

## Effects of reading strategies on first grade children's phonic performance

**Associate Professor Solomon Melesse\* and Assistant Professor Chanyalew Enyew**

*Bahir Dar University, PO Box 79; Bahir Dar, Ethiopia.*

*\*Corresponding author: e-mail-btlhmslmn1997@gmail.com, Ph: +251918784190*

### **Abstract**

*This study examined the effects of strategies on children's phonic reading performance at Kosober Primary School, Injibara, Amhara National Regional State, Ethiopia. For this purpose, one hundred grade one children of two sections of intact classrooms (n=50) and (n=52) were selected as experimental and control groups respectively and participated in quasi-experimental pre-test and post-test research design aimed to examine improvements on children's phonic performance. Researchers administered pre-test and post-test to collect quantitative data and observation and teacher self-reflection report to qualitative data. A paired samples t-test was computed to analyze the quantitative data. To analyze qualitative data, researchers employed narratives. Findings indicated that phonic reading strategies could improve children's phonic performance. Furthermore, findings from observation and teacher's reflections showed that application of strategies resulted in enhanced children's phonic performance. Eventually, recommendations and implications for further research were suggested.*

**Keywords:** Reading; Phonic; Strategy; Performance

### **Background of the study**

Juel (1988) and United States Agency for International Development/Improving Quality in Primary Education Program [hereafter USAID/IQPEP] (2011) contended that gap between good or poor reading performance begins and continues from early grade and children who cannot read by the end of grade one tend to stay behind reading and other language skills. It is further claimed that children who struggle with reading in grade one will be at a serious academic disadvantage having a much harder time keeping up with their peers, and increasingly falling behind in other subjects (Burch, 2007; Gove & Civelich, 2010). Children who fall behind in kindergarten and grade 1 continue to fall further behind over time and their difficulties associated with reading persist through adulthood demonstrating that the consequences of untreated reading difficulties extend far beyond poor academic achievement (Burch, 2007; Butler, 2007; Research Triangle Institute [hereafter RTI], 2009).

There is, thus, keen interest in providing children with the most beneficial reading instruction early in life in formal education structure (AIR, 2012; NRP, 2000; OMoE, 2003). When children are first provided with formal reading instruction in kindergarten and grade one, they need to understand what reading is about and how it works. Research made clear that unless teachers help children practice the alphabetic principle through reading materials at their appropriate level; they remain poor readers (National Reading Panel hereafter NRP, 2000; Zenebe, 2000). It was found that children who have sufficient knowledge on alphabetic principles were found to be good readers who can convert sequences of letters into the sounds they represent rapidly and automatically without much intentional effort. So, teachers need to support grade one children learn details of letters (AIR, 2012; Piper, 2010; Stone, 1998).

First grade children need to learn specific things about oral language, letters, and words. They need to understand how print works, and be able to connect print with the letters and words (MoE, 2008; NPR,

2000). To help grade one children read letters and words properly; teachers need to work on phonics which is the knowledge of relationships between written letters and words with sounds. They can be taught through the appropriate reading strategies, such as synthetic and analytic phonics (AIR, 2012; Almaz, 2015; Carson, Gillon, Boustead, Nippold & Troia, 2013; NRP, 2000).

First grade children are taught synthetic phonics employing a part-to-whole approach that shows letter-sound (grapheme-phoneme) associations in a distinctive and gradual increment process. Teachers are expected to demonstrate small groups of letter sounds during brief, alert daily reading lessons so that children can commence blending (i.e., synthesizing) when reading and dividing letter sounds in words (MoE, 2008).

Teaching analytic phonics to children begins at letter and word levels. Once a word is identified children are taught to analyze letter-word correspondence (MoE, 2008).

NRP (2000) and Piper (2010) argued that instruction in phonics influence children's reading of letters and words. So, it is necessary for children to learn and understand phonics skill in order for them to read words better. It was noted that phonics involves written language. When teacher says mat and asks children to say the three separate sounds they hear in the word they apply, children instantly employ phonics for written language (OMoE, 2003).

