

Effect of Amharic Letter Acquisition and Fluency Instruction on the Reading Achievement of Ethiopian Students at Risk for Reading Difficulties

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Abstract

This study took place in Addis Ababa, Ethiopia and examined the impact of explicit instruction and fluency practice of letter/sound combinations on reading Amharic letters and words. First grade students at risk for reading difficulties were assigned via stratified random assignment to treatment or control condition. Students in the treatment group received explicit instruction and fluency practice on grade one Amharic letters, two times a week for 18 weeks for 36 sessions. Students in the control condition received typical Amharic reading instruction. Results indicate that students in the treatment condition significantly outperformed students in control on letter sound identification and word reading fluency.

Key Words: Ethiopian Reading Achievement; Amharic Letter Sound Fluency Instruction; Reading; Learning Disabilities

The ability to read is arguably the most essential skill necessary for academic achievement. Children who are able to read on grade level or above are likely to be successful at school. Conversely, children who struggle with reading have difficulty with academic tasks and are at risk for school failure. Despite the importance of early intervention, children at-risk for or with reading disabilities are often not identified in their early school years (Wong, 2004). As a result, the gap between grade-level reading expectations and the reading ability of the children with reading difficulties becomes larger over time. Additionally, without early identification and intervention, teachers miss a crucial period to work on improving students' reading skills (Hoff, 2001).

Reading Achievement in Ethiopia

In Ethiopia, until recently, it was difficult to ascertain the nature and prevalence of reading problems. However, due to an initiative from Ethiopia's Ministry of Education and the United States Agency for International Development (USAID), a national reading survey called Ethiopia Early Grade Reading Assessment (EGRA, 2010) was conducted. The EGRA survey was administered in six languages of the country. More than 13,000, second and third grade, children were participants in the survey. Overall findings from the Ethiopian EGRA indicate that reading problems are deep rooted and are a national issue.

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Figure 1: Example Fidel Consonant/Vowel Combination Symbols

The EGRA (2010) indicates that the vast majority of primary grade students struggle with learning to read. In second grade, the EGRA report broke students reading level into four categories: (1) nonreaders, (2) low oral reading fluency [1-29 word per minute (WRPM)], (3) moderate oral reading fluency (30-59 WRPM), and (4) those at or above the bench mark level (60 WRPM or greater). According to EGRA (2010) more than 80% of the students were unable to reach the 60 WRPM benchmark.

Amharic is the official language of Ethiopia, and is spoken by approximately 30% of the Ethiopian population. Amharic is also the language of instruction in primary schools in Addis Ababa. Survey results of Amharic reading from the EGRA (2010) indicate that a significant number of students who receive their reading instruction in Amharic have difficulty learning to read. The average words read per minute in second grade in Addis Ababa was 38.2, well below the minimum benchmark of 60 WRPM. These poor results translated into low reading comprehension performance, with 24% of second graders and 10% of third graders scoring a zero on the comprehension assessment.

As is the case in most of Africa (Abosi, 2007), Ethiopian schools do not identify or provide special services for students at-risk for or with learning disabilities (LD). Therefore, although the EGRA provides clear data to indicate many students struggle learning to read, the percentage of these students who are struggling because of a learning disability remains unclear. Abosi (2007) contends that approximately 20% of students in African schools have learning difficulties with a subsection of these students likely having specific learning disabilities. These numbers are in-line with prevalence figures of LD from the U.S. (U.S. Department of Education, 2014) and are likely similar in Ethiopia.

Nature of Amharic Language

The orthographic complexity of a language is often defined on a continuum from shallow (i.e., orthographies with consistent grapheme- phoneme correspondence) to deep (i.e., complex languages with many inconsistencies between grapheme- phoneme correspondence) (Seymour, Aro, & Erskine, 2003). For example English is a language with deep orthography because a grapheme can represent a variety of different phonemes (e.g., /e/ as in ten and teen) and a phoneme can be represented by a variety of different graphemes e.g., /c/ as in city and /s/ as in sand). Amharic, on the other hand has a shallow morphology where each

orthographic character is exclusively tied to a single phoneme (Tadesse & Takara, 2009).

