Deepalaya Community Library Project
Reading Fluency Program Evaluation Report
Summer 2016

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Introduction/Summary

The Deepalaya Community Library Project serves 600-800 mostly working class and poor children and adults in the Sheikh Sarai region of Delhi. We have long noticed that many of our student members read slowly and/or read books that are well below grade level.

To confirm informal observations that suggested many library members had difficulty even with Hindi reading fluency, we conducted a random screening of 99 members of the Deepalaya Community Library Project on June 6, 2016 to determine reading rate and accuracy of our members. We found that, although most of our members could decode at least basic words, very few had acquired the ability to read quickly or fluently enough to be considered truly proficient readers.

Based on the screening data, we selected and recruited 21 members enrolled in schools between fourth to twelfth standard to participate in a five day a week, one-hour reading workshop. The workshop ran between June 13th-June 30, a total of 14 sessions. Volunteer teachers conducted a variety of activities known to support reading fluency, self-monitoring and reading stamina. At the end of the program,

students were assessed again and results indicated significant growth in both accuracy and rate of reading. Teacher observations also suggested improvement in use of self-monitoring and self-correcting strategies and overall student confidence.

This report outlines the program we used, details the results of our assessments and observations, and suggests what implications our experience has for classroom teachers in Delhi and volunteer programs such as ours.

Background and Motivation

Though most reading is done silently, oral reading fluency is an important measure of overall reading proficiency. It has been well established that those who are able to read text with appropriate rate and expression are not only able to read more material faster, but tend to understand what they read better. There are many possible reasons for this relationship, but an important one is that readers don't read automatically must use much of their mental energy decoding words; as a result, they tend to have less energy left over for thinking about the meaning of the text they are reading.

Over the years we've informally observed that although most library members have learned how to decode words in Hindi (and sometimes in English), they seem to read slowly and/or read books that are well below their grade level. We've speculated that this may have to do with the fact that while schools do a decent job of teaching students to decode words, they rarely give students time to read the amount of text required to become fluent readers in any language. A typical annual Hindi or English reader may contain 18 passages (a dozen stories and non-fiction articles and a half-dozen short poems is typical). That is not nearly enough text for students to practice with to become fluent readers.

Though our library does not have the time or volunteer resources to teach students decoding skills, we do have books for students to read—and research has shown that extensive reading is necessary part of obtaining reading fluency in any language. We also know that members who are not fluent readers will be unlikely to be able to access many of the longer, more interesting books we have to offer. We wondered if a short-term summer intervention aimed at building fluency could help students become more confident readers of longer, more complex text.

In order to find out whether our informal observations of library members were accurate, on the first Monday in June, we conducted a one-day random screening of library 99 members. We chose to focus on Hindi reading proficiency for several reasons. First, and most importantly, most of our students are native Hindi speakers. It is generally accepted that students who acquire literacy in their mother tongue are more able to acquire literacy in a second or third language. Moreover, because we had limited time, it made sense to focus on what we thought we might be able to most efficiently impact. It seemed likely that improving reading fluency in Hindi would be easier for native Hindi speakers because they would be able to use all major reading cuing systems effectively. We predicted that our members would likely have access to decoding strategies because Hindi is a phonetically regular language and most Delhi schools teach phonics explicitly. Additionally, since our members know the language, we guessed that with instruction they would be able to make use of semantic/context clues (what makes sense) and syntactical clues (what sounds right) to figure out difficult words and self-correct miscues.

Initial Assessment and Results of Membership Fluency Screener

Our initial assessment confirmed what we expected: more than 90 percent of our members could decode words, but a large majority were not fluent readers. Before our summer workshop, we conducted a one-minute fluency screening of 99 library members, second standard and up. Following are the number of students in each class we assessed: second standard students: 10; third standard students: 5; fourth standard students: 16; fifth standard students: 14; sixth standard students: 19; seventh standard students: 19; eighth standard students: 9; ninth standard students: 4; tenth, eleventh and twelfth standard students: 1 each). In most cases, members read from a text at the grade level they had recently completed (e.g., a member beginning sixth standard was given a 5th standard text). For simplicity, all students from beginning of seventh upward were given a sixth standard text. To insure texts were unseen, they were chosen from government-approved Hindi readers not used in government schools or in schools where our members study. Trained volunteers marked miscues and self-corrections, and then recorded the number of errors and the correct number of words read by each student in one minute.

