

# Executive Summary

In 2016, the Nuru Kenya (NK) Education Program achieved impact across its two literacy-focused indicators: progress toward literacy and the percentage of students achieving paragraph level and above. Also this year, the Nuru Kenya Education Program began a transition to a new program model that will be rolled out fully in 2017.

The NK Education team administered weekly literacy-focused outreach workshops to students in grades 2-5 at public, primary schools in Nuru's targeted farmer areas during the 2016 Kenyan school year. In 2016, the outreach program served a total of over 4,000 students in 18 schools. For the 2016 impact evaluation two impact schools were selected as well as four core schools for monitoring purposes.

Using a difference in difference methodology, key findings of the 2016 impact report include:

- When compared against growth rates in literacy skills from the 2015 school year prior to Nuru's intervention, the average literacy levels of students in Impact School #1 during Nuru's first year of services increased by 31%.
- For Impact School #1, the percentage of students reading at the paragraph level nearly doubled, increasing from 26% at the end of 2015 to 50% at the end of 2016, with an increase of within year growth rates of 13 percentage points.
- After the 2015 teacher strike negatively affected growth rates in Impact School #2, literacy levels in 2016 significantly increased. Average progress towards literacy levels increased by 28% over the year prior to Nuru's services (2014) compared to only a 4% increase in growth rates between 2014 and 2015.
- In 2016, the percentage of students in Impact School #2 who could read at the paragraph level or above more than doubled from the year prior to Nuru's services and increased by 22 percentage points from 21% to 43% from the beginning to the end of the year.
- For monitoring purposes, three of the four core schools saw increases in literacy levels to the highest levels since the intervention began in 2012.

This is the final impact report for the Nuru Kenya outreach program. In 2017, the program's core components will involve teacher training, reading material provision, school administrator training, and community reading initiatives run through Nuru's cooperatives. A new phase of impact assessments will be conducted to evaluate the impact of this new model in a new district.

# Education Program

The Nuru Kenya (NK) Education Program 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,

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vocabulary and comprehension. NK Education facilitators aim to build student confidence and increase student participation in literacy development through games, reading activities and creative projects. Literacy skills allow students to progress towards secondary school and have opportunities for livelihoods outside of agriculture, which help end intergenerational poverty and accomplish Nuru's goals.

## Objective

This report serves as the 5th impact assessment for the 2016 Kenyan school year for Nuru's outreach program in Kuria West, Kenya. This paper presents the results from the Uwezo evaluation and the program's monitoring data over time.

Nuru M&E supports this work by conducting an annual review of progress toward the program's impact goal to address the evaluation question: *What is the impact of Nuru Kenya Education on progress toward English literacy and a student's ability to read fluently at the paragraph level and above?*<sup>1</sup>

This is the final impact evaluation of the NK Education outreach program. In 2016, the decision was made to transition the NK Education Program to a different, more sustainable model that fit in line with the new cooperative-based strategy of Nuru Kenya.

## Methodology

NK M&E administers an annual Uwezo literary assessment to evaluate the impact of NK Education. 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. NK M&E enumerators collected data by coordinating available dates and times (Table 1) with both the Ministry of Education and NK Education for surveys administered the beginning of the year (BOY) and end of the year (EOY).

Table 1: 2016 Uwezo Assessment Schedule

Collection	Dates	No. of Enumerators	No. of Schools
BOY	Jan 11 - Jan 14	24	6
EOY	Sep 28 - Oct 3	25	6

For the impact analysis, one school was selected and assessed at the beginning and end of year prior to Nuru's services in 2015 and the beginning of year (BOY) and end of year (EOY) after one year of Nuru's services in 2016. A census of the students present on the day of the exam were taken, so sample sizes vary slightly (Table 1).

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<sup>1</sup> The evaluation survey is available upon request

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Table 1: Impact School #1 sample size (grades 2-5)		
	BOY	EOY
2015 (pre-Nuru)	98	108
2016 (post-Nuru services)	134	107

A second school that was reported on for the 2015 impact report has been followed up to assess the two year impact of Nuru's Education Program. This school was assessed at the beginning of the year (BOY) and end of year (EOY) for the years 2014-2016. A census of the students present on the day of the exam were assessed, so sample sizes vary slightly (See Table 2).

