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# A longitudinal study of learning, progression, and personal growth in Sierra Leone

## Baseline Report

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12<sup>th</sup> May 2016

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## ACKNOWLEDGEMENTS

The evaluation study benefits from the financial backing of the Solon Foundation as part of their partnership with the UBS Optimus Foundation. We are grateful to them for supporting this work.

We are indebted to Natasha Robinson and Rebecca Mitchell for their support in data collection and analysis and for their inputs on different aspects of the research.

We are grateful to Andrew Steven Boima for his invaluable assistance to the project. It is right to say that we would not have managed without him.

## EXECUTIVE SUMMARY

1. The evaluation study assesses the reading and mathematics performance of students in the Rising Academy Network on three occasions every year, for three years.
2. Comparison groups consisting of matched student samples drawn from other private schools and government schools in the same geographical areas are assessed on the same tests.
3. This report discusses the reading and mathematics scores for students based on the first assessment in January 2016 (taken before teaching had begun) in the Rising Academy Network and comparison schools.
4. We can see from Table 1 below the scores for reading at the beginning of the study. As expected, students in the Rising Academy Network achieve scores that are very similar to those achieved by the matched samples.

Table 1 - Reading Scores in the First Assessment Period

	January 2016		April 2016		July 2016	
	Scale Score	Reading Age	Scale Score	Reading Age	Scale Score	Reading Age
Rising Academy Network	193	7:02	Data not reported here		Data not reported here	
Other Private Schools	190	7:02				
Government Schools	176	7:01				

5. This shows that the students are all starting from more or less the same level of learning. This is illustrated well by the similarity in reading ages for all groups.

6. Table 2 below shows at the first assessment (before teaching had begun) the distribution of students by Levels of Achievement. Level 4 represents the benchmark and is based on a norm referenced standardised score<sup>1</sup> of 90.

7. Only 1% of students in the Rising Academy Network achieved the benchmark (Level 4) at the start of the study (before teaching began). 82% achieved Level 1 (very poor performance). This illustrates the scale of the challenge to improve reading skills.

8. The evaluation will monitor closely the percentage of students that migrate from the lowest performance bands towards the higher performance bands. This will allow us to assess how equitable the benefits of education are.

Table 2 – Distribution of students by performance bands (reading)

School	Level 4	Level 3	Level 2	Level 1	Total
All RAN students	2 (1%)	6 (3%)	24 (13%)	149 (82%)	181
All private comparison	0	3 (3%)	22 (21%)	78 (76%)	103
All public comparison	1 (1%)	3 (2%)	18 (12%)	123 (85%)	145
<b>Total</b>	<b>3 (1%)</b>	<b>12 (3%)</b>	<b>64 (15%)</b>	<b>350 (82%)</b>	<b>429</b>

Level 4: Good performance. Working at or above the benchmark

Level 3: Moderately good performance. Working just below the benchmark

Level 2: Poor performance. Working well below the benchmark

Level 1: Very poor performance and in need of urgent intervention

<sup>1</sup> Normed Referenced Standardised Score (NRSS) is an age standardised score that converts a student's "raw score" to a standardised score which takes into account the student's age in years and months and gives an indication of how the student is performing relative to a UK sample of students of the same age. The average score is 100. A higher score is above average and a lower score is below average.

9. Table 3 below shows the scores for mathematics at the first assessment (before the start of teaching). As expected, student scores are very similar.

10. The students in the Rising Academy Network achieve in mathematics an average scale score of 475 compared to those in other private schools (matched in age and circumstance) who achieve an average score of 458 and those in government-funded schools who achieve an average score of 450.

11. The difference in achievement between the RAN schools and other private schools is not statistically significant but is statistically significant between RAN schools and government-funded schools - but by a very small margin.

12. Importantly, students across all three groups are working at level 2b of the curriculum standards in England and Wales.

Table 3 - Mathematics Scores in the First Assessment Period



Assessment before teaching			Teaching starts in all schools			
	January 2016		May 2016		July 2016	
	Scale Score	UK National Curriculum	Scale Score	UK National Curriculum	Scale Score	UK National Curriculum
Rising Academy Network	475	2b	Data not reported here		Data not reported here	
Other Private Schools	458	2b				
Government Schools	450	2b				

13. Table 4 below shows at the first assessment (before teaching had begun) the distribution of students by levels of Mathematics achievement. Level 4 is a benchmark equivalent to that used of assessing mathematics performance in the UK.

14. Only 5% of Rising Academy Network students achieved the benchmark at the start of the study (before teaching began). 62% performed very poorly. The scale of the challenge to improve mathematics outcomes is clear and the study will monitor the migration of students out of low performance bands as a measure of equity in performance standards.

Table 4 – Distribution of students by performance bands (mathematics)

School	Level 4	Level 3	Level 2	Level 1	Total
All RAN schools	10 (5%)	31 (17%)	29 (16%)	113 (62%)	183 (100%)
All private comparison	3 (3%)	17 (15%)	23 (21%)	68 (61%)	111 (100%)
All public comparison	2 (1%)	15 (10%)	32 (21%)	101 (67%)	150 (100%)
Total sample	15 (3%)	63 (14%)	84 (19%)	282 (64%)	444 (100%)

Level 4: Good performance. Working at or above the benchmark

Level 3: Moderately good performance. Working just below the benchmark

Level 2: Poor performance. Working well below the benchmark

Level 1: Very poor performance and in need of urgent intervention

15. As an additional measure of academic achievement, the study looked at the writing abilities of students in the Rising Academy Network at the start of the academic year – that is before they received any instruction.

16. Three kinds of writing were assessed: writing a story, giving a description of an event, and expressing an opinion on a topical issue.

17. Each piece of writing was assessed on three indicators of proficiency: global or whether the writing type conformed to what was asked for (a story, a description and an opinion); local or

whether the writing was organised so that it could be followed easily and that it made sense, and formal or whether most common words were spelt correctly and punctuation used to effect.

Table 5 – The writing achievement of students on three types of text

Types of writing	Indicators of proficiency		
	Global	Local	Formal
	Producing the type of writing required	Writing in a coherent and grammatically correct way	Using punctuation effectively and spelling common words correctly
Telling a story	Weak	Moderate	Moderate
Describing an event	Weak to moderate	Moderate	Moderate to good
Expressing an opinion	Weak	Moderate	Good

18. Students performed weakest at the global level of text. They were unable to write for the 'audience' demanded.

19. The majority of students showed moderate levels of proficiency at the local level of text. Much of the work showed the use of a range of linguistic devices to achieve coherence. Grammar was impaired across much of the corpus but the writing held together well to achieve moderate levels of coherence.

20. The majority of students showed moderate to good proficiency in the formal accuracy level. Most spelt common words correctly. The use of punctuation, both between sense and within sentence punctuation was markedly impaired. Handwriting on the whole was legible with some noticeable difficulties in letter formation.

21. The study of writing achievement and the extent to which students in the Rising Academy Network might improve is a promising avenue for further examination.