We did not have access to data to determine expected Hindi reading rates. Instead, to get a general idea of our members' reading proficiency, we looked at expected reading rates for US students reading English based on the AimsWeb Curriculum Based Monitoring tool. The drawbacks to using AimsWeb standards are clear: for one thing, doing so involves comparing oral reading rates in different languages. Though this is a limitation, research suggests that, if anything, students learn to decode phonetically regular languages like Hindi and Spanish more easily than they do phonetically irregular languages such as English or French, meaning there is little reason to expect proficient readers in Hindi would read significantly more slowly than proficient readers in English.

It is also possible that, in spite of our choosing grade level narrative texts in Hindi, those texts may have been somewhat easier or more difficult than the grade level narrative texts used to assess US students in English.

Keeping in mind these limitations, some general observations of the data were instructive. Based on AimsWeb standards for correct words per minute read, we found that 82 percent of our members read at a rate that would be suggest they were in need of 'intensive' intervention or support; only about 8 percent appeared to be 'at standard'; the remaining students were in what is sometimes called the 'strategic group', meaning they were close to meeting the standard, but would likely fall behind without some further support. On a more positive note, fewer than 10 percent of the members we assessed were unable to read any words or stated they could not read Hindi.

Though we did not collect enough reliable data to quantify other reading behaviors, we could see from our assessment that many students failed to self-correct based on what made sense or what sounded right; many readers appeared to rely exclusively on sounding out words—in those cases miscues looked similar to the correct word but did not mean the same thing (e.g., saying 'unko' instead of 'unki'.)

Based on this data, it seemed likely that many of our members (and many government school students, generally) could benefit from interventions aimed at increasing reading fluency and self-monitoring skills

(i.e., the ability to self-correct reading miscues based on what sounds right, what makes sense, as well as letter knowledge and decoding skills). We decided to go forward with a small group, short-term intervention to provisionally evaluate whether a few well-tested methods of building fluency in other languages would work with readers of Hindi texts.

Selection and Recruitment of Participants

In selecting participants for the summer workshop we looked at several factors. We eliminated from consideration students who were already clearly 'at standard' and students who could not read at all; our goal was to offer a short-term intervention to members who could read, but who read slowly. It was important to us that students be motivated, as they would be expected to give up an hour a day for three weeks during their summer holidays and to do homework. As a result, we did not push students to participate who seemed reluctant. Given our limited time and resources, we focused on grade/age levels where there seemed to be the most candidates: fourth; sixth; and seventh and up.

Students were recruited individually the week before the program began. Phone calls were made to all homes the day before the program's first day, and students were called each day if they did not come on time. In most cases, students lived close to the library and were able to come a few minutes late even if they initially forgot to come. In the end, we recruited 21 students: Five fourth graders; five sixth graders; six seventh graders; two fifth graders; one in ninth, tenth and twelfth each. All but one were in need of 'intensive' support by US standards, but within the group, a wide range of reading rates was represented: from 26 correct words per minute to 121 correct words per minute.

Volunteer Staff/Grouping Method

Though our program involved 10 volunteers, it was led by three point people: myself (a very slow Hindi reader and US-trained educator with a background in Special Education and reading instruction) and two long-time Deepalaya volunteers. Most of the volunteers received 45-60 minutes of direct training and then ongoing coaching from me. During the course of the program, three groups of Deepalaya teachers (totaling about 10 teacher) were introduced to the programs methods and observed sessions.

Students were divided, roughly by age and class, into four groups ranging from 4-7 students each. Each group came one hour per day, Monday-Friday. Each session was led by one teacher; on most days, there was an additional assistant volunteer.