Research revealed that children who learn phonics of English language at an early age through strategies were able to diminish problems associated with reading and spelling (Carson et al., 2013). So, phonics must be learned and practiced through rhyming, reading aloud, and choral reading, and repeated reading.

In the 1920s and 1960s, phonics approach was criticized by whole language approach because of its failure to teach grade 1 students to be able to read the names of letters and sound out words. Hence, it was replaced by whole language approach and word recognition which are applied in most schools today. However, teaching phonics was found more effective in word recognition than taught by whole language approach which was appropriate for first grade children (Almaz, 2015; Mesfin, 2008).

Therefore, currently, Ethiopia has given high attention to developing first cycle primary grade children's reading skill in their native language [L1] and in English. Particularly, Grade 1 English Syllabus (2008) suggests and focuses on teaching of children's phonics as foundation for reading fluency, vocabulary and comprehension (MoE, 2010). Accordingly, children are learning phonics at grade one as stated in the minimum learning competencies of the English Syllabus for Grade 1 (MoE, 2008).

### **Statement of the problem**

Tsehay's (2013) study in Amhara Region of Semein Gonder Zone Primary Schools on reading also revealed that students' early reading achievement was low. The children in kindergarten and first grade displayed very small levels of pre-reading skills. The finding showed that the majority of the children, even those at the later stages of first cycle primary schooling (i.e., grade 4 students), were unable to display proficiencies in reading skills such as phonics (letter naming) skill. It was found very low gauged against the expected reading competences indicated by grade level (MoE, 2008). The results appear to be similar with recent studies (e.g., AIR, 2012; Almaz, 2015; Chanyalew & Abiy, 2015a, b). It was concluded that even fourth grade students, who are about to complete the first cycle primary schooling could read only an average of 27 words per minute and the rest 7% of the group missing all. The mean of nonsense words reading was 19 words per minute, 13% of them scoring zero. Hence, 'reading' is suffering from deficiencies of trainings and consequent decreases in primary school children's ability to read at a basic level which needs further studies and endeavor (Abiy, 2011; AIR, 2012; Almaz, 2015; Piper, 2010).

Investigating reading strategies, is thus, needed; and this, the researchers thrust, requires an intervention on grade one children's phonics to improve their reading performance. Owing to reading deficiencies of grade one children's and teachers' low application of reading strategies, researchers believe that there is felt-need to investigate the effects of reading strategies on first grade children's letter knowledge. Thus, researchers formulated the following objectives.

### **Objective of the study**

The purpose of this study was to look into effects of reading strategies on grade one children's phonics reading performance.

## Research question

Based on this objective, the study attempted to respond to the following research question: What is the effect of reading strategies on grade one children's phonic performance?

## Significance of the study

The results of this study may be crucial for the concerned stake-holders. Grade 1 children of the selected primary school who participated in this study would be beneficiaries by familiarizing themselves with reading strategies that can help improve their letter and word reading.

Second, the study possibly help teachers as classroom practitioners, build their capacity of teaching phonics by employing variety of reading strategies, to improve children's reading, construct a deeper understanding of strategies, and use them more frequently in their classrooms.

Eventually, the results may inform curriculum developers, material writers and experts at MoE, Amhara Region Education Bureau and Bahr Dar town Education Office language experts by providing feedback for curriculum revision and identifying gaps in teacher training. These stakeholders could be informed by this research that appropriate reading strategies be incorporated in primary grade teacher training colleges.

## Delimitation of the study

Students' success or failure in reading can be affected by many intervening factors, of which, reading strategy may be taken into consideration. However, this study was delimited to investigating the effects of reading strategies on 2 sections of grade 1 children of Kosober First Cycle Primary School of Banja District (Woreda), Awi Administrative Zone, which is found in Amhara Regional State, Ethiopia.

## Methods

The study employed quasi-experimental pre-test and post-test group comparison design.

### Participants

Participants of this study were Grade 1 students in Kosober Primary School. There were 4 sections who were taught by one English language classroom teacher of which two intact classrooms were assigned to intervention and non-intervention group for which random assignment was not a mandatory (Creswell, 2009).

