



# 2015 Nuru Kenya Education Program Impact Assessment

*Results of the 2015 Education Uwezo Surveys*

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# Executive Summary

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Through student-centered Literacy Outreach, Nuru Kenya (NK) Education aims to increase child literacy to the Standard Two (grade 2) level among rural primary school children in Kuria West, Kenya. In service to NK Education, NK Monitoring and Evaluation (M&E) seeks to answer the following evaluation question: ***What is the impact of Nuru Kenya Education on progress toward English literacy and a student's ability to read at least at the paragraph level?***

As part of the evaluation approach, NK M&E administers the Uwezo<sup>1</sup> Literacy Assessment at the beginning of the school year (BOY), middle of the school year (MOY) and end of the school year (EOY) with the intent of summarizing findings for two evaluation indicators: 1) progress toward literacy, and 2) the percentage of students achieving paragraph level and above.

In order to draw conclusions about the impact of NK Education Literacy Outreach, NK M&E assesses a select number of host schools via a multi-tiered approach:

- **To evaluate attributable impact**, NK Education and M&E select one host school (Impact School) to survey over a two-year period. One year prior to receiving Literacy Outreach (pre-Nuru), NK M&E administers the Uwezo exam to the Impact School. In the second year of the study (post-Nuru), when students are enrolled in Literacy Outreach, their Uwezo scores are again collected and compared with scores from the pre-Nuru year. For this strategy, the targeted improvement in both indicators is 10 percentage points.
- **To enable adaptive management and support program monitoring**, data from four Core Schools (School 1, School 2, School 3 and School 4<sup>2</sup>) in Kuria West, Kenya were collected from 2012-2015 and are utilized to draw conclusions about patterns in the effectiveness of Literacy Outreach.
- **To assess comparability of trends in literacy progress over time**, NK M&E employs a multi-year study of literacy levels in the four Core Schools and compares scores with regional literacy averages from the national Uwezo assessment.

**Data underline the success of NK Education for 2015: students from the Impact School who received one year of Literacy Outreach (2015) show a measureable improvement in literacy levels relative to the improvement of students during the pre-Nuru year.** Specifically in progress toward literacy, children in grades 2-5 experienced an increase of 33 percent from BOY to EOY versus the pre-Nuru year, where average literacy levels increased by 29 percent. This means Literacy Outreach provided an advantage of 4 percentage points to children in grades 2-5 in the Impact School. Additionally, Literacy Outreach gave children a gain of 6 percentage points in the paragraph and above level relative to the pre-Nuru year.

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<sup>1</sup> For more information on Uwezo, please visit this website: [www.uwezo.net](http://www.uwezo.net).

<sup>2</sup> School names are not revealed to protect the privacy of the students, teachers and the the school.

Although NK Education did not achieve the 10 percentage point target, it is important to contextualize the results. Students improved their literacy scores in 2015 even after missing a total of seven weeks of school due to teacher strikes. Moreover, prior to the second teacher strike which lasted five weeks, data collected at MOY provided evidence that students in the Impact School were on track to hit the 2015 target at the EOY evaluation.

In support of adaptive management and program monitoring, NK M&E evaluated trends in literacy progression within the Core Schools. From 2012-2015, data demonstrate varied effectiveness in literacy progress across the four schools, with specific schools consistently showing greater improvements over time than others. For average progress toward literacy, School 2 and School 4 experienced increases of 11 and 24 percent, respectively. In comparison, School 1 and School 3 experienced drops of 9 and 6 percent, respectively. When examining BOY paragraph and above literacy from 2012-2015, School 2 and School 4 also demonstrated a 20 and 24 percentage point growth in their respective levels, while School 1 and School 3 both experienced a -3 percentage point drop.

Given the 2015 results for the Core Schools, it is possible that the strike negatively affected students' literacy levels at the end of the year. At the same time, not all schools experienced the same repercussions. Moreover, scores from Schools 1 and 3 consistently showed the least change across years. Thus, the differences in the effectiveness of Literacy Outreach across schools and years may potentially signify that the quality of Literacy Outreach implementation is not equal. Further exploration is needed to understand the underlying causes of the observed increases and decreases in literacy outcomes in the Core Schools.

In regards to the multi-year study of the Core Schools, Uwezo has only released datasets from two time points: 2012 BOY and 2013 BOY. While results demonstrate students in Literacy Outreach host schools show no considerable difference in literacy levels relative to regional Uwezo scores, these findings reflect progress during the **first year** of Literacy Outreach (2012). In the future, continuing to benchmark NK Education progress against public school children in Kuria West will contribute to Nuru Kenya's understanding of literacy progress.