Program Assessment, Goals and Design

Assessments used:

Pre-test data based on the one-minute fluency screening conducted on June 6. Students in standard II through standard VII read from a text at the grade level they had recently completed (e.g., a student in the beginning of sixth standard was given a 5th standard text). All students above seventh standard were assessed with a sixth standard text. To insure pre/post assessment texts remained unseen, students were not given access to them during the program. Volunteers marked miscues, self-corrections, and recorded the number of errors and the correct number of words read in one minute. After seven instructional days, students were given another unseen practice text probe, also selected from a grade level text. At the end of the program the original pre-assessment was repeated as a post-assessment.

Stated learning objectives:
In order to avoid the idea that the only goal of the program was to read faster, three learning objectives were explicitly stated (in Hindi and English) and reviewed daily:

1. *We will read faster and more accurately.*
2. *We will read in a natural voice.*
3. *We will correct our errors words don't make sense or don't sound right.*

In addition to these goals, as the program continued, we added a fourth goal related to stamina: *We will read for longer periods and we will read more books and longer books.*

Stated behavior objectives:
Three 'rules' were stated in Hindi and English and reviewed daily:

1. *Work hard!*
2. *Work together!*
3. *Have fun!*

Emphasis was placed on building cooperation in the group; (e.g., 'all of us are starting at a different place but if we work hard and work together, we will all improve.') Fun was stressed as something that happens when we work together and as something that happens when we read good books. On most days we saved a few minutes for games or other fun activities.

Program design and routines
In the natural course of things, most readers become fluent simply by reading extensive amounts of text. We don't learn to ride a bicycle well simply by listening to lectures or doing worksheets on bicycle riding; neither do we become a fluent readers by spending the majority of our time doing worksheets on vocabulary words—extensive reading practice is required for that. Our goal was to give students at least 40 minutes a day in our program and another 15-20 at home simply reading text. For this, we primarily relied on the independent reading and partner reading routines detailed below. *These are activities that can and should be a part of every school's reading program; all that is required are basic teacher training and access to a variety of age appropriate reading material.*

Research shows that certain activities, such as repeated readings of the same text, can help accelerate reading fluency in struggling readers. Since we had limited time, and were going for maximum short-term impact, we spent 10-15 minutes per day on these activities. For this, we relied on the daily homework practice reading; the three-minute reading drills and the 'model/practice' routines outlined below. These activities are appropriate and possible for short-term interventions aimed at building fluency and for programs that have volunteer support. We also found that students could time each other in partners; in this way, the 'three minute drill' routine might be adapted for use in a larger class environment. *However, it is important to note that for most students in most classrooms drills such as these are not as important as activities that simply get them reading for extended periods.*

Our program met Monday-Friday between June 13 and June 30 (14 days total).
Following is an outline of the activities we used and the routine we followed.

Monday-Wednesday-Friday Activities

Daily Opening/Homework Performance (5-10 minutes): Students performed the short homework passage reading they practiced the night before (see below). After each student read, teacher asked, 'How many times did you practice your passage?' and 'How far did you read in your story?' Teachers encouraged accuracy, natural reading voice, effort and self-corrections.

Model/Practice (5-10 minutes): Teacher read aloud a short text from a grade-level Hindi reader. Teachers modeled natural expression and how to self-correct mistakes. Then students all individually or with a partner practiced reading the same text at least three times as teacher(s) circulated and 'listened in'. Teachers encouraged natural reading voice (e.g., 'if it's got a question mark, make it sound like a question!'); accuracy; effort and self-corrections.

Partner Reading (10 minutes): After the model/practice, the teacher made sure sure students had any questions answered about the daily text they had begun reading. Then students were grouped into pairs. If we had extra teachers or an odd number of students, we partnered teachers with students. Stronger students were often paired with weaker ones. Free teachers circulated as students read aloud the story with expression, alternating each paragraph or two. Groups that finished early practiced their favorite reading with expression or began their choice reading.

We explicitly taught students that is was their responsibility to fix their own errors or to get help. (Students who are used to being corrected immediately by a teacher often learn that they don't need to correct themselves and this can close down the self-monitoring part of their brain.) We taught students to ask their partner for help only if they were stuck; we asked listening partners to read along but not to offer corrections immediately unless asked. Only at the end of the paragraph were listening partners to point out important mistakes made by their reading partner; this is because sometimes we self-correct only after we read on and realize something does not make sense.

