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MINISTRY OF EDUCATION, SCIENCE, TECHNOLOGY AND SPORTS

USAID/Uganda School Health and Reading Program: Early Grade Reading Assessment Results: Cluster 1 Follow-Up 4 – End of P4: Ateso, Leblango, Luganda, Runyankore-Rukiga

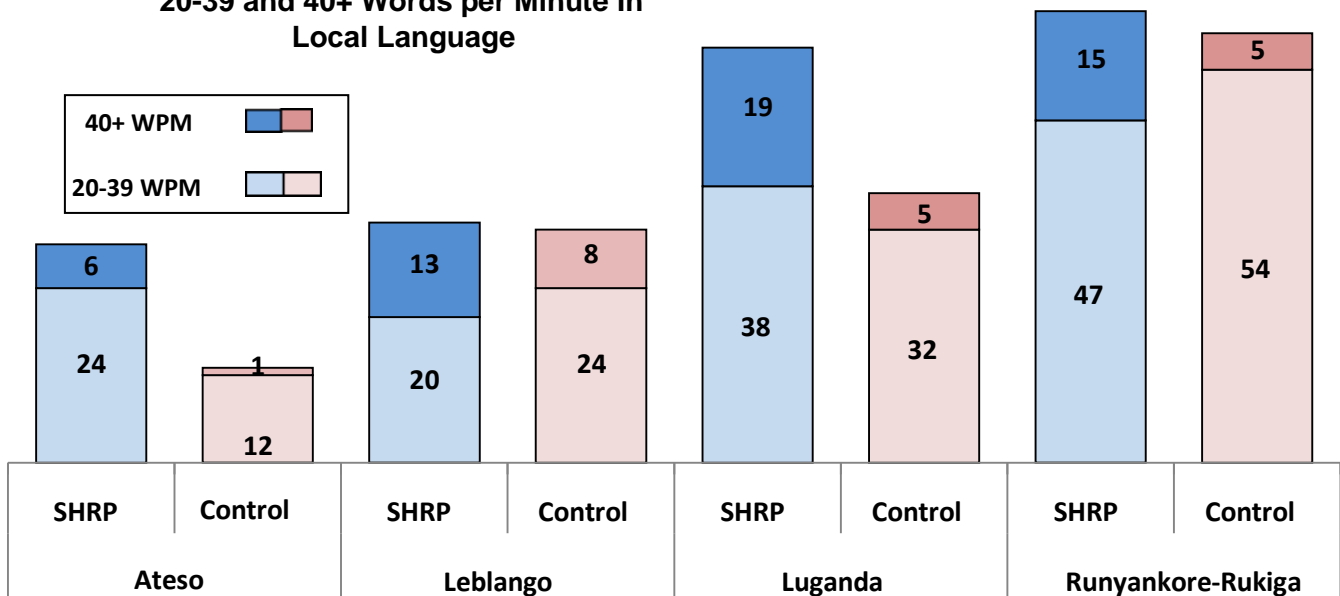
Has reading achievement increased as a result of the USAID/Uganda School Health and Reading Program interventions? Early Grade Reading Assessment data collected for four Cluster 1 languages (Ateso, Leblango, Luganda and Runyankore-Rukiga) and English at the beginning of Primary 1 compared to end of Primary 4 show increases in fundamental reading skills, higher than increases found in control schools. No systematic differences were found between girls and boys.

By the end of P4, learners in Program Schools are reading more words than learners in control schools and are closer to becoming fluent readers in both Local Language and English

The Early Grade Reading Assessment data presented here are from a randomized control trial which included 4,541 learners in program schools and 1,468 learners in control schools at the beginning of P1 in February, 2013 compared to 1,417 learners in program schools and 1,505 learners in control schools at the end of P4 in October, 2016¹.

Local Language Oral Reading Fluency: Differences in Oral Reading Fluency (ORF or words per minute) between program and control learners are notable and have increased more in program schools than control schools as shown in the Figure 1 and Figure 2². **Figure 1** shows the percent of learners who could read 20-39 words per minute (wpm) and 40 or more wpm at the end of P4. At baseline, all language groups (treatment and control) started from zero. For all 4 languages, program learners were significantly more likely to be reading 40 or more words per minute than control learners.