Amharic is written using a scripting system called Fidel. In Fidel, consonant and vowel combinations are represented with a single symbol. In isolation, Amharic contains seven vowels and 32 consonants (Tadesse and Takara, 2009). However, because each constant and vowel combination is represented using a unique symbol, there are a total of 224 syllables (i.e., 7 vowels * 32 consonants= 224) in Fidel. See Figure 1 for an example of the symbols associated with one Amharic consonant when it is combined with the seven Amharic vowel sounds.

The formation of consonant- vowel combination on single symbol and its orthographic identity make the written form of Amharic language less complicated compared to other languages such as English where sounds can be represented with more than one letter and the sound for specific letters can change from location to location in different words. Even though the Amharic language seems to be less complex (Tadesse & Takara, 2009), no studies to date have examined the extent to which this reduced complexity benefits readers. Previous studies have, however, examined the relative benefit of learning to read in European shallow orthographic languages (e.g., German) and found that compared to deep European orthographic languages (e.g., English), students learn to decode more efficiently (Seymour et al., 2003).

Aro and Wimmer (2003) suggest that the high phoneme-grapheme correspondence in languages such as Amharic provides an overall advantage in learning to read. They contend that the orthographically regular nature of languages such as Amharic benefit readers because they contain few to no irregular words (i.e., words in which one or more letters do not represent their most common sounds). Therefore, readers can consistently sound out words using the most common phoneme-grapheme combination. Such assumptions, however, are still up for debate because even though there is high phoneme-grapheme correspondence in Amharic, Ethiopia is currently unable to effectively teach students who struggle with reading.

Early Reading Instruction

Much is known about how to effectively teach early reading skills. Important instructional components to improve the reading skills of primary grade students who struggle are to focus on explicitly teaching unknown letter sound combinations and ensuring students can read

known letter sound combinations with fluency (i.e., with speed and accuracy). These instructional components may be particularly effective in a language such as Amharic that has a strict one-to-one phoneme- grapheme correspondence structure. Therefore, unlike in English, fluently blending known individual sounds in Amharic consistently results in the reader being able to read words.

Regardless of the regularity of the language read, researchers consistently assert that knowledge of letter/sound correspondence is a strong predictor of success in learning to read (Share, 2004). Beck and Juel (2002) emphasize that letter sound fluency is the initial step to associating meaning to print. They called this initial skill acquisition decoding. Effective decoding skill leads the reader to word recognition. Along with letter/sound acquisition, ensuring students read sounds, words and passages with fluency is critical to increase students' comprehension (Fuchs, Fuchs, Hosp, & Jenkins, 2001). When reading is dis-fluent, readers must expend much of their cognitive resources decoding leaving little to no resources available for comprehension (LaBerge & Samuels, 1974; Therrien, Kirk, & Woods-Grove, 2012).

Another potentially important early reading instructional component is phonological awareness. Although not studied to date in Amharic, phonological awareness (i.e., the ability to recognize and manipulate linguistic sounds apart from their meanings) has been found to be a critical early reading skill in many alphabetic languages (Branum-Martin, Tao, Garnaat, Bunta & Francis, 2012). In English, teaching students phonological skills such as isolating, blending, and segmenting phoneme sounds has resulted in improved student reading achievement (Ehri, et al., 2001) with the greatest gains being obtained by students at-risk for reading failure (Hatcher, Hulme & Snowling, 2004).

Unfortunately, typical Amharic reading instruction does not devote a significant amount of instructional time to these critical early reading skills (Tadesse & Takara, 2009). Instead, the Ethiopian Education Ministry's reading curriculum allocates most of early reading instructional time on reading whole words while providing picture cues to assist students with unknown words. Further, when letter/sound correspondences are taught, they tend to be taught in predictable patterns (similar to having students read their ABCs in alphabetic order). Due to the use of predictable patterns, students do not need to attend to the grapheme when verbalizing the sound and can recite the letters from memory once the sequence is initiated.