Table 2: Impact School #2 sample size (grades 2-5)		
	BOY	EOY
2014 (pre-Nuru)	151	150
2015 (Year 1 of Nuru services)	122	114
2016 (year 2 of Nuru services)	112	90

## Uwezo Literacy Assessment

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>2</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>3</sup> Specifically, NK M&E assesses literacy levels in a select number of host schools to both monitor and evaluate Literacy Outreach at the BOY and EOY.<sup>4</sup>

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

- To evaluate 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 students in grades 2-5 in the Impact School. In the second year of the study (post-Nuru), when students in grades 2-5 in the school participate in the literacy outreach program scores are again collected and compared with scores from the pre-Nuru year. NK M&E employs a difference in difference approach to evaluate impact

<sup>2</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>3</sup> Kenya's official languages are English and Kiswahili.

<sup>4</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.

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comparing growth rates in the year prior to Nuru's intervention with growth in the year of Nuru's services. The difference in the growth rates in those years is seen as Nuru's impact.

- Additionally, Nuru has been able to track one school (Impact School #2) over a three year period from the year prior to Nuru's services in 2014 to 2016 after two years of Nuru's intervention to evaluate continued growth.
- 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.

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.

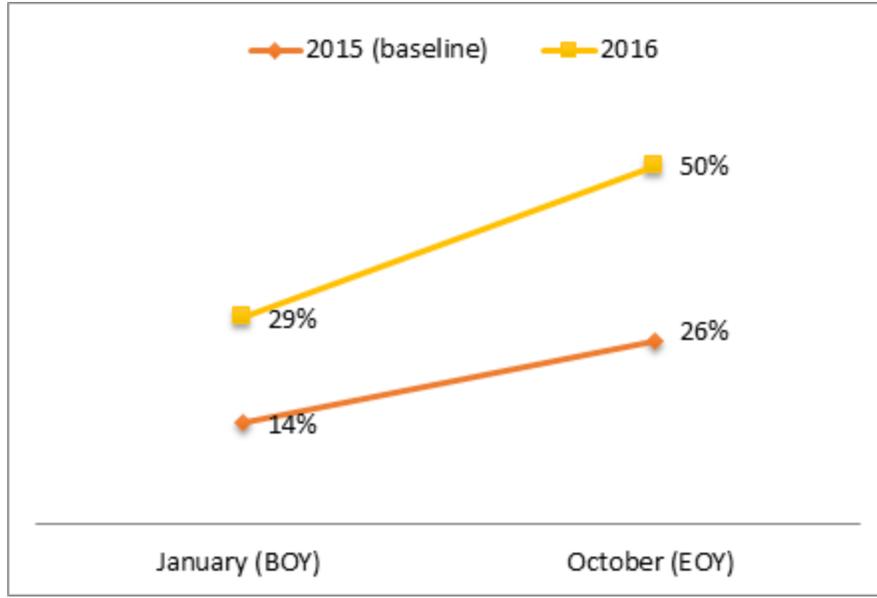
## Results

### Results: Impact of Nuru Outreach Program (One-year)

The percentage of children who were literate at the end of the year nearly doubled from 29% in 2015 to 50% 2016 (Figure 1). These findings exceeded the target of 10% difference in gains between the non-Nuru year and the Nuru year. Similarly, significantly more students from the post-Nuru year read at the paragraph level or above in comparison with their pre-Nuru counterparts. From BOY to EOY, pre-Nuru students demonstrated an increase of 8 percentage points in comparison with the post-Nuru students, who improved their paragraph and above rates by 21 percentage points. The gains for students during Nuru's year of outreach were 13 percentage points higher than the year prior to Nuru's services.