In conclusion, **evidence from the Impact School demonstrates Literacy Outreach had a positive impact on progress toward literacy and ability to read at the paragraph level for children in grades 2-5 even though the intended targets were not met.** Teacher strikes likely contributed to the plateau of scores seen after the MOY assessment in this school. Additionally, patterns identified in monitoring data from the Core Schools could highlight a varied effect of Literacy Outreach with certain schools outperforming others over time. This may be related to differences in the implementation of Literacy Outreach across host schools. Furthermore, data from the first year show no large gains for children in Literacy Outreach in comparison with children from Kuria West public schools. Recommendations for NK M&E and Education to consider as a result of these findings are as follows:

1. NK Education should perform a thorough investigation to understand the positive deviance that occurred in some of the Core Schools (School 4 in particular) in order to examine whether or not any lessons learned can be applied to Literacy Outreach in other host schools. Moreover, specific attention should be given to implementation of Literacy Outreach and whether or not this differs across host schools. Thus, it will be important to ascertain whether differences in student performance are related to factors that can be controlled by NK Education.
2. NK Education should also consider enhancing program monitoring perhaps by identifying additional indicators related to the teaching abilities of host school teachers, classroom infrastructure and the performance of Literacy Outreach facilitators with the aim of better understanding what happens at each individual school prior to the EOY evaluation. This could help provide further explanation as to why literacy progress over time is not the same across host schools.
3. NK M&E should continue to utilize the multi-year study tied to Uwezo regional data as a benchmark for evaluating progress while understanding the limitation with the delayed release of data and its effects on reporting timelines. Expectations should be established in future impact assessments that Uwezo regional data will be included in reports every two years rather than every year.

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# Introduction

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The Nuru Monitoring and Evaluation (M&E) Program produces useful and relevant information that can contribute to key decision-making about Nuru's programs (e.g., whether to continue, replicate and/or scale an intervention). With this focus on utilization at the center of Nuru's M&E strategy, the M&E team works to objectively monitor and evaluate the performance and impact of Nuru's four impact programs—Agriculture, Financial Inclusion, Healthcare and Education.

In service to this approach, Nuru Kenya (NK) M&E continuously assesses NK Education to answer the question: ***What is the impact of Nuru Kenya Education on progress toward English literacy and a student's ability to read at least at the paragraph level?*** To answer this question, this impact assessment presents the program rationale, goals and progress toward these goals.

## The Integrated Nuru Model

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Nuru International is on a mission to end extreme poverty in remote, rural areas. Communities facing extreme poverty deal with fundamental challenges around hunger, an inability to cope with economic shocks, averting preventable disease and death and illiteracy. Nuru has proven its ability to deliver lasting impact in these four areas in Kenya and is currently positioning its model for global scale.

As a catalyst for sustainable development, Nuru's role is to identify nationals to raise up as servant leaders and nation builders; remove barriers preventing them from realizing their full potential; equip them with skills, resources and attitudes to end extreme poverty in their region; and build social enterprises to provide a reliable, market-based source of capital.

By establishing community development organizations that are locally led and also launching social enterprises to fund the work, Nuru enables nationals to lift communities out of extreme poverty within seven years.

## Nuru Kenya (NK) Education

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Nuru Kenya (NK) Education aims to increase child literacy to the Standard Two (grade 2) level among rural school children in pre-unit (kindergarten) to grade 5 through student-centered teaching and literacy-focused interventions. NK Education works with the Ministry of Education to supplement existing classroom curriculum in rural primary public schools located in communities where Nuru farmers live. NK Education facilitates student workshops (Literacy Outreach) that focus on the five main components of literacy development: phonemic awareness, phonics, fluency,

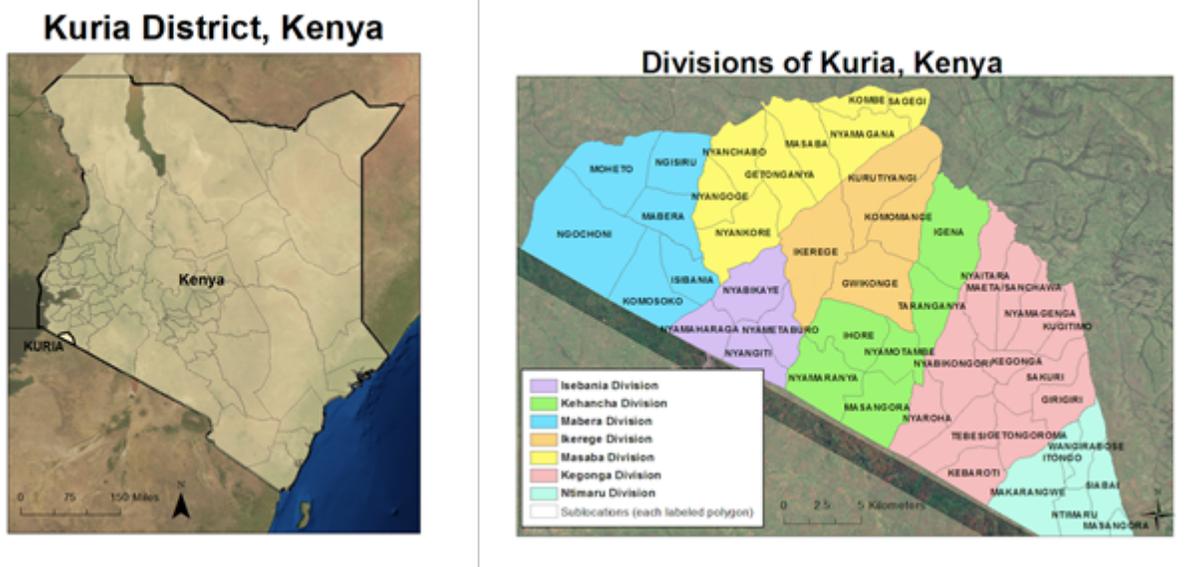
vocabulary and comprehension. NK Education coordinators aim to build student confidence and increase student participation in literacy development through games, reading activities and creative projects.