Because of the current gaps in the Amharic reading curriculum, one way that the reading achievement of students at-risk for reading difficulty may be positively impacted is to provide them acquisition and fluency instruction on letter/sound correspondence. To date no

studies have examined the impact of Amharic letter acquisition and fluency instruction on students at-risk for reading difficulties.

Although no studies have been conducted in Amharic reading, there is an extensive research base in the U.S. stretching back to the 1950s (Flesch, 1955) that indicates explicit letter/sound correspondence instruction and fluency practice is effective at improving the reading skills of at-risk learners reading English. In fact, research indicates that phonics instruction, particularly systematic phonics instruction [i.e., "use of a planned, sequential introduction of a set of phonic elements along with teaching and practice of those elements" (NICHD, 2000, p. 2-99)] results in significant increases in reading achievement for students at-risk for reading difficulties (NICHD, 2000). Along with systematic phonics instruction, ensuring students receive enough practice to achieve fluency with letter/sound correspondence is also critically important to improving students reading outcomes particularly as it relates to reading words, sentences and passages (Hudson, Richman, Lane, & Arriasa-Allen, 2011; Therrien, 2004).

The purpose of this study was to investigate the impact of systematic instruction of letter/sound correspondence and fluency practice on the reading achievement of Amharic first grade students who are struggling with learning to read. The study has two questions of interest:

- (1) Does systematic Amharic letter/sound correspondence instruction coupled with letter/ sound fluency practice increase students' fluency reading letters compared to students who receive typical Ethiopian Amharic reading instruction?
- (2) Do gains made via systematic Amharic letter/sound correspondence instruction coupled with letter/ sound fluency practice generalize to increases in students' fluency reading words in isolation?

METHOD

Participants and Setting

First grade students in one government primary school in Addis Ababa, Ethiopia were potential subjects. The targeted school had 132 first grade students enrolled in three grade one classes with each classroom staffed with one teacher. The number of students who participated in the pre-test per-class was: class A ($n=43$), class B ($n=47$), and class C ($n=42$). The age distribution was as follows: age 7 ($n=60$), age 8 ($n=43$), age 9 ($n=11$), age 10-12 ($n=18$) and the mean age for all children in grade one was 7.99 years. Gender breakdown was as follows: female students ($n=88$) and male students ($n=44$).

To be eligible for study participation, students had to be age 9 years or younger, speak Amharic as their first

language, and be reading between 0 and 40 letters per minute. To determine eligibility, all students were pre-tested to ascertain their rate of letter reading per-minute (LRPM). Across all students ($N=132$), the mean pre-test score was 35.03 LRPM with a minimum of 0 and a maximum of 105 LRPM and a standard deviation of 26. A total of 67 students were 9 or younger and had LRPM at or below 40 and therefore were eligible to participate in the study.

To examine participants' backgrounds, a questionnaire was distributed to eligible students' families. The questionnaire examined parents' educational level, employment situation, and monthly income. Over one-third of students' parents (34% of fathers and 43% of mothers) had no formal education with the remainder of parents completing at least primary school. Most fathers (70%) and mothers (79%) were either unemployed or worked as day laborers. Family income was less than 1000 Birr (equivalent \$49 U.S. dollars) per month for 90% of families with most families (60%) earning less than 500 Birr (equivalent \$24.50 U.S. dollars) per month.

Eligible students were assigned via the following 3-step stratified random sampling procedure to treatment and control groups. First, students were categorized into four reading levels based on their LRPM score (0-10, 11-20, 21-30 and 31-40) to assure group equivalence based on reading level. Second, to control for potential confounding effects of core classroom instruction, we blocked on classroom to ensure an equal number of students from each class were in treatment and control groups. Third, students within each reading level, blocked by classroom, were assigned randomly to treatment or control condition.