Figure 1: Cluster 1 Percent of P4 learners reading 20-39 and 40+ Words per Minute In Local Language



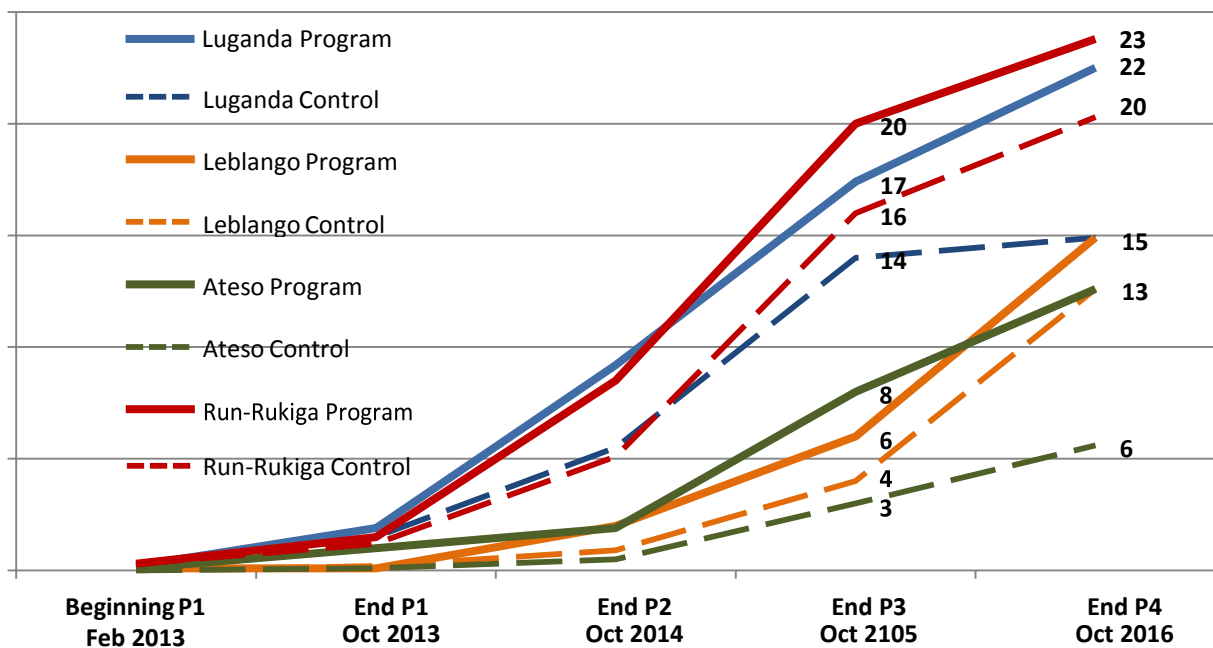
¹ Districts include: Wakiso, Gomba, Kiruhura, Bushenyi, Kabale, Kumi, Katakwi, Serere, Apac, Lira, Kole.

² Differences in Ateso are statistically significant with medium effect sizes for 0 wpm, 1-19, wpm 20-39 wpm and 40+ wpm (effect sizes .69, .29, .43 and .39). In Luganda, the differences in 1-19 wpm and 40+ wpm were significant (effect sizes .35 and .75). In Leblango, 60 + wpm is significant (effect size .398). In Runyankore-Rukiga the difference in 40+ is statistically significant (effect size 0.52). The only significant gender differences were in control schools where males scored higher than females in Luganda 0 wpm, Ateso 1-19 wpm, and Runyankore-Rukiga 1-19 wpm, and Luganda 1-19 wpm where girls scored higher than boys.

In Ateso, the percent of learners reading 20 or more words a minute increased to 30% (24% reading 20-39 wpm and 6% reading more than 40 wpm) in program schools and to 13% in control schools. In Leblango, 33% of program learners could read 20+ words per minute (13% read more than 40 wpm), compared to 32% for control learners (only 8% could read 40+ wpm). In Luganda, 57% of program learners could read more than 20 wpm compared to 37% in control schools. For Runyankore-Rukiga, the percent of learners reading 20 or more words per minute increased to 63% compared to 59% in control schools but the percent of program learners reading over 40 wpm was 15% in program compared to only 5% in control. **In every language, programs learners are shifting to higher levels of reading at higher rates than control learners.**