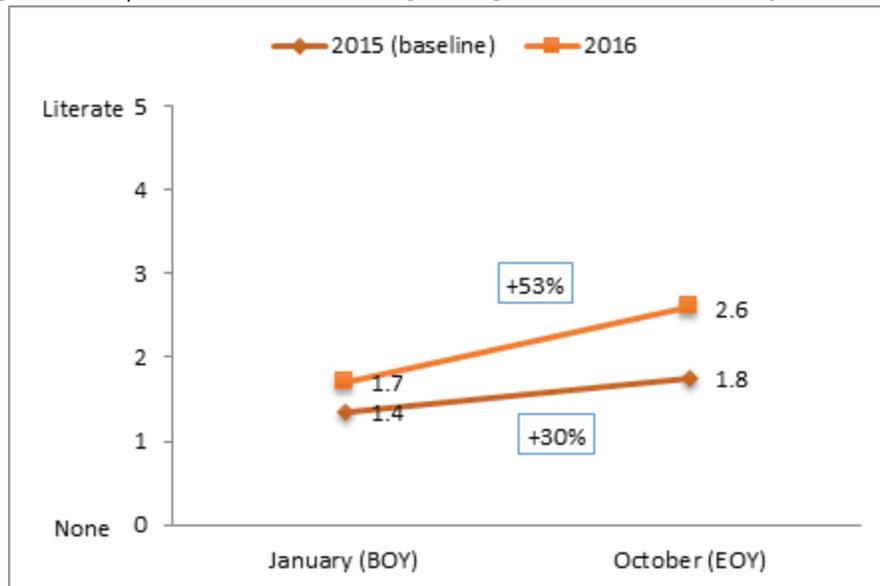
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Figure 1: Impact School #1 Paragraph and Above Levels 2015-2016



Post-Nuru students began the year reading at the letter level and ended the year achieving scores at above the word level with about half being able to read paragraphs and above (Figure 2). On average, pre-Nuru students recognized letters at both BOY and EOY. These findings well exceeded the target of 10% difference in gains from the non-Nuru year to the Nuru year. Students from the pre-Nuru year increased their average progress toward literacy by 30% while post-Nuru, students experienced a 53% jump in scores from BOY to EOY. Overall, post-Nuru students outperformed pre-Nuru students in progress towards literacy by 23%.

Figure 2: Impact School #1 Average Progress Towards Literacy 2015-2016



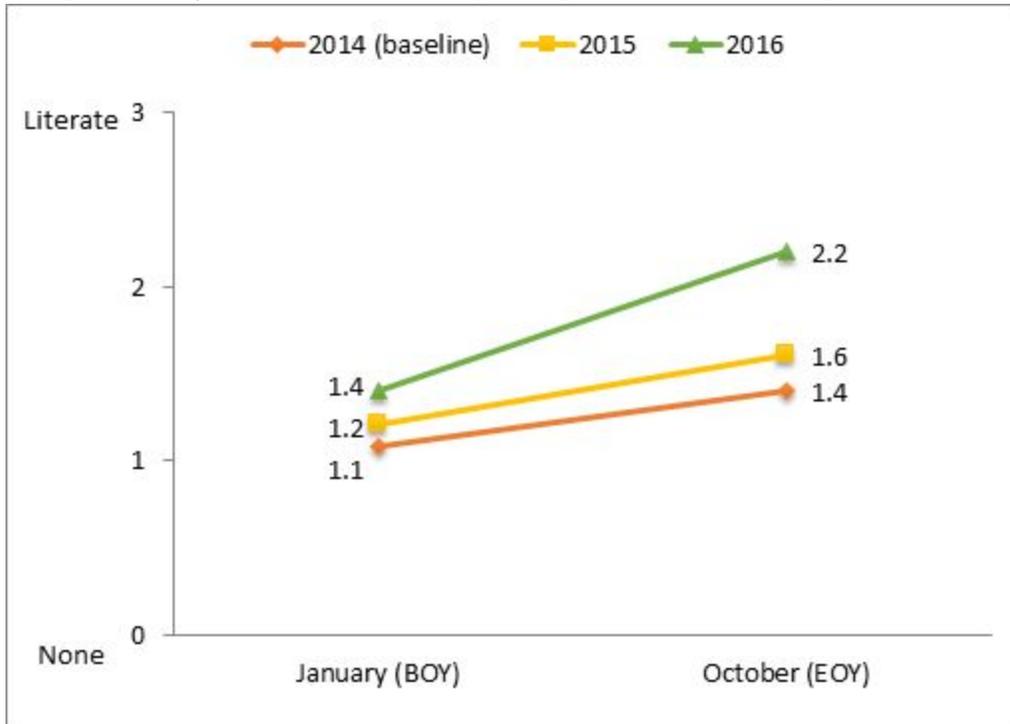
Literacy Scores: 0 = None, 1 = Letter, 2 = Word, 3 = Paragraph, 4 = Story, 5 = Full Literacy

## Results: Impact of Nuru Outreach Program (Two-Year)

In 2015, a 5-week teacher strike at the end of the school year had a substantial effect on the impact of the outreach program across all Nuru schools. Slower than normal growth was seen in Impact School #2 as well as monitoring data from other Nuru schools that the program had tracked over time. Figure 3 illustrates the small difference in growth rates from 2014, the year prior to Nuru's intervention and 2015, after one year of Nuru's intervention. The percentage difference in growth rates between Nuru's first year of services and the year prior to Nuru's services on the average progress towards literacy was only 4%.