After stratified random assignment, the intervention group had 33 students and the control 34 students. The general demographic background of the intervention group was as follows: female ($n=20$), male ($n=13$), age 7 ($n=20$), age 8 ($n=12$) and age 9 ($n=1$). General demographic background of the control group ($n=34$) was as follows: female ($n=18$), male ($n=16$), age 7 ($n=17$), age 8 ($n=13$) and age 9 ($n=4$). The mean age for the intervention group was 7.58 while the mean age for control group was 7.4.

The school selected for this study is a government primary school in Addis Ababa, Ethiopia. In Ethiopia, most children attend government schools because they are tuition free. Almost all children at government schools are from low socioeconomic backgrounds. The intervention was implemented by the first author with help from a teaching assistant who was a special education graduate student at a local university. The interventionist/ first author has extensive experience as a language arts and special education teacher at both primary and secondary school levels. She was a teacher for a total of 11 years,

seven as an elementary language arts teacher and four as a high school special education teacher.

Materials

The intervention instruction material was developed after discussion with grade one Amharic teachers and reviewing their yearly plan for teaching Amharic in the selected classes. To ensure that the letters targeted in intervention classes were the same as those targeted in the control classes, teachers daily lesson plans were cross-checked against each day's intervention plan and weekly briefings with the Amharic teachers were held to ensure no deviations were made between the plans. The intervention instruction was 36 sessions long and each session had its own activity sheets based on the associated goals of the lesson and students' assigned reading groups. These activity sheets were in turn used to create instructional component checklists that were used to assess treatment integrity.

Design and Procedures

Design. A two-level (intervention or control) single factor pre/post experimental design was used to compare the effects of the intervention on students' reading achievement. Mean comparisons via t-tests and analysis of covariance, using pretest scores as the covariate, were used to examine the intervention's impact on students' letter and word fluency.

Intervention. The intervention entitled 'explicit instruction and prompt phonic decoding' (EPPD) consisted of the following core components: explicit teaching of letter/sound combinations and fluency practice to increase students' accuracy and speed at sounding out letters.

The goal of the intervention was to enhance students' letter reading fluency through explicit instruction to 60 letters per-minute, which is the benchmark set by the Ethiopian early grade reading assessment guidelines (EGRA, 2010). A core assumption for the intervention was that because Amharic language has one-on-one association between letter name and its grapheme, rapidly calling letter names results in increased letter and word reading fluency.

The 45-minute intervention sessions were broken down as follows:

1. Five minutes for students to move from their class to the intervention room.
2. Twenty minutes for the whole group activity of which 2 minutes were used to review the previous lesson.
3. Twenty minutes for small group activities.

During the initial introduction session, rapport was established with the students and the purpose, procedures, and role of the instruction were described.

The new letters presented in each intervention whole group session were guided by the Amharic grade one textbook used in the regular first grade classes. In each intervention session, seven letters were presented, one consonant and its seven consonant-vowel representations.

Along with new letter introduction, whole group activities focused on accurate and fluent letter naming. During this time, all students attended to the same set of letters and related fluency activities. In these activities higher performing students, the primary instructor, and teaching assistant helped instruct and provide fluency practice for lower achieving students. The fluency practice was often enhanced by having students rhythmically drum and clap their hands in conjunction with verbal letter rehearsal.

During small group instruction, student seats were arranged based on their letter reading level. The two lower reading level groups (0-10; 11-20 LRPM) were exposed to increased repetition for accuracy while the third group (21-30 LRPM) was involved in both accuracy and fluency instruction and the fourth group (31-40 LRPM) focused on increasing letter naming fluency.