Since 2012, NK Education has been working with schools in Kuria West.<sup>3</sup> School selection is based on the Ministry of Education’s recommendation in terms of school needs. In 2015, Literacy Outreach worked with an average of 7,021 public school children in pre-unit through grade 5 or 7 (depending on geographic location)<sup>4</sup> at 25 schools across three divisions:

- 9 schools in Isibania Division with students from pre-unit through grade 7
- 8 schools in Mabera Division with students from pre-unit through grade 7
- 8 schools in Kehancha Division with students from pre-unit through grade 5

Figure 1 below provides maps of Kuria West district and its divisions:

**Figure 1: Maps of Kuria District and Divisions in Kenya**



With the exception of 2012, all participating schools received similar outreach across the 2013, 2014 and 2015 academic years<sup>5</sup> with workshops conducted for up to four hours of classroom time per month. In comparison with the later years, outreach in 2012 was done slightly differently as students attended Literacy Outreach every other week.

Across all years, Literacy Outreach was periodically cancelled due to school exams or events that were not communicated by teachers. However, more so than the intermittent cancellations, teacher

<sup>3</sup> The World Bank cites Kuria West district as being >70% below the Kenyan rural poverty line (\$1.25/day).

<sup>4</sup> Starting in 2016, NK Education will phase out working with grades 6 and 7 completely to only focus on students in pre-unit through grade 5, where the most gains can be made in progress toward literacy.

<sup>5</sup> The standard school year in Kenya consists of three terms. Approximate dates for each term are: January-March, April-July and August-November.

strikes presented challenging interruptions in 2015. In January 2015, Kenyan public school teachers went on strike for two weeks. Toward the end of the school year, events escalated and Kenyan public schools closed for five additional weeks in September and October due to a second teacher strike. Consequently, children missed an average of seven more weeks of school than normal. In spite of the strike, students received 27 out of the targeted 30 Literacy Outreach sessions for the year.

## About Uwezo Literacy Assessment

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The Uwezo Literacy Assessment was developed by a regional initiative between Kenya, Tanzania and Uganda called Uwezo, which strives to improve the competencies in numeracy and literacy among primary school aged children.<sup>6</sup> NK M&E relies on this tool for two reasons: 1) the Uwezo tool can assess literacy levels quickly and reliably and 2) it helps NK Education and M&E understand progress toward English literacy in the schools where Literacy Outreach is implemented.<sup>7</sup> Specifically, NK M&E assesses literacy levels in a select number of host schools to both monitor and evaluate Literacy Outreach at the beginning of the year (BOY), middle of the year (MOY) and end of the year (EOY).<sup>8</sup>

The Uwezo assessment employed by NK M&E measures a student's ability to successfully recognize and read English letters, words, a paragraph and a story. Finally, if the student can read the story, the student must answer two comprehension questions correctly to qualify as Standard Two Literate. When working directly with a student, testing begins at the paragraph level to conserve time. If the student struggles to read the paragraph during testing, he or she is directed to the word level and instructed to read any five words from a word list. If he or she struggles at the word level, the student will be directed to read letters. If the student recognizes enough letters, he or she will advance back up by level of proficiency until it is clear that the child cannot advance any further. On the other hand, if the student first reads at the paragraph level successfully, he or she will be directed to the story level and is then asked two questions to assess comprehension (see Appendix 1 for a complete write-up). In addition to recording the student's literacy level, the assessment records each student's grade, name, age and gender.

## Methodology

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Nuru implements a multi-tiered approach to assess progress toward impact:

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<sup>6</sup> Primary school aged children are between 6 and 16 years old in this context. For more information on Uwezo, please visit [www.uwezo.net](http://www.uwezo.net).

<sup>7</sup> Kenya's official languages are English and Kiswahili.

<sup>8</sup>For more detail, see "2013 Nuru Kenya Education Impact Assessment" for full details of Nuru's strategy for evaluating NK Education during previous iterations.