### Sampling

With the consent of stakeholders, two sections of grade 1 students were assigned to intervention and non-intervention group. One section (n=50) students were assigned to the intervention group while the other section (n=52) students were assigned to non-intervention group. To get baseline data, pre-test was administered. Having administered the pre-test, researchers introduced first grade English language classroom teacher and trained her on reading strategies of teaching phonics. Orientation was given for students by the researchers.

The classroom teacher taught both the intervention and comparable group, and, therefore, history was not a problem in this study since differences among teachers cannot systematically influence post-test results.

### Instruments of data collection

Instruments of data collection were preliminary observation, informal discussion, tests, classroom observation, and teacher self-reflection reports.

## Pre- and post-tests

In Ethiopia, there are no available standardized tests that could measure children's phonic performance for primary schools. The researchers adapted the tests prepared and used by AIR (2012) English Early Grade Reading Assessment [hereafter EGRA] and Tsehay (2013). The researchers further invited two first grade English language teachers to evaluate whether or not the pre-test and the post-test were appropriate for grade one children's phonics skill. They suggested that pre-and post-test was in line with the formats and test procedures of grade one in Bahir Dar City primary schools and MoE's (2008) corresponding minimum learning competencies (MLCs) as suggested by the syllabus.

The pre-and post-test has one sections. It deals with phonics or Letter Name Knowledge Test for which time is limited in 2 minutes (timed 2 minutes) where a full set of 10 letters are listed in random order to a row in a clear, large and familiar font, with each letter represented twice (once in upper and once in lower case). Randomization is used to prevent students from reciting a memorized alphabet. The score is the number of letters (out of 52) each student named correctly in 2 minutes.

## The intervention

The intervention group was taught using phonics reading strategies while the non-intervention group was taught without employing the strategies by the classroom teacher for a semester. Based on the above rationale, the study employed a quasi-experimental design, especially the pre-test and post-test two groups' comparison design whereby one group received the intervention while the other group did not. Both the intervention and comparison groups took the pre-test (pre-intervention test) and post-test (post-intervention test). Time for intervention, testing, instrumentation, maturation, and mortality were considered uniform for the two groups to reduce problems of internal-validity (Ary, Jacobs & Razavien, 2002).

### Teacher self-reflection report

Teacher self-reflection grid consisting of reading strategies, teacher's role, and challenges she encountered was prepared by researchers to self-check her practice in teaching phonics. Content and face validity of items were judged by one educational psychologist, one Amharic teacher (Ethiopian Official language), and two professors in TEFL and suggested instruments were appropriate and valid to measure the purpose they were designed.

### Classroom Observation

Non-participant observation was planned and implemented for ten rounds.

## Findings

Table 1 reveals that Intervention-non-intervention group pre-test mean difference (1.68) is not significant as the t-calculated (1.29) is less than t-critical (2.38) at alpha value of 0.05. The result implies that both the experimental and control groups were homogeneous in their academic performance before the intervention was exposed to the experimental group. This further may imply that if any academic performance is observed between the Intervention-non-intervention groups after intervention, it may be attributed to the intervention.

Table1: *Independent samples t-test analysis of Intervention-non-intervention group pre-test mean difference*

Intervention-non-intervention group pre-test mean difference	N	Mean Difference	Df	Std	t	Sig. (2-tailed)
	50	1.68	49	0.71	1.29	0.657

Table 2 highlights that Intervention-non-intervention group post-test pre-test mean difference (3.68) is significant as t-calculated (12.29) is greater than t-critical (2.38) at alpha value of 0.05. This implies that the intervention has contributed much to students' reading performance.

Table 2: *Independent samples t-test analysis of Intervention-non-intervention group post-test pre-test mean difference*

Intervention-non-intervention group post-test pre-test mean difference	N	Mean Difference	df	Std	T	Sig. (2-tailed)
	50	3.68	49	2.71	12.29	0.01

Table 3 unfolds the fact that Intervention-non-intervention group *letter name knowledge* mean difference (4.02) is significant as the t-calculated (6.98) is greater than t-critical (2.38) at alpha value of 0.05. The result implies that students who were taught via the conventional approach had shown a significant increase in letter name knowledge, i.e., they read letters of the English alphabet using phonics better than those students who were taught using the traditional method.