Control condition. During the intervention sessions, students in the control condition remained in their regular class for Amharic reading instruction. On days when students in the treatment group did not receive the intervention (i.e., three days each week), they also attended their typical Amharic reading class. The major difference between the intervention and control groups was the approach to letter instruction. Both groups utilized the grade one Amharic textbook to determine letters to target. However, unlike in the treatment condition, typical Amharic instruction provides no time for letter name fluency instruction or practice. Instead, the teacher introduces new letters and then spends the majority of instructional time teaching students words using picture cues for unknown words. Further, students are never grouped based on reading level with all activities occurring with the entire class.

Dependent measures. There were two primary experimental dependent measures. First, Amharic letter probes were developed for pre-and post-testing by randomly selecting letters from a grade one Amharic student textbook and then distributing them in random order on a sheet of paper. These probes were used for both pre-and post-test assessment. See Figure 2 for an example letter probe. Second, a word probe was developed from randomly selected words from the same grade one Amharic student textbook. The word probe was only implemented as a post-test measure. See Figure 3 for an example word probe. Both letters and words administered during the assessment sessions were developed based on the lesson coverage by grade one Amharic teachers and the interven-

tion work, which was carried out in line with the classroom lesson plans.

Data collection. Measures of LRPM were collected as a pre-test prior to group formation and as a post-test at the conclusion of the intervention. A measure of word fluency was collected at post-test only. The following procedures were used for both pre-test and post-test administration:

1. The activity was explained to the student.
2. The letter/word reading sheet was presented to the student.
3. Once the student began reading, the timer was started on the first letter/word call.
4. Errors and distortions were marked as the student read.
5. When the timer rang at 1 minute, the last letter/word read by the student was marked.
6. The child was praised for their participation and the assessment session ended.

In order to ensure assessment fidelity, all pre-and post-tests for both the intervention and control group were video recorded and scored by the first author and a graduate student. The correlation between raters was calculated with the mean score recorded. Inter-rater agreement using Pearson Correlation was found to be .999 for LRPM and .993 for WRPM.

Treatment integrity was assessed using the instructional component checklists. Out of 36 sessions of the intervention instruction, 10 days (27.8%) were video recorded and analyzed by the first author and a graduate student. The overall integrity performance was 99.5% with 100% agreement between raters.

General procedures. The study was implemented in the following 5 steps:

1. The school administrators and parents and grade one Amharic teachers were contacted and a discussion was held on the purpose of the study. All parents, the school administration and teachers agreed to involve their children in the study.
2. All first grade students were administered the LRPM pretest in an unoccupied counselor's room.
3. Students eligible for study participation were assigned via stratified random assignment to intervention and control groups.
4. The intervention was implemented to the selected group, two times a week, for 45 minutes over 18 weeks for a total of 36 sessions. Students in the control condition remained in their normal Amharic reading class during intervention sessions.
5. Two weeks after intervention implementation, post-test assessments were conducted for both intervention and control group students.

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Figure 2: Letter Probe

RESULTS

Overall pre-and post-test letter and word fluency results based on students' pre-test level are provided in Tables 1 and 2.

Statistical analyses were completed to answer the following two research questions: (1) Does systematic Amharic letter/sound correspondence instruction coupled with letter/sound fluency practice increase students' fluency reading letters compared to students who receive typical Ethiopian Amharic reading instruction? (2) Do gains made via systematic Amharic letter/sound correspondence instruction coupled with letter/sound fluency practice generalize to increases in students' fluency reading words in isolation?

To address question one, students' increases in LRPM in treatment and control were compared. On the pre-test,

the mean LRPM for the intervention group was 18.74 (*SD*= 9.07) and for the control group was 19.18 (*SD*= 9.94). This difference (0.45) in favor of the control group was not statistically significant (*t*= .019, *p*= .848). On the post-test, the mean LRPM for the intervention group was 58.2 (*SD*= 19.74) and for the control group was 29.18 (*SD*= 18.46). ANCOVA results using the pre-test as a covariate indicated that this difference (29.02) in favor of the treatment group was statistically significant (*F*= 87.60, *p*< .0001; Hedges *g* (*ES*) = 1.50)

To address question two, treatment and control group students' words read per minute (WRPM) on the post-test were compared. The mean WRPM for the intervention group was 21.44 (*SD*= 9.6) and for the control group was 10.42 (*SD*= 9.3). This difference (11.02) in favor of the treatment group was statistically significant (*t*= 4.77, *p*< .0001; *ES* = 1.15).

