2] Other children not in the study that registered during the last month.

Apart from these 275 winners, we randomly constructed ordered lists from the total lottery losers, to call in cases in which lottery winners declined their slots. The number of registered children called from these randomly assigned waiting lists is reported in column (2), for a total of 94. That means that a total 279 children, either lottery winners or children in the waiting list from the study, were actually registered in the center. We have a total 307 children in the control group. And finally, 5 non-study children were registered after the center called our study children many times to secure registration.

In Table 7 we report compliance rates. Close to 68% of lottery winners actually registered in the center, while the other 32% did not. This success rate does not vary much by age group, with the exception of children between 4 and 5, with a lower compliance rate of 61%. It is important to note that ages in Table 1 do not necessarily coincide with ages in Tables 6 and 7. This is because the child's age might have changed from assessment to lottery and then to actual registration. That means that some lottery winners were registered in an age group that did not correspond to their initial assessment (Table 1).

Table 7. Compliance rates by group in La Paz

Age group	Registered winners / winners	Winners declined / winners	Registered waiting list / Control group	Other non-study / Registration
<1	0,70	0,30	0,71	0,05
1-2	0,70	0,30	0,15	0,00
2-3	0,70	0,30	0,14	0,00
3-4	0,70	0,30	0,20	0,01
4-5	0,61	0,39	0,43	0,03
Total	0,68	0,32	0,20	0,02