Table 3: *Independent samples t-test analysis of Intervention-non-intervention group phonic performance*

Intervention-non-intervention group pre-test mean difference	N	Mean Difference	df	Std	t	Sig. (2-tailed)
	50	4.02	49	0.34	6.98	0.000

### Classroom observation

Observations revealed that English language teacher increased application of reading strategies from one lesson to the next with children's enhanced performance of phonics strategies. Researchers observed that children were applying the reading strategies at the pre, while and post-reading stages. In the pre-reading stage, the teacher gave clues to the children to help them identify letters and words.

Classroom observation also showed that the teacher motivated children practice pair/group reading where they were arranged to sit in pairs/groups and were provided with charts of alphabet written in small and capital letters and guided them to use strategies. One student from the group would read to the group members and others would give corrections to ensure the speed with accurate pronunciation and letters. This role was practiced taking turns to each group member until he or she read properly. Then, teacher invited children to reread individually and improve their phonics skill. She often gave children letter reading assignments using phonemic clues by the end of the period and encouraged them to read orally to the class the following period before she began that day's lesson.

Observations revealed that the teacher first introduced reading strategies and activities. She played her part as a role model by demonstrating each strategy to students in pre, while and post reading phases. The activities were followed by teacher-student, student-student, student-teacher interactions, and student independent practice of reading strategies. The teacher was expected to prompt children use strategic processes regularly. Thus, both the teacher and the children were able to apply reading strategies appropriately. Each child's application of reading strategies and the subsequent increases in his or her reading improvement might have been resulted from employing strategies.

### Teacher's self-reflection reports

Self-reflection reports of the teacher were written based on the grid given to her what to write in reflections which requires her to reflect on the application of reading strategies and activities. Thus, the teacher was encouraged to write self-reflection reports with regard to strategies she utilized in teach-



ing phonics in each reading lesson. She was also required to explain reasons to include reading activities, children's engagement in strategy use, and to indicate the challenges faced. Prior to intervention, the researchers gave orientation to the teacher on what and how to write in the self-reflection report.

From teacher's self-reflection reports on her teaching, it was evident that her report in the first reading lesson was not clear and did not achieve the goal of the reflection. This might have occurred due to the teacher's and children's early attempts to implement strategies which might have slowed down the reading process; however, with sufficient practice, teacher used strategies efficiently and assisted children in learning phonics (AIR, 2012). To identify the gaps and keep strengths of the strategies up, after the second classroom observation, both teacher and researchers used to read teacher self-reflection report and came across the merits of reading strategies as supportive and encouraging except few ideas which were written out of the context or target (It was answered in general reading sense rather than reading strategy along with phonics). Although ideas to be written about by the teacher were clearly indicated in the reporting grid format, teacher wrote few ideas deviated from the topic of the research theme and the research questions asked.

Hence, before the next reflection session, researchers tried to detect what teacher's problems were and tried to re-orient her about what should be major points in the self-reflection and how to reflect on them. Researchers' clarification and informal discussion with the teacher brought about sufficient and reliable data in her succeeding reports.

The researchers collected the reports after the intended reading lessons. Phonics activities focused on self-reflections at different time. Children were taught phonic's strategies to learn letters and words in reading classes.

The self-reflection grid required the teacher to write the reasons for using the different reading strategies and activities of the intervention. Her reflection indicated strategies have vital importance to enhance children's phonics reading performance and strategy use. She attributed that she developed this belief because of the 10 hour training on strategy use.

To put in a nutshell, teacher reported that in the while and post-intervention, students became familiar with reading strategies and improved their phonics skill. Students also learnt about the importance of strategies and their employment in enhancing their reading development. Teacher's reflection report added that students became active, motivated and encouraged. The teacher's reflection was consistent with the findings of classroom observations that the improvements in teacher-student, student-student interaction, and teacher-feedback and child's independent practice of strategies might be attributed to results of the intervention.