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ያለ	ትምህርት	በጊዜ	በጊላ	አንድ	ምሳሌ	የሚለው	መልሱ	ቃላት	አማርኛ
ጠየት	ተማሪ	አስተማሪ	ክፍል	ደብተር	አርሳስ	ውሃ	በምንበው	ተማሪዎች	አኖቱ
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Figure 3: Word Probe

DISCUSSION

This study examined the impact of systematic letter/sound correspondence instruction and fluency practice on the reading achievement of Amharic speaking students at-risk for reading difficulties in Ethiopian schools. No previous studies have examined this type of instruction on the reading achievement of at-risk readers in Ethiopia. This investigation is important because although LD is not formally identified in Africa (Abosi, 2007), many Ethiopian students struggle learning how to read (EGRA, 2010) and consequently they suffer poor life outcomes.

Results from this study are similar to findings on systematic phonics and fluency instruction conducted in English (Hudson et al., 2011; NICHD, 2000). Students at-risk for reading difficulties who received systematic and intensive letter/sound correspondence instruction and fluency practice made significant improvements in their reading achievement. On letter fluency, students in the treatment group increased the letters read per minute an average of 39.46 in 5 months compared to the mean control increase of 10 LRPM during the same time. This difference equates to a mean weekly increase of 2.19 letters for the

Table 1
Student Mean Pre-and Post- Test LRPM Scores Based on Reading Level

Reading level	Number of students	Average pre-test (SD)	Average post-test (SD)	Difference
<i>Treatment group</i>				
0-10 LRPM	8	6.88 (4.1)	35.75 (3.1)	28.88
11-20 LRPM	12	16.58 (2.9)	58.58 (19.7)	42.0
21-30 LRPM	11	25.18 (1.8)	67.73 (13.1)	42.55
31-40 LRPM	3	35.33 (1.5)	81.67 (7.8)	46.33
<i>Control group</i>				
0-10 LRPM	7	6.57 (2.8)	13.57 (9.2)	7.00
11-20 LRPM	12	15.08 (2.9)	22.5 (12.0)	7.42
21-30 LRPM	10	26.2 (2.8)	41.6 (20.0)	15.4
31-40 LRPM	4	36.0 (2.2)	45.5 (10.6)	9.5

Note: LRPM= letters read per minute SD= standard deviation

treatment group compared to a 0.55 mean weekly letter increase for the control. In other words, students in the treatment group, on average, made almost 4 times more growth per week in letter/sound fluency compared to students in the control condition.

Perhaps even more important than the dramatic increase in letters read per minute for students in the treatment was the fact that they also significantly outperformed students in control on words read per minute. By the end of the intervention, students in the treatment group on average read more than two times as many words per minute (21.44 compared to 10.42) than students in the control group. This difference is particularly significant because the intervention focused exclusively on letter

acquisition and letter/sound fluency practice. The intervention included no reading instruction or fluency practice at the word level. Such skill generalization from letter to word reading provides potential confirmation that, similar to shallow grapheme European languages (Seymour et al., 2003), students benefit when learning to read in a language such as Amharic that has almost perfect one to one correspondence between spoken sounds and their corresponding graphemes (Tadesse & Takara, 2009).