In 2016, in the absence of a teacher strike, the impact of Nuru's outreach program was more evident. Students from the pre-Nuru year (2104) saw increases in average progress toward literacy of 29% while post-Nuru year 2 (2016), students experienced a 57% jump in scores from BOY to EOY. In sum, when strike conditions were not present, students in Impact School #2 increased 28% more than the pre-Nuru year compared to an only 4% difference in growth rate from 2014 to 2015. Since Nuru's Education Program works in conjunction with national education programs, their effectiveness hinges on schools being in session. In practical terms, pre-Nuru students averaged just over being able to read letters, while students after two years are now averaging just past the word level.

Figure 3: Impact School #2 Average Progress Toward Literacy 2014-2016



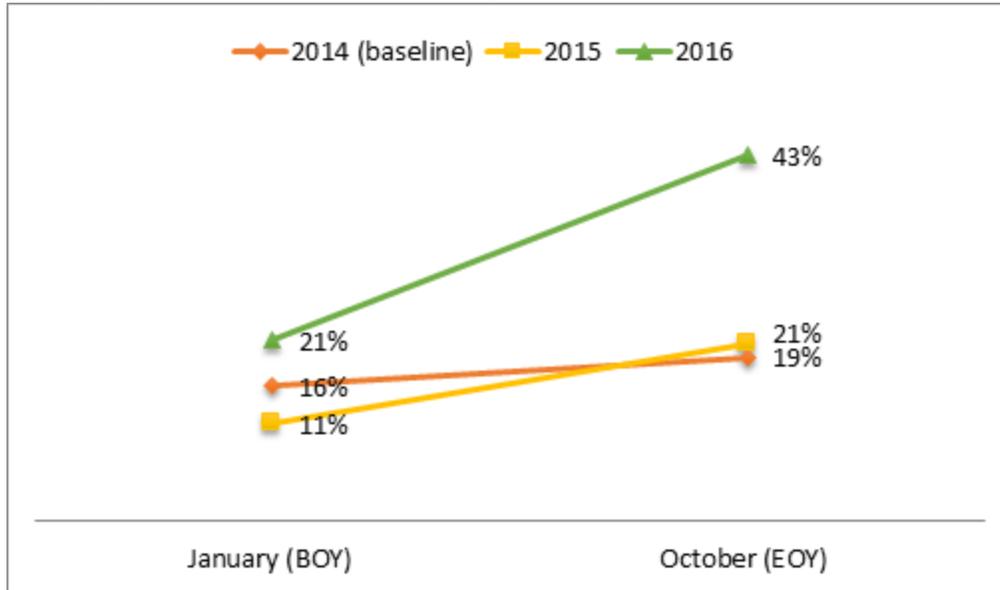
Literacy Scores: 0 = None, 1 = Letter, 2 = Word, 3 = Paragraph, 4 = Story, 5 = Full Literacy

When assessing results for how many students could read at the paragraph level or above, trends were similar. In 2014, prior to Nuru, the percentage of students who could read at the paragraph

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level grew by three percentage points. In 2015, during the strike shortened year, the percentage of students who could read at the paragraph level grew 10 percentage points from the beginning to the end of the year. In 2016, the percentage of students who could read at the paragraph level or above more than doubled and increased by 22 percentage points from 21% to 43% from the beginning to the end of the year (Figure 4).