- **To evaluate attributable impact**, NK Education and NK M&E select one school (Impact School) to survey over a two-year period. One year prior to receiving Literacy Outreach (pre-Nuru), NK M&E administers the Uwezo exam to the Impact School. In the second year of the study (post-Nuru), when students are enrolled in Literacy Outreach, their Uwezo scores are again collected and compared with scores from the pre-Nuru year. For this strategy, the targeted improvement in both indicators is 10 percentage points.
- **To enable adaptive management and support program monitoring**, data from four Core Schools (School 1, School 2, School 3 and School 4) in Kuria West, Kenya were collected from 2012-2015 and are utilized to draw conclusions about patterns in the effectiveness of Literacy Outreach for students in grades 2-5.
- **To assess comparability of trends in literacy progress over time**, NK M&E employs a multi-year study of literacy levels in the four Core Schools and compares scores with regional literacy averages from the national Uwezo assessment for students in grades 2-5.

As a part of the evaluation strategy, NK M&E assesses two key indicators: 1) progress toward literacy, which reflects the average literacy level of students according to the Uwezo assessments, where 0 = None, 1 = Letter, 2 = Word, 3 = Paragraph, 4 = Story and 5 = Literate, and 2) paragraph and above incidence rates, which are calculated by counting the number of students who scored at either the paragraph, story or literacy levels and dividing this by the total number of students surveyed.

Besides collecting data with the Uwezo Literacy Assessment, NK M&E captures shifts in the number of certified teachers, school infrastructure and materials available to public school children from year to year in each host school. These data help M&E understand whether there were changes in the school environment that might prevent a comparison of annual outcomes in literacy proficiency.

## Sampling Frame

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To assess attributable impact, NK M&E administered the Uwezo literacy assessment to 100 percent of host school children in grades 2-5 who were present on the given survey dates for both 2014 and 2015 (Table 2). Surveying 100 percent of host school children present at survey time (effectively a school census of the targeted grades) versus a sample ensures a decrease in margin of error, thus providing a more precise estimate of scores. Note the variation in the number of host school children from BOY to EOY across the pre and post-Nuru surveys. The number of students tested across years and schools consistently fluctuates. During the post-Nuru year, NK M&E also implemented MOY—in addition to the BOY and EOY collections—to help NK Education course correct if progress was off track.

**Table 2: Sample Sizes for the Impact School, Grades 2-5, 2014-2015**

Cohorts	BOY	MOY	EOY
Pre-Nuru (n) 2014	151	-	150
Post-Nuru (n) 2015	122	137	114

To support program monitoring and the multi-year study in the Core Schools, a census of students in grades 2-5 was collected from 2012-2015 at BOY and EOY time points (Table 3). Again, as seen above, there is variation in the number of students present during survey times across schools and years. From 2012-2015, NK M&E assessed 53 more students at EOY versus BOY on average.

**Table 3: Multi-year Study: Core Schools, Grades 2-5**

Cohort Grades 2-5	BOY Sample Size (n)	EOY Sample Size (n)
2012 Core Schools	524	567
2013 Core Schools	532	587
2014 Core Schools	566	639
2015 Core Schools	532	571

## Data Collection

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NK M&E enumerators collected data by coordinating available dates and times with both the Ministry of Education and NK Education for surveys administered at BOY, MOY and EOY. Prior to survey implementation, two NK M&E field managers trained enumerators and selected the top performers from each training to carry out the assessments. The survey collected each child's name, age and gender as well as the literacy level of each student. Details about each survey can be observed below (Table 4).

**Table 4: 2015 Uwezo Assessment Schedule**

Collection	Dates	No. of Enumerators	No. of Schools
BOY	January 20 - February 5	20	9
MOY	June 8	5	1
EOY	October 26-30	16	9

To ensure the quality of the data analyzed in this report, NK M&E built a system of checks and balances into the data entry process whereby each individual survey was reviewed three separate times before final entry. First, NK M&E closely supervised the data entry process by constantly checking for common mistakes. Throughout the process, data entry clerks highlighted systematic data collection errors so supervisors could correct any field mistakes in real time. Second, surveys were randomly selected for a question-by-question comparison of entry versus the raw data. Consistently poor data collection or data entry resulted in employee termination. Given the system implemented by NK M&E, the 2015 season resulted in a limited number of firings as well as exceptional data quality.

## Analysis

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Across each of the different analysis strategies, data were analyzed at the selected host schools to evaluate progress toward literacy and the percent of children at the paragraph and above level. Progress toward literacy at BOY, MOY and EOY time points was assessed via aggregate scores created by M&E where: **0 = None, 1 = Letter, 2 = Word, 3 = Paragraph, 4 = Story, 5 = Literate**. These scores were then averaged to determine the mean proficiency level for each time point. In addition to progress toward literacy, achievement of paragraph proficiency and above was also assessed for all host school children surveyed. Host school children scoring at least a 3 on the assessment were classified as “paragraph or above.” Examples of the assessment are included in Appendix 1.