Figure 2 shows learners Local Language reading progression from the beginning of P1 (baseline in February, 2013) to the end of P4 (Follow-Up 4 October, 2016). Average Oral Reading Fluency in Local Language (words read per minute or wpm) shows continual progress over the past years³. The solid lines in the chart below show program schools, the dashed line of the same color shows control schools. Program schools continue to outperform control schools in all 4 languages (Luganda 22.5 vs 14.8; Runyankore Rukiga 23.8 vs. 20.3; Leblango 15.0 vs. 12.5 and Ateso⁴ 12.7 vs. 5.6). P4 saw a lot of growth for all learners, with the exception of Luganda control schools.

**Figure 2: Average Local Language Words Read Per Minute (wpm)
Cluster 1 Beginning of P1 to end of P4,
Program (solid lines) and Control Schools (Dashed lines)**

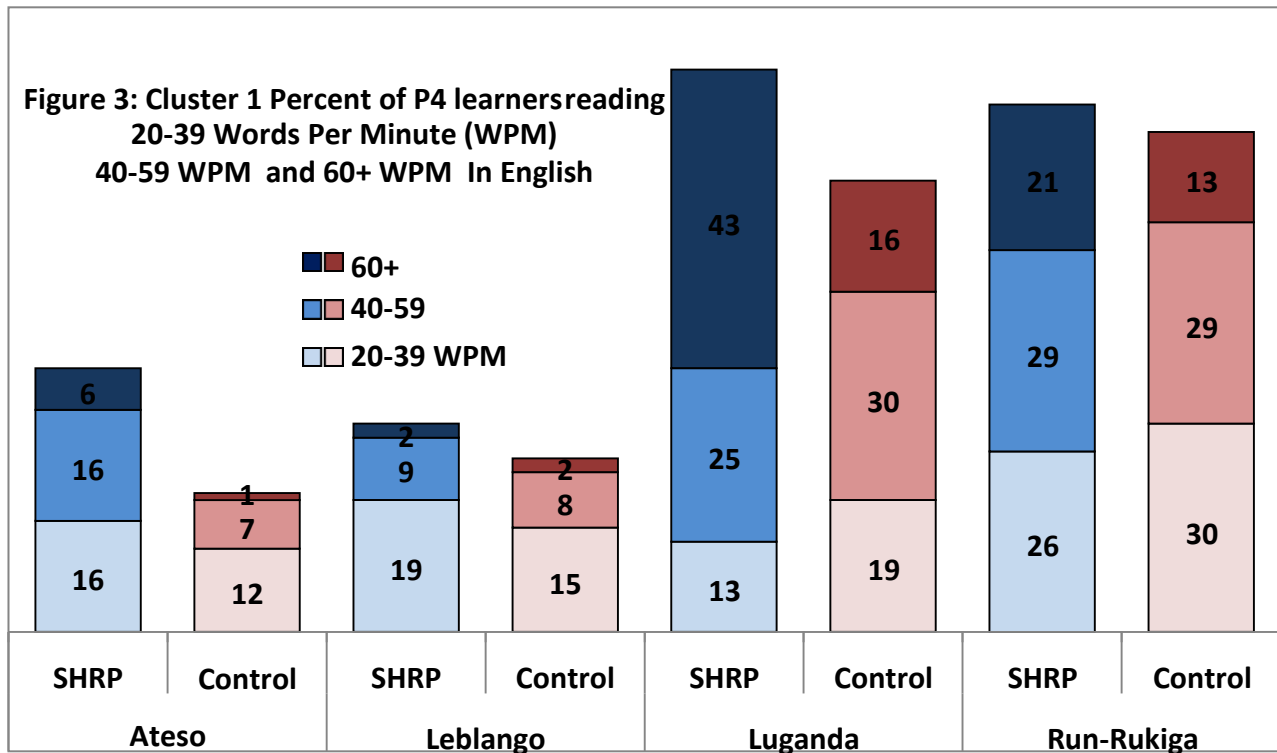


English Oral Reading Fluency and Comprehension: The program follows the MoES thematic curriculum and teaches reading predominantly in the local language in P1-P3, with more and more time devoted to teaching in English as the learner progresses to higher grades – in P4, the teaching is almost all in English. From P1 onwards, the program supports materials and training in both English and local language reading. Based on the knowledge that learning how to read in the local language has been found to make learning to read in a second language easier, in P4 we would expect to see improvements in English reading associated with the program.