Discussion of Reading (5 minutes): When time permitted, we had a quick discussion of the big idea or theme, whether students enjoyed the story, etc. When reading the longer sixth standard level stories, sometimes we took two days to cover one story.

Choice Reading/3-Minute Drills (15-20 minutes): Students chose from a pile of available picture books and magazines and read silently 'for fun'. During this time, students read silently or in quiet voices, as teachers circulated and 'listened in'. Students were taught to try three things when they encountered difficult words: break it into parts; re-read the sentence; then ask for help if it was still confusing.

While the individual students read, teachers met with individual students to conduct daily 'three minute drills'. In this drill, students read a section from the book they were reading for one minute while the teacher listened with a timer. The teacher then corrected errors, noted how far the student got in one minute, and repeated process, reading the same text two more times. Typically, students read faster (and got further) each time, which supported both fluency and confidence. After this, with the help of a

teacher, students chose a short passage from a magazine to practice reading at home, 3-5 times. Usually the short passage was part of a larger story, which was also part of the 'optional/encouraged' homework. Students 'performed' their practiced passage the next day at the beginning of class (see opening).

Choice time (5-15 minutes): When time allowed, we either played a group game or gave students a few minutes to choose a fun activity such as chess or checkers. Teacher(s) circulated to make sure every child had chosen a homework practice passage and had done their 'three minute drills.'

Closing Group: Compliment; Restate; Review (5 minutes). We tried to give one concrete compliment to each child (e.g., 'I loved it when I saw Aakash work hard when he read to the group. He seemed a little nervous, but he did such a nice job.' or, 'I was so impressed to see Manju self-correct! First she said 'unko' but that didn't make sense, so she went back and said 'unki'!) We restated learning targets in one sentence and reviewed homework expectations.

Tuesday Thursday Activities

Daily Opening/*Homework Performance* (5-10 minutes) Students 'performed' their homework readings to the group, practicing fluent reading.

Independent Reading/Reading Meetings (25-35) minutes. Here we focused on encouraging students to read more and longer texts/stories in order to build stamina. While students read, the teacher circulated and had short meetings with students about things including what they were reading, what they did when they came to unknown words, or whatever else that seemed important. Often the teacher listened to a student read for a minute (or did a three-minute drill) before beginning the meeting. The student reading meeting routine was as follows:

- Review: Teacher reviewed teaching point/goal from previous meeting or discussion.
- Read: Students read to teacher for a minute.
- Strength: Teacher identified a student strength to encourage—self correcting; speed growth; natural voice, etc.
- Goal: Teacher and student identify a goal to work on.

Homework Choosing (5-10 min)—Students **chose a** new homework reading for homework practice. We used a variety of age appropriate magazines for this, ranging from *Champak* to women's magazines for older girls.

Choice time with games (15-20 minutes). Students celebrated their hard work with games or 'play time'. This was more important to younger students than older ones.

Closing Group: Compliment; Restate; Review (5 minutes). We tried to give one concrete compliment to each student. We restated learning targets in one sentence and reviewed homework expectations.

Results:

Attendance:

Overall, attendance was good: though two students missed multiple days due to family obligations, on average, students attended 13 out of 14 days, and all students attended 10 or more sessions.

Homework completion:

Based on daily student reports, nearly every student completed their passage practice daily. Some said they practiced their passage 3 times, others reported practicing as many as 20 times! It was easy to tell if they hadn't practiced, so our assumption was that 90 percent or more students did this work daily. Most students also reported completing reading at least one entire story from the magazine they'd chosen. This was not 'required', but students did it more and more as we encouraged and praised them for doing so. We suggested that students who didn't manage to finish a story would want to complete it during choice reading time, since stories are always more interesting when you finish them. Most did so.