## Results

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The following results section is organized according to the different strategies NK M&E employs to support NK Education in the overall assessment of impact. Firstly, the analysis of attributable impact is presented. Secondly, trends from the four Core Schools are outlined with the aim of aiding program iterations in NK Education. Finally, the results of the multi-year study in comparison with Uwezo regional data are highlighted.

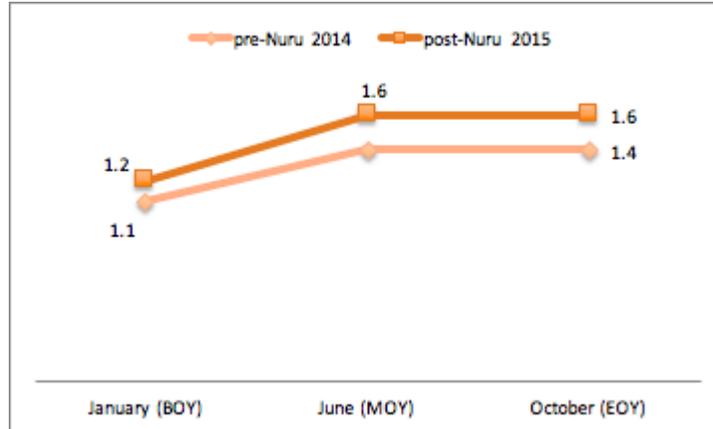
### Results: Attributable Impact

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Overall, data demonstrate Literacy Outreach positively influenced children from the Impact School across both literacy indicators. Students from the pre-Nuru year saw increases in average progress toward literacy of 29 percent while post-Nuru, students experienced a 33 percent jump in scores from BOY to EOY. In short, Literacy Outreach offers a distinct benefit to students of 4 percentage points in progress toward literacy (Figure 2). In practical terms, pre-Nuru students on average recognized letters at both BOY and EOY. Comparatively, post-Nuru students began the year reading at the letter level and ended the year achieving scores closer to the word level.

As can also be observed in Figure 2, even though the post-Nuru students did not achieve the 10 percentage point target, at MOY, they were on track to do so. Progress leveled off after this time point. While the true effects of the strike cannot be comprehensively evaluated, it is likely that missing five weeks of school after MOY had a negative effect on children.

**Figure 2: Impact School Average Progress Toward Literacy 2014-2015**

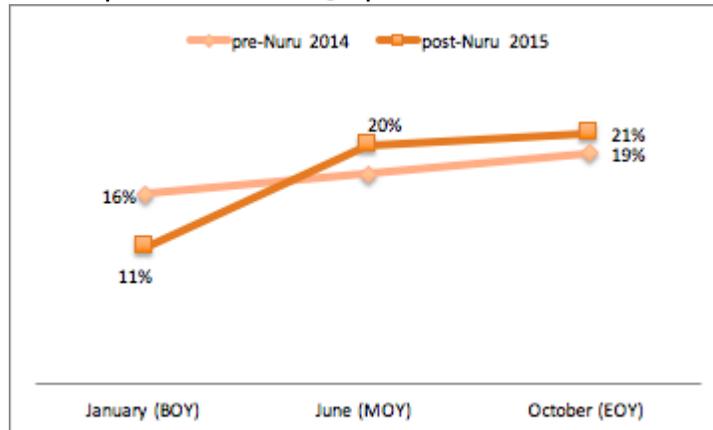


*Literacy Scores: 0 = None, 1 = Letter, 2 = Word, 3 = Paragraph, 4 = Story, 5 = Full Literacy*

Similarly, more students from the post-Nuru year read at the paragraph level or above in comparison with their pre-Nuru counterparts (Figure 3). From BOY to EOY, pre-Nuru students demonstrated an increase of 3.4 percentage points in comparison with the post-Nuru students, who improved their paragraph and above rates by 9.5 percentage points. This means the post-Nuru students have a comparative advantage of 6 percentage points because of Literacy Outreach. Again, the targeted growth was not met, potentially as a consequence of the strike. Post-Nuru, nearly twice as many students scored at the paragraph and above level from BOY to MOY; however, progress slowed significantly from MOY to EOY after the strike, with post-Nuru students only improving by 1 percentage point.<sup>9</sup>

<sup>9</sup> For rates of change in paragraph and above, please see Appendix 2.