Figure 4: Impact School #2 Paragraph and Above Levels 2015-2016



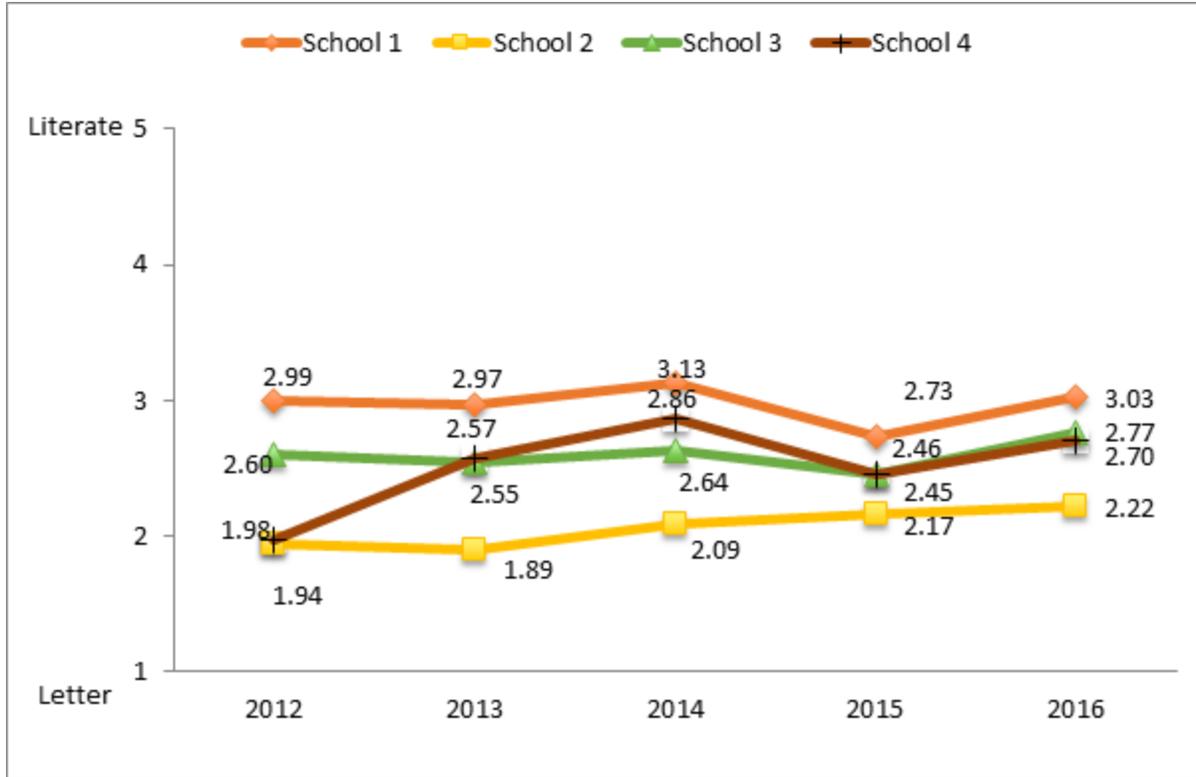
In sum, Nuru has seen significant impact on the two literacy measures at both of the impact schools it assessed over the last two years. Children's progress towards reading with comprehension will open up doors for them to understand concepts they read in other subjects and give them a better shot at secondary school and beyond.

## Results: Monitoring Data 2012-2016

Nuru Kenya M&E also reviewed trends in four core schools from 2012-2016. In general, monitoring results from year to year fluctuate amongst host schools (School 1, School 2, School 3 and School 4), but on the whole, match impact data. For example, Nuru Kenya Education saw a dip in average progress towards literacy across the four schools in 2015 due to the prolonged teacher strike, but scores rebounded to near previous year highs indicating a return to sustained impact and growth (Figure 5).

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Figure 5: Core Schools BOY-EOY Average Progress Toward Literacy 2012-2016