Results of Post-Assessment

At the end of the three-week program, a post assessment was carried out using the same text and guidelines as the pre-program assessment given the week before the program started. One-minute assessments such as these are considered 'screening tests'. Though they can help us monitor individual progress, they are not enough on their own to make decisions about a student's overall progress unless they are combined with other assessment and teacher observations. Reading screeners such as these are, however, good tools to use when evaluating the effectiveness of overall programs: though individual students will often have bad (or good) days, those variations will tend to balance out when group data is examined. We did we make observations and conclusions about individual students (e.g, 'Surya did worse than I expected on the post-test because she seemed to freeze on a couple of difficult words, but she says feels much more confident and has begun reading short novels 'for fun'). But our evaluation of the efficacy of the program was based primarily on a look at trends in the overall data we collected.

The results of our assessment, outlined below, support this program as an effective reading intervention. We saw broad-based improvement in rate and accuracy. We observed more reading stamina and use of self-monitoring strategies. Specifically:

· *Average correct words per minute grew from 76 to 88.* English readers are typically expected to grow by between 12 and 20 words per minute per year between grade three and grade seven, so an average increase of 12 words per minute in a three-week program is encouraging.

· *Average accuracy rate went from 93 percent to 96 percent.* This is important because on many informal reading assessments, 97 percent or higher is the target accuracy rate. Reading accuracy below 95 percent suggests substantial impact on comprehension; 93 percent or lower nearly always results in frustration. Improvement in average accuracy suggests suggests our students did not get the message that speed is all that matters, something that can be a problem in programs like this. In fact, of the few students who did not show progress on the post-test as measured by speed, most made great progress as measured by accuracy.

· *Between the pre and post-test, the median (middle student's) reading rate went from 82 to 95.*

· *17 of 21 students made gains in their reading rate.* Gains were highest among fourth standard students.
· *14 out of 21 students made gains of 6 or more words per minute.*
· *12 out of 21 students made gains of 15 or more words per minute (also, one made 11).*
· *7 out of 21 students made gains of 20 or more words per minute (also, two made 19 and one made 18).*
· *3 students lost ground by more than 6 words per minute on the post assessment.* Though one must use caution (and other data) when using one-minute screeners like this to evaluate individual student progress, it was interesting to see that three of the four students who did not improve their rate on the post test did significantly improve their accuracy.
· *On the post-*test*, 11 out of 21 students were observed self-correcting; the same number made miscues 'that made sense.'* Since some students make no miscues/self-corrects on a one-minute probe, simply because they read it very accurately, this number is encouraging; though we don't have reliable comparison data from the pre-test, teacher observation supports the idea that most of our students improved in their self-monitoring.
· *During the program, all students agreed they were reading more and better than before, and in general, greater levels of confidence and reading stamina were observed by teachers.* It seems significant that all students attended the end-of program celebration.

Discussion/Implications

The results of our random membership screening suggest that reading fluency is a problem that is widespread among Delhi students who attend government schools and low-cost private schools, such as those where most of our library members study. This is likely due to the fact that most students in these schools either do not have access to a wide variety of books in school and/or are not expected to read the amount of text required for them to become fluent readers, even in their mother tongue, Hindi.

Our assessment data supports the idea that the interventions we used were effective: overall, readers made gains in both accuracy and rate, and teacher observation suggests participants became more effective and consistent at using self-monitoring skills, as well. In follow up meetings conducted with students two weeks after the program ended, almost all report reading more and longer books than before, including several students who are reading or have finished reading Hindi translations of books including *Harry Potter, The Famous Five* and *Around the World in 80 Days* (condensed).

While it is not possible to know for certain to what extent each individual activity worked, it is reasonable to conclude from our data that research-supported interventions developed for readers of English and other language will also be effective in helping students become more fluent readers of Hindi. Following from this, it is recommended that schools with access to libraries give students time to practice reading. The *individual choice reading* and *partner reading* routines we used have been shown to be effective in a wide variety of schools and would work in any classroom where students have acquired basic levels of decoding skills and have access to books to read.