Figure 3: Impact School Paragraph and Above Levels 2014-2015

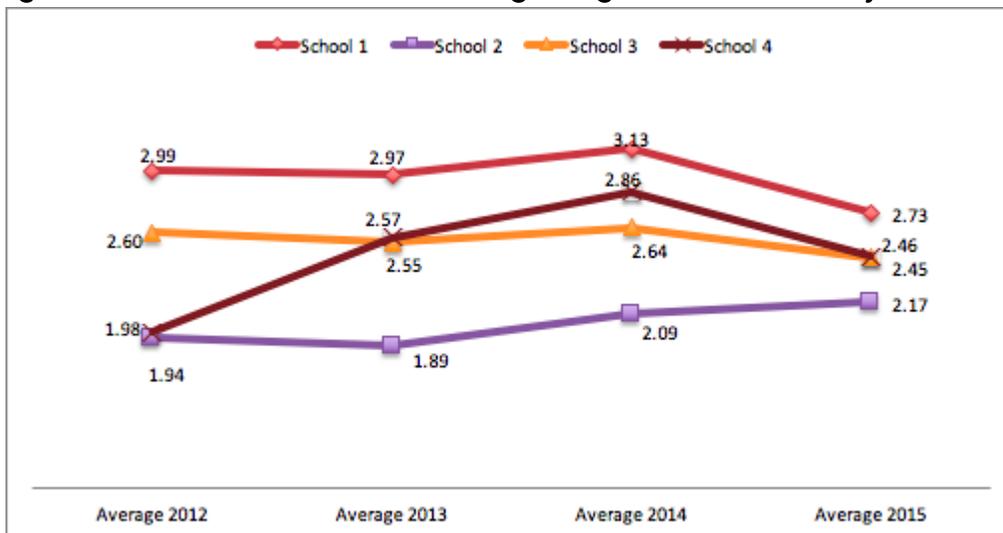


## Results: Monitoring Data 2012-2015

In service to NK Education monitoring, NK M&E also reviewed trends in the Core Schools from 2012-2015. In general, results from year to year fluctuate amongst host schools (School 1, School 2, School 3 and School 4), with School 2 and 4 showing the greatest growth relative to the other two schools.

For progress toward literacy, annual averages of BOY and EOY were calculated for each of the four Core Schools from 2012-2015. As can be seen from Figure 4, two of the four Core Schools (Schools 2 and 4) performed better in 2012 in comparison with their 2015 scores. Averages of School 2 improved by 11 percent, from 1.94 to 2.17, whereas School 4 began 2012 at 1.98 and achieved scores of 2.46 in 2015 for an increase of 24 percent. Schools 1 and 3 exhibited decreases in their average progress toward literacy from 2012 and 2015 of 9 percent and 6 percent, respectively.

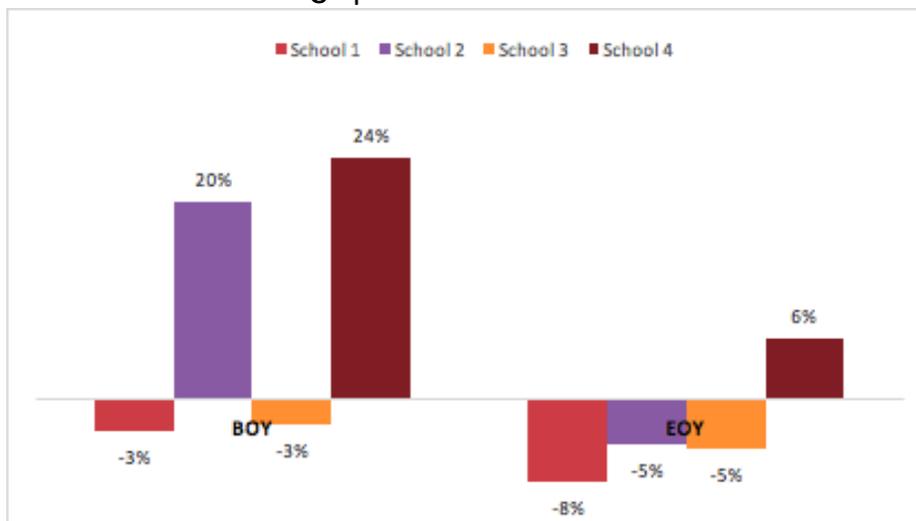
Figure 4: Core Schools BOY-EOY Average Progress Toward Literacy 2012-2015



Equivalently, Schools 2 and 4 demonstrated similar improvements in paragraph and above rates (Figure 5). At BOY from 2012-2015, paragraph and above rates increased by 24 percentage points for students from School 2. In School 4, progress was comparable, with an increase of 20 percentage points for students at BOY during the same time period. Schools 1 and 3 decreased their paragraph and above levels by -3 percentage points from BOY 2012-2015. At EOY 2012-2015, however, only one school showed positive growth: School 4, which improved by 6 percentage points. Just like the Impact School, it is important to keep in mind that data from 2015 could have been affected by the seven weeks of teacher strikes.

The additional data M&E collected about school infrastructure and the number of teachers amongst other variables do not highlight any changes that could have explained the observed differences across host schools. Thus, current data do not allow for an understanding of the drivers behind these variations and further exploration will be necessary to determine the true causes of the fluctuating performance among schools. For example, are the trends below caused by students and host school teachers or are the findings a reflection of factors NK Education can control within its programming? These questions will be important to consider moving forward as NK Education continues to refine its model.