## Discussion

The qualitative and quantitative results of phonics performance showed that the intervention has contributed much to children's phonics performance. Children who were taught through phonic strategies showed a significant increase in phonic scores than those students who were taught using the usual method. This is consistent with previous studies that systematic and explicit phonics instruction significantly improved children's reading performance (e.g., Adams, 2001; Tunmer & Arrow, 2013). Using a systematic instructional sequence which begins from most common letters and letter patterns, providing ample opportunities for practice; and employing evidence-based methods of phonics instruction to assist students in decoding and encoding multisyllabic words were enhanced children's phonics performance (Carreker, 2011a). The intervention brought significant and positive effects on children's phonics scores. Findings suggested that students who participated in early intervention made more progress in primary grades and are at lower risk for later reading failure (Coyne et al., 2004; Vellutino et al., 2003), supporting the claim that strategies can enhance children's motivation and engagement on phonics performance.

Lemons, Mrachko, Kostewicz and Pattera (2012) and Johnston, McGeown and Watson (2012) Sparks, R. L., Patton, J., & Murdoch, A. (2014). also examined the National Reading Panel (NRP) report (National Institute of Child Health and Human Development, 2000) the magnitude of the effect of systematic phonics instruction. They found that the largest effects were in harmony with the reading instruction that enhanced increased ability in phonics reading that systematic phonics reading strategies are meaningful and could result in significant improvement for many students who are low readers or insufficient readers.

However, it was inconsistent with (AIR, 2012; Almaz, 2015; Moore, DeStefano, & Adelman, 2010) that children's phonics score revealed they were not able to change the previous results indicated in the national researches. Grade 1 children's results indicated poor reading performance. The findings also disclosed that teachers predominantly used loud reading during the reading lessons even after trainings were given on phonemic awareness strategies. This may further suggest future study on phonics instruction. The researchers found that children with learning difficulties and children who are low achievers would be benefited less from phonics instruction alone. They concluded that phonics strategies integrated with classroom reading instruction will yield the greatest advantage to first grade students.

Qualitative data from classroom observations revealed that the grade one English language teacher increased application of reading strategies from one lesson to the next with children's enhanced performance of phonics strategies. Researchers observed that children were applying the reading strategies at the pre, while and post-reading stages. In the pre-reading stage, the teacher gave clues to the children to help them match sounds to letters systematically using phonemic approach and asked them to practice reading the sound of the letters by identifying the first word using phonemic clues individually and in small groups.

In while-reading phase, classroom teacher activated students' loud and choral and individual reading to facilitate appropriate sound letter-correspondence, speed, and pronunciation and guided children to independent reading. The teacher motivated students to practice in pair/group reading where they were arranged to sit in pairs/groups and were provided with charts of alphabet written in small and capital letters and guided them to use strategies.

Observations revealed that the teacher first introduced reading strategies and activities. She played her part as a role model by demonstrating each strategy to students in pre, while and post reading phases. The activities were followed by teacher-student, student-student, student-teacher interactions, and student independent practice of reading strategies. The teacher was expected to prompt children use strategic processes regularly. Thus, both the teacher and the children were able to apply reading strategies appropriately. Each child's application of reading strategies and the subsequent increases in his or her reading improvement might have been resulted from employing strategies.

The qualitative data from the teacher's reflection revealed that students who were frustrated and reluctant before the intervention showed improvements and became active participants. The teacher felt that this gradual progress is a very good success for the students who had low performance in phonics. This could be attributed to the fruits of reading strategies in promoting students' phonics reading performance. Her reflection indicated strategies have vital importance to enhance students' reading performance and strategy use. She attributed that she developed this belief because of the 10 hour training on strategy use.

To put in a nutshell, teacher reported that in the while and post-intervention, students became familiar with reading strategies and improved their phonics and phonemic awareness. Students also learnt about the importance of strategies and their employment in enhancing their reading development. Teacher's reflection report added that students became active, motivated and encouraged. The teacher's reflection was consistent with the findings of classroom observations that the improvements in teacher-student, student-student interaction, and teacher-feedback and child's independent practice of strategies might be attributed to results of the intervention.