Ideally students should be expected to practice reading in school for at least 30 minutes in each language they are studying. Students with access to a library, should be reading an additional 30 minutes 3-5 times

per week at home. The reading stamina required for this takes time to build. In the beginning of our program, students often tired after 20-25 minutes of individual reading; by the end, most could comfortably manage 35. To make this possible, teachers will have to encourage/require students to either read longer books or to share with each other short picture books: even the fourth graders in our program regularly read 3-6 short picture books when given 30-35 minutes of individual reading time—one book per week isn't enough for one child, but when shared, 30 books per week would be more than enough for a class of 30 students.

The repeated reading drills we employed ('three minute drill'; model/practice, etc.) have been shown to be effective with many struggling readers. There are ways to do these drills in a classroom setting using partners to monitor and support each other ('each one/teach one') but they are more effectively and easily done with small groups of children or when regular volunteers are available. These drills typically work best when they are consistently done 3-4 times per week. They can be a valuable part of any short-term intervention such as the one we conducted; they can also be part of long-term volunteer supported reading programs. But for classroom teachers, they will likely be less effective than simply having students read more text, more often, individually and in partners.

Next Steps

We plan to continue to meet with members of this program every six weeks to encourage them to continue in their reading progress. Having done this program once, we will also look for opportunities to repeat it in this or some modified form. We are happy to meet with interested Delhi teachers to discuss specific activities.

We are happy to share the assessment materials we used. Though they could be improved, our pre-post assessments are suitable for program evaluation of short-term interventions such as this and of year-long school literacy programs. But more leveled progress monitoring texts would be needed for schools that wanted to monitor student progress more than three times per year; repeated use of the same text over the course of the year would undermine its use as an assessment of student growth, since it would eventually become rehearsed.

It should be noted that although tests of reading fluency do not directly measure comprehension, there is rough correlation between oral reading fluency and reading comprehension, and many measures of reading fluency in English have been evaluated to establish this. However, since the tools we have developed have not been tested to measure the relationship between student performance on them and student reading comprehension as measured by other assessments, they are not reliable measures of reading comprehension levels of individual students. However, we do feel tools such as the ones we developed are appropriate and useful for individual student screening and progress monitoring, and for overall program evaluation. Because they are efficient and easy to administer, they can be a valuable tool for teachers in India to measure student progress in Hindi reading fluency. In the long run, schools in India would benefit from regional language standards for oral reading fluency, and consistently leveled tools for measuring and monitoring student progress.

Appendix:
List of texts used for pre-post evaluation:

Gunjan Hindi Pathmala, Class - 1 (Hindi) Paperback – 2016, Chapter 7, first page.

Gunjan Hindi Pathmala, Class - 2 (Hindi) Paperback – 2016, page 32

Gunjan Hindi Pathmala, Class - 3 (Hindi) Paperback – 2016, page 65.

Gunjan Hindi Pathmala, Class - 4 (Hindi) Paperback – 2016, page 49.

Gunjan Hindi Pathmala, Class - 5 (Hindi) Paperback – 2016, page 19.

Gunjan Hindi Pathmala, Class - 6 (Hindi) Paperback – 2016, page 87 (began after introduction).

Form and scoring rules used in conjunction with reading fluency evaluation (photocopied on the backside of teacher copy of text read). Students asked to read for one minute. Miscues/self-corrections noted.

Name_____
Scoring:
Correct words per minute:_____ *Errors:_____*

Check any that apply:
___ Self-corrects
___ Miscues make sense
___ Miscues look similar to to words in the text.

Oral reading fluency scale (circle one):
4 Reads primarily in larger phrase groups. Most of text is read with expression and follows punctuation.
3 Reads mostly in 3-4 word phrase groups. Most of the reading follows punctuation; some expression; some monotone or sing-song.
2 Reads mostly in 2 word phrases with some larger groupings. Some word-by-word reading. May not follow punctuation. May be a little expression, but mostly monotone.
1 Reads mostly word-by-word. Occasional larger groupings. monotone expression.

Scoring:
Counted as errors:
- Mispronunciations or substitutions

- Omitted words (even a whole line)
- More than 3 second delay (tell).
- Change of order (both words count as errors)

Not counted as errors:

- Self-corrections
- Regional variations in pronunciation
- Repeated words
    - Inserted words (extra words)