**Figure 5: Core Schools Paragraph and Above Shifts at BOY and EOY 2012-2015**



## Results: Multi-year Study of Core Schools and Regional Uwezo Data

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Data from national Uwezo assessments reveal NK Education students in grades 2-5 did not accrue significant benefits from the first year of Literacy Outreach, as the net difference in average progress toward literacy is 0 percentage points (Table 5). Important to note, NK Education started servicing children in schools whose literacy levels were below the regional average for public schools in Kuria West.

**Table 5: Multi-year Study Average Progress Toward Literacy 2012-2013**

Cohorts	BOY 2012 Average Literacy	BOY 2013 Average Literacy	% Change
Core Schools Grades 2-5	2.03	2.29	13%
Kuria West Public Grades 2-5	2.64	2.98	13%
<b>Difference</b>			<b>0%</b>

Similarly, progress in paragraph and above levels was minimal for BOY 2012 and BOY 2013 when comparing the Core Schools with all Kuria West public schools in grades 2-5 (Table 6). Again, as Table 6 validates, students receiving Literacy Outreach scored at lower literacy levels relative to regional Kuria West averages, even prior to the official launch of NK Education. In general, the percentage of Literacy Outreach students in grades 2-5 scoring at the paragraph level or higher grew by 5 percentage points from BOY 2012 to BOY 2013 versus students from all Kuria West public schools, whose scores grew by 10 percentage points. The net difference between the two groups was -5 percentage points, with students from Kuria West public schools exhibiting greater increases.

**Table 6: Multi-year Study: Percentage of Students Achieving Paragraph and Above 2012-2013**

Cohorts	BOY 2012 Paragraph and Above	BOY 2013 Paragraph and Above	% Change
Core Schools Grades 2-5	38%	43%	5%
All Kuria West Public Grades 2-5	50%	60%	10%
<b>Difference</b>			<b>-5%</b>

Given that Core School students appear to be at a disadvantage, it is relevant to provide context. During the first year of NK Education (2012), facilitators only provided Literacy Outreach every other week to children in kindergarten through grade 7. Through the years, this strategy was proven to be less effective since targeting children in lower grades (kindergarten through grade 5) caused the greatest improvements in literacy levels and weekly sessions proved more impactful. With the upcoming release of the 2014 Uwezo dataset<sup>10</sup>, continuing to benchmark NK Education progress against all Kuria West public schools will help determine whether or not clear advantages can be identified in previous years of NK Education implementation. Please see Appendices 3 and 4 for additional data from the Uwezo national assessment.

## Limitations

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This study includes various limitations. Firstly, NK M&E has been unable to study a panel set of children from schools receiving Literacy Outreach. In 2013, M&E proposed to track host school children across multiple years in order to create a time-series assessment of NK Education. However, this turned out to be not feasible as the number of host school children fluctuates throughout the academic year due to circumstances beyond the control of the program. For example, at BOY 2015, 122 children from the Impact School were assessed while only 114 were tested at EOY 2015. Inabilities to pay school fees, illnesses and high transfer rates amongst other reasons could account for such differences in attendance. Therefore, NK M&E determined that the best course of action for future analyses was to generate an aggregate score at each time point (BOY and EOY).

Additionally, conclusions from the multi-year study are difficult to draw due to the fact that Uwezo regional data could also possibly include children from Literacy Outreach host schools. In its dataset, Uwezo does not reveal the school of children tested, making it impossible to exclude these students from the analysis M&E performs for both methodological and practical reasons. Ultimately, the delayed release of Uwezo data also makes findings less relevant for the current year. NK M&E waited over two years to have access to data from 2013 and findings from nearly three years ago do not necessarily provide actionable evidence for NK Education in 2015. That said, Uwezo regional data will continue to serve as benchmark for NK Education progress in the future as new datasets are released.

Lastly, the true impact of the integrated Nuru Model (described above under “The Integrated Nuru Model” section) implies families who participate in all four Nuru Impact Programs receive the greatest benefits. Essentially, the intentional layering and sequencing of Nuru programs allows the interactions of these interventions to have a magnified impact on families. Within the census taken by NK M&E in the selected evaluation schools, however, children from families who do not participate in Nuru’s integrated model are tested, thus diluting the potential impact of Literacy Outreach. Ideally, only children from Nuru farmer households should be assessed moving forward.

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<sup>10</sup> It is predicted the next Uwezo national dataset will be released mid-2017 and included in the impact report to be released in 2018.