³ At the end of P4, gender differences were found in Leblango treatment and Ateso control schools where boys were higher than girls.

⁴ Differences in ORF at the end of P4 were statistically significant with large effect sizes for Luganda ($p < .001$, effect size .85) and Ateso, ($p < .001$, effect size .71), while Runyankore Rukiga had a medium effect size (.39).

Similar to local language, learners in program schools are reading more words and progressing into higher wpm reading levels – in all 4 languages, program learners were more likely to read 40 or more words per minute and in 3 of the 4 languages, program learners were more likely to read 60 or more words per minute (Figure 3). There were no systematic gender differences⁵.



While all groups started at zero at baseline, 43% of learners in Luganda speaking program schools could read 60+ WPM in English compared to only 16% in control schools. In Runyankore-Rukiga, 21% of program learners could read 60 or more words per minute compared to only 13% for control learners. In Ateso, 6% of program learners could read 60 or more words per minute compared to only 1% of control learners and 16% of program learners could read 40-59 words per minutes in English compared to only 7% in control schools. Leblango program learners seem to have only the slightest, not significant, advantage over control learners in English.⁶

Figure 4 shows learners English reading progression from the beginning of P1 (baseline in February, 2013) to the end of P4 (Follow-Up 4 October, 2016). Average Oral Reading Fluency in Local Language (words read per minute or wpm) shows continual progress over the past years⁷. The solid lines in the chart below show program schools, the dashed line of the same color shows control schools. Program schools continue to outperform control schools in all 4 languages (Luganda 52.5 vs 30.8; Runyankore Rukiga 34.8 vs. 31.5; Leblango 11.9 vs. 10.3 and Ateso⁸ 16.6 vs. 7.7). P4 saw a lot of growth for all learners in English oral reading fluency with the exception of Luganda control schools (the same situation was found in Local Language).

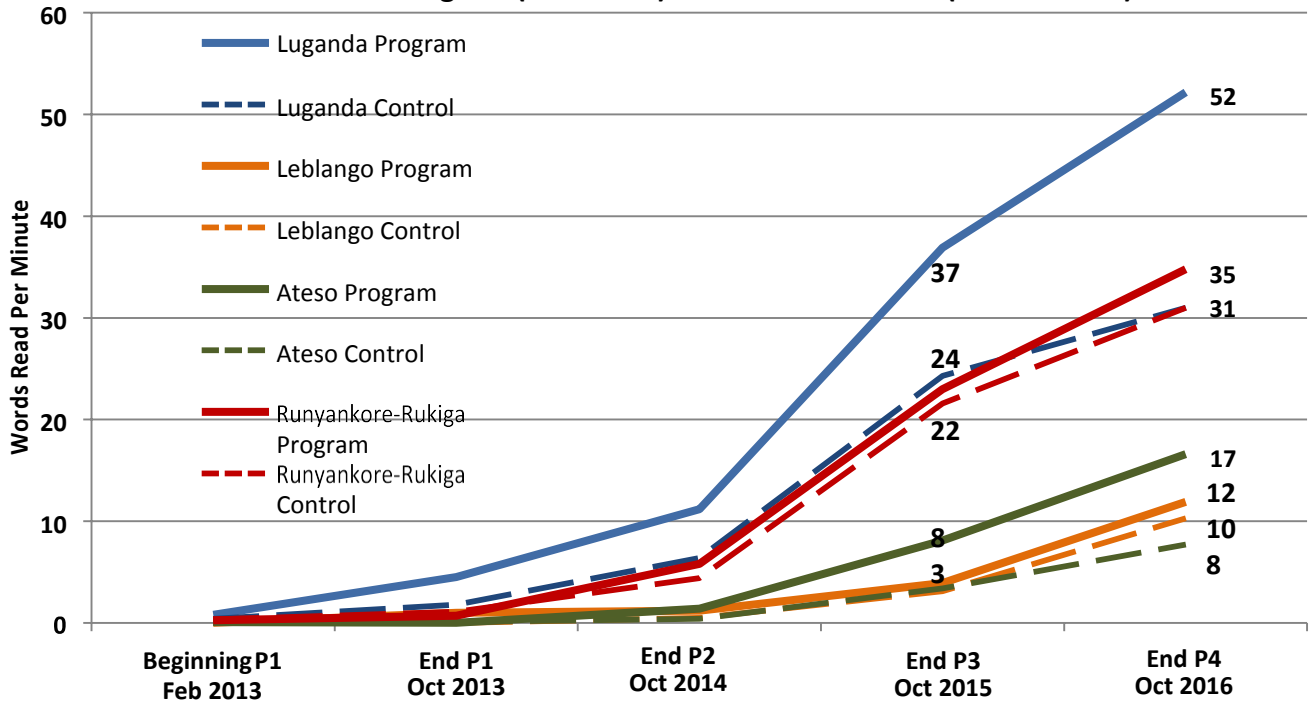
⁵ The only significant gender differences were found in Leblango speakers 1-19 wpm where boys scored higher than girls in treatment schools and Luganda speakers in control schools 60+ wpm where girls scored higher than boys.