## Conclusions

Research on phonics corroborated their findings and advanced our knowledge of assessment, intervention, and instruction. Phonics skills are found crucial for the development of letter-sound correspondence reading skills. Students having difficulties in phonics, determined with psychometrically sound assessment instruments seem to have further intervention. Evidence suggests that explicit instruction in phonics reading can have the largest effect on struggling reader's phonics performance. Reading experts should carefully examine the evidence for interventions before implementing them in the reading classroom.

Phonic skill improvement may be attributed to their active participation during the research. The main implication of the current study for practitioners and language teachers is that it may be an answer for the question of engagement of English language learners within classroom. Language learners may

have many backgrounds and many problems in their personal life which might prevent them of becoming fully engaged in the teaching and learning process, so language teachers must try to find innovative ways to promote children's involvement and engagement in the classroom.

*Therefore, it is recommended that training be given for teachers on strategies to help them to adapt and link the texts to strategies for children at different grade levels. English language and curriculum experts should revisit syllabus and textbooks and incorporate reading strategies to help children improve their phonic performance. However, further research is needed to examine longitudinal effect of reading strategies on primary school children's phonic performance.*

*Eventually, other variables such as students' learning styles, age, attitude, gender, motivation, and group dynamics should be considered in relation to reading strategies in future research.*

## References

- Adams, M. J. (2001). Alphabetic anxiety and explicit systematic phonics instruction: A cognitive science perspective. In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of early literacy research* (Vol. 1, pp. 66-80). New York, NY: Guilford.
- Abiy, Y. (2011). Effects of Teacher Mediation on Student Concepts and Approaches to Reading. VDM Verlag Dr. Muller GmbH & Co. KG: Berlin.
- Almaz, D. (2015) Investigating the practice of teaching English reading and its challenges in the First Cycle Primary Level. (Unpublished PhD Dissertation): Addis Abeba University.
- American Institutes for Research (AIR) (2012). Ethiopia Teach English for Life Learning (TELL) Program: Ethiopia English Early Grade Reading Assessment: Data Analytic Report. A.A: USAID.
- Ary, D, Jacobs, L.C., & Razavieh, A. (2002). *Introduction to research in education* (6<sup>th</sup> ed.). Belmont, CA: Wardsworth/Thomson Learning.
- Bruch, J. R. (2007). The impact of scaffolding young children's acquisition of literacy in primary grades. Unpublished doctoral dissertation, Louisiana College State University. Louisiana. Retrieved from [http://etd.lsu.edu/docs/available/etad-041332007\\_101339/](http://etd.lsu.edu/docs/available/etad-041332007_101339/)
- Butler, T. W. (2007). Vocabulary and comprehension with students in primary grades: A comparison of instructional strategies. PhD Dissertation, University of Florida.
- Chanyalew, E. & Abiy, Y. (2015a). Effects of scaffolding on students' reading comprehension. *Science, Technology and Arts Research Journal*, 4(2), 263-271.
- Chanyalew, E. & Abiy, Y. (2015b). Teachers' current practices of teaching reading and Grade Four students' reading achievement in Dona Berber Primary School. *Science, Technology and Arts Research Journal*, 4 (3), 265-272.
- Carreker, S. (2011a). Teaching reading: Accurate decoding. In J. R. Birsh (Ed.), *Multisensory teaching of basic language skills* (pp. 207-250). Baltimore, MD: Brookes.
- Coyne, M.D., Kame'enui, E.J., Simmons, D.C., & Harn, B.A. (2004). Beginning reading intervention as inoculation or insulin: First grade reading performance of strong responders to Kindergarten intervention. *Journal of Learning Disabilities*, 37(2), 90-104.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications.
- Dereje Negede. (2012). Primary EFL teaching in Ethiopia: Policy and practice.(Unpublished PhD Dissertation), Addis Ababa University.
- Gove, A., & Cvelich, P. (2010). *Early Reading: Igniting education for All. A Report by the Early Grade Learning Community of Practice*. Research Triangle Park, NC: Research Triangle Institute.
- Johnston, R.S., McGeown, S., & Watson, J.E. (2012). Long-term effects of synthetic versus analytic phonics teaching on the reading and spelling ability of 10 year old boys and girls. *Reading & Writing*, 25(6), 1365-1384.



- Juel, C. (1988). Learning to read and write: A longitudinal study of 54