## Conclusions and Recommendations

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In conclusion, compared with scores from the pre-Nuru year, children from the Impact School demonstrated improvements in literacy levels even though two strikes interrupted school sessions. Potentially, the strikes negatively impacted the ability of NK Education to achieve the targeted 10 percentage points of growth between pre-Nuru and post-Nuru years. Additionally, monitoring data show variation in literacy levels amongst the Core Schools from 2012-2015. That said, School 4 proved to be the most successful in terms of growth in literacy levels over the past four years. Finally, in the multi-year study, evidence implies NK Education did not impact children in the Core Schools during the first of year of programming relative to Uwezo regional data (2012-2013); however, as new datasets are released these data will continue to serve as benchmarks for progress in NK Education. Recommendations for the NK M&E and Education teams to consider as a result of these findings are below:

1. NK Education should perform a thorough investigation to understand the positive deviance that occurred in some of the Core Schools (School 4 in particular) in order to examine whether or not any lessons learned can be applied to Literacy Outreach in other host schools. Moreover, specific attention should be given to implementation of Literacy Outreach and whether or not this differs across host schools. Thus, it will be important to ascertain whether differences in student performance are related to factors that can be controlled by NK Education.
2. NK Education should also consider enhancing program monitoring perhaps by identifying additional indicators related to the teaching abilities of host school teachers, classroom infrastructure and the performance of Literacy Outreach facilitators with the aim of better understanding what happens at each individual school prior to the EOY evaluation. This could help provide further explanation as to why literacy progress over time is not the same across host schools.
3. NK M&E should continue to utilize the multi-year study tied to Uwezo regional data as a benchmark for evaluating progress while understanding the limitation with the delayed release of data and its effects on reporting timelines. Expectations should be established in future impact assessments that Uwezo regional data will be included in reports every two years rather than every year.
4. Moving forward, NK M&E should only assess children of Nuru farmer families at the household level to ensure the results reflect the impact of the integrated Nuru model.

# Appendix 1: Example of Uwezo Assessment

Figure 1: Example of "Letters" and "Words" literacy level as presented to public school children during testing.



**READING TEST (2)** *KENYA 2011*

Letters	Words
w	day
o	shop
d	pet
i	girl
c	eye
m	road
z	sun
h	roof
	head
	class

The child should attempt to read any five. At least four attempts must be correct.

The child should attempt to read any five. At least four attempts must be correct.

Figure 2: Example of “Paragraph” and “Story” literacy level as presented to public school children during testing.

 **READING TEST (2)** **KENYA 2011**

**Paragraph 1**

My name is Kioko.  
I have a brown cat.  
It has a long tail.  
My cat likes to play.

**Paragraph 2**

My home is in Meru.  
Meru is a big town.  
Many people live there.  
We go to pray on Friday.

**Story**

Monday will be Jamhuri day. It is a great day in Kenya. There will be a party in our school. Many people will come. We will sing and dance. The boys will raise the flag. Our flag has four colours. It teaches us many things. Black shows the colour of the people. Red is for our blood. Green is for our land. White is the best colour. It means love and peace for all. I like our flag.

Q1. Who will raise the flag?  
Q2. Why is white the best colour?

## Appendix 2: Rates of Change for the Impact School

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Table 7: Rates of Change in Paragraph and Above for the Impact School

Cohort	Rate of Change in Paragraph and Above
Pre-Nuru (2014)	22%
Post-Nuru (2015)	83%
<b>Difference</b>	<b>61%</b>

## Appendix 3: Core Schools Grades 2-7

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Table 8: Core Schools vs. Uwezo Regional Data: Literacy Levels

Cohorts	BOY 2012 % Literate	BOY 2013 % Literate	% Change
Core Schools Grades 2-7	18%	28%	9.9%
Kuria West Public Grades 2-7	32%	41%	8.4%
<b>Difference</b>			<b>1.5%</b>

Table 9: Core Schools vs. Uwezo Regional Data: Paragraph and Above

Cohorts	BOY 2012 Paragraph and Above	BOY 2013 Paragraph and Above	% Change
Core Schools Grades 2-7	55%	60%	5%
All Kuria West Public Grades 2-7	63%	70%	7%
<b>Difference</b>			<b>-2%</b>

# Appendix 4: Rates of Change for Core Schools

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Table 10: Rates of Change in Literacy 2012-2013, Grades 2-5

Cohorts	Rate of Change: Paragraph and Above
Core Schools Grades 2-5	13%
All Kuria West Public Grades 2-5	19%
<b>Difference</b>	<b>-6%</b>

Table 11: Rates of Change in Literacy 2012-2013, Grades 2-7

Cohorts	Rate of Change: Literacy
Core Schools Grades 2-7	55%
Kuria West Public Grades 2-7	26%
<b>Difference</b>	<b>29%</b>

Table 12: Rates of Change in Paragraph and Above 2012-2013, Grades 2-7

Cohorts	Rate of Change: Paragraph and Above
Core Schools Grades 2-7	9%
Kuria West Public Grades 2-7	11%
<b>Difference</b>	<b>-2%</b>