⁶ The differences were statistically significant for Ateso for 0 wpm, for 40-59 wpm and 60+ wpm; for Luganda 0 wpm and 60+ wpm and for Runyankore-Rukiga 60+ wpm.

⁷ At the end of P4, significant differences were found in Ateso (p=.001) and Luganda (p=.05). Gender differences were found in Ateso control schools where boys were higher than girls.

⁸ Differences in ORF at the end of P4 were statistically significant with large effect sizes for Luganda (p<.001, effect size .85) and Ateso, (p<.001, effect size .71), while Runyankore Rukiga had a medium effect size (.39).

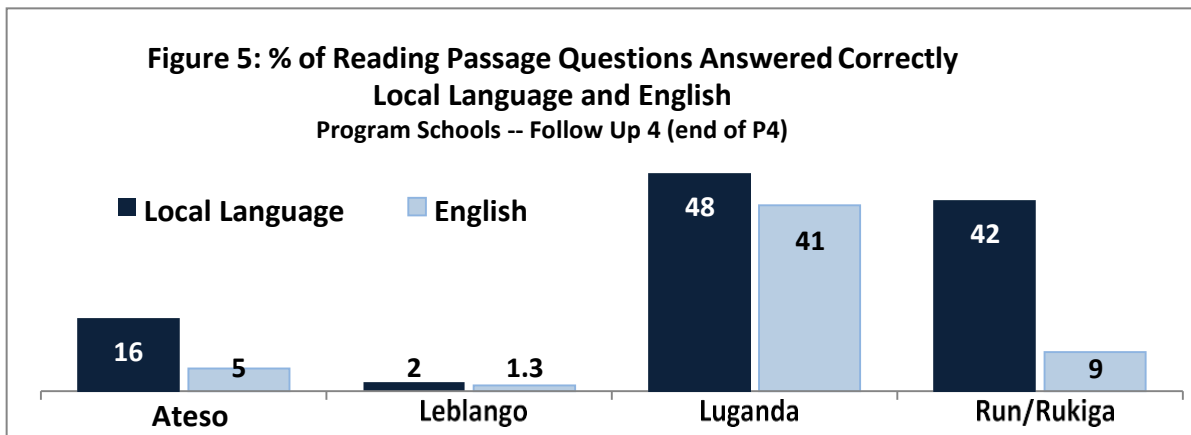
Figure 4: Average English Words Read Per Minute (wpm), Cluster 1 Languages Beginning of P1 to end of P4, Program (solid lines) and Control Schools (Dashed lines)



In prior years, it was always the case that learners could answer more questions (comprehend what they are reading) in local language than English – even when they were able to read more words in English. **Figure 5** shows that this is still the case in all of the languages with the exception of Leblango – where learners could answer the same number of questions in the local language and English. In Ateso, program learners answered 16% of Local Language questions compared to only 5% of the English, in Luganda 48% compared to 41% and in Runyankore-Rukiga learners answered 42% of local language questions compared to 9% of English questions.

Learners in Ateso, Luganda, and Runyankore-Rukiga speaking program schools understand more of what they read in local language than in English

Figure 5: % of Reading Passage Questions Answered Correctly Local Language and English Program Schools -- Follow Up 4 (end of P4)



Understanding more in Local Language than English lends support to the importance of learning in local language.