Although we could not explore the question statistically because of limited number of students per reading group, it appears that the intervention benefited all readers. Treatment group students across all reading levels made at least 4 times as much LRPM growth compared to control group students at the same reading level. Students on the ends of the continuum (i.e., students with pre-test scores between 0-10 and 31-40 LRPM) made the least amount of growth (approximately 4 times more growth than control students at the same reading level) and students in the middle two groups (i.e., students with pre-test scores between 11-20 and 21-30 LRPM) made the most growth (approximately 5.5 to almost 8 times more growth than control students in same reading level). Treatment group students across all reading levels also scored at least 1.4 times higher on words read per minute compared to control group students at the same reading level with the greatest difference (3.2- 3.9 times higher) found for students at the two lowest reading levels (students reading 0-10 and 11-20 LRPM).

Despite the positive impact of the intervention on letter and word reading, students in the treatment group were still on average (58.2 LRPM) below the benchmark (EGRA, 2010) of 60 LRPM for first grade and only a third (21.44 WRPM) of the way to the second grade benchmark (EGRA,

Table 2
Student Post-Test WRPM

Reading level	Average WRPM (SD)
<i>Treatment group</i>	
0-10 LRPM	11.13 (1.1)
11-20 LRPM	20.83 (10.0)
21-30 LRPM	26.82 (6.6)
31-40 LRPM	31.67 (2.5)
<i>Control group</i>	
0-10 LRPM	2.86 (3.9)
11-20 LRPM	6.58 (5.6)
21-30 LRPM	15.4 (9.5)
31-40 LRPM	22.75 (5.4)

Note: WRPM= words read per minute SD= standard deviation

2010) of 60 WRPM. Further, students in the treatment group scores were highly variable compared to control in LRPM with a one standard deviation range of 38.5 to 69.3 LRPM at post-testing. Going forward, this intervention might have a greater impact if it is implemented for a longer time. Further, the intervention might have a more significant impact on word reading if, as is common in explicit English language reading programs (e.g., Carnine, Silbert, Kame'enui, & Tarver, 2004), once a suitable number of letters are mastered, word reading is added to the program.

Limitations

There are three limitations to the conclusions of this analysis. First, the dependent measures utilized were not norm referenced or standardized and instead were investigator-generated measures. Unfortunately, standardized measures are not available in Amharic. Although not standardized or normed, the dependent measures were aligned with the assessments used in the Ethiopia Early Grade Reading Assessment (EGRA, 2010), one of the main assessments of Ethiopian students reading achievement.

Second, the study was conducted in only one language of Ethiopia and in only the urban city of Addis Ababa. Whether and/or how the intervention will translate to other languages and whether it can effectively be implemented in other parts of the country remains unanswered.

Third, the first author and her graduate assistant, not typical Amharic reading teachers were the instructors of the intervention. Efforts were made to align the sequence of instruction with the traditional Amharic reading curriculum and lesson plans were created with the eventual goal to have teachers implement the program on their own. Despite these efforts, it remains unknown what impact the intervention would have if it was implemented by typical Amharic reading teachers.

Future Research

Although results from this study indicate that Amharic students with reading difficulties benefit from systematic letter/sound correspondence instruction and fluency practice, several questions remain unanswered. First, it remains unknown what the essential instructional components are and program length needed to ensure maximum student achievement. Adding word level reading to the intervention package and increasing the duration of the program may significantly improve students' achievement. Second, future studies should utilize typical Amharic reading teachers to implement the program in order to determine their efficacy implementing the program. Third, because Ethiopia is a very diverse country, the intervention needs to be implemented and evaluated in other languages and geographic regions.

Conclusions

Similar to the United States, the reasons students struggle with learning to read in Ethiopia are multiple and complex and include both home- (e.g., language experiences, poverty) and school-based factors. Although complicated, there is no doubt that reading instruction in schools plays a role in students' reading achievement. Typical reading instruction in Ethiopia tends to focus at the word level or above and does not provide systematic instruction in letter/sound correspondence and related fluency practices. Results from this study provide evidence that, similar to students who struggle with learning to read in English, Amharic readers at-risk for reading difficulties benefit from explicit systematic phonics and fluency instruction. This relatively straightforward intervention, based on best practices, made a dramatic improvement in students reading achievement.

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