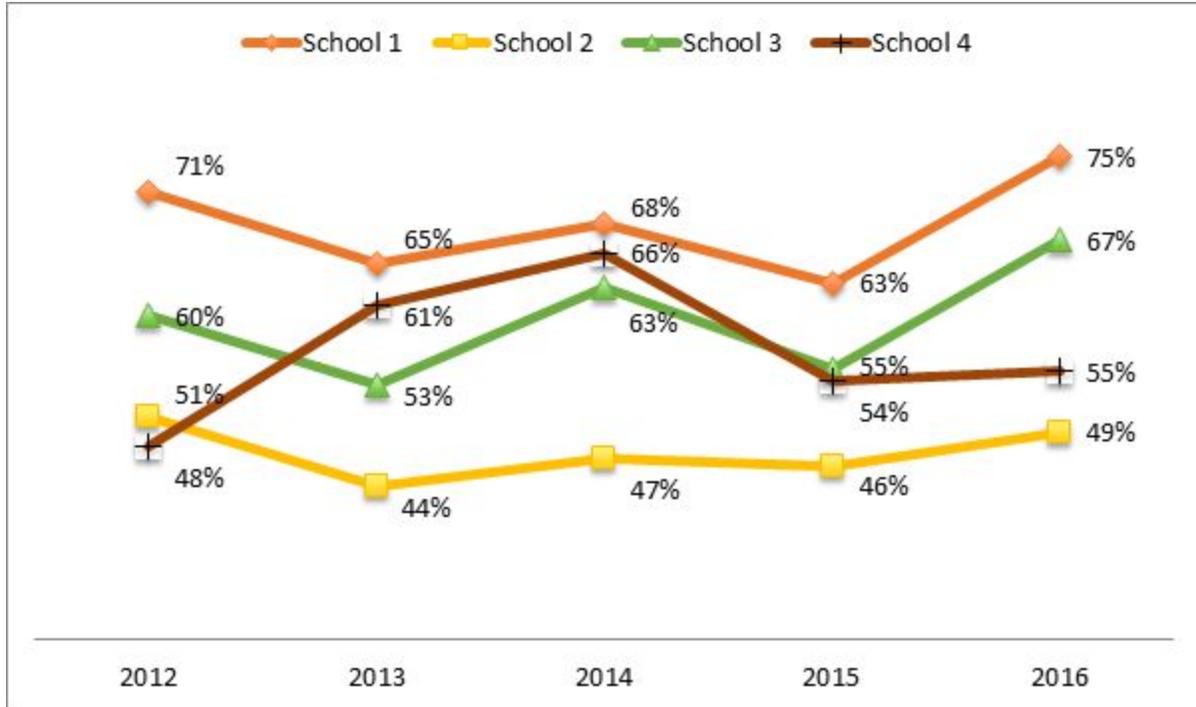


Literacy Scores: 0 = None, 1 = Letter, 2 = Word, 3 = Paragraph, 4 = Story, 5 = Full Literacy

When looking at the four core schools on measures of students' ability to read at the paragraph and above at the end of each school year, similar trends were found with all schools but one seeing an uptick from 2015 levels on the percentage of students reading at the paragraph level (Figure 6). Three of the four schools saw their largest percentage of students reading at the paragraph level and above since the first year of the intervention in 2012. Data for the year prior to Nuru's first year of intervention is not available for these four core schools and thus the amount of impact attributable to Nuru is unknown despite trends upward over the last five years with Nuru's services. With that said, trends upwards over time are not present on average in national and regional level data when looking at the data collected by the Uwezo initiative over 2012-2014.

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Figure 6: Core Schools Paragraph and Above EOY 2012-2016



## Limitations

While the results were very positive across schools Nuru targeted, Nuru recognizes some limitations to the study. Due to logistical challenges, Nuru was unable to isolate and assess the specific literacy achievements of children from Nuru households. Instead, the NK M&E team collected a census of students from the selected evaluation schools, thus partially diluting the potential impact of Literacy Outreach on Nuru households alone. Also, in 2016, Nuru delivered a two week teacher training for the first time to teachers in the public schools it served. This may have had a positive impact on the results of the 2016 school year, especially compared with other years. However, it is not possible to isolate the unique impact of the teacher training given the current study sample.

## Conclusion

The Nuru Kenya Education Program achieved its goals, helping to increase students literacy levels on both the average progress towards literacy and percentage of students who could read at the paragraph level or higher. Students showed progress towards using reading as a skill to learn new things which could open up opportunities in the future and prevent the cycle of intergenerational poverty.

- In 2016, students in Impact School #1 improved their average levels of literacy by 31% more than in the year prior to Nuru's intervention. The percentage of students reading at the

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paragraph level nearly doubled, increasing from the end of the previous year from 26% to 50% and a difference in growth rates of 13 percentage points.

- At Impact School #2, students saw a marked increase in average progress towards literacy and the ability to read at the paragraph and above when compared to the pre-Nuru year in 2014 and a strike shortened first year of the intervention in 2015. Once again, paragraph and above rates doubled and the majority of students moved from being able to read letters to being able to read words.
- Three of the four core schools saw increases in literacy levels to the highest levels since the intervention began.

As mentioned, this is the final year of the outreach program for Nuru Kenya Education. NK Education is transitioning to a model that is roughly based on Save the Children's Literacy Boost model. Teacher training, administrative official training and supervision, and community engagement will be core tenants to ensure sustainability of the program under Nuru Kenya's new cooperative and graduation model strategies. The evaluation strategy will shift to only include children of Nuru farmer households, be conducted at the household level, and compared against children in non-Nuru areas to address some of the limitations of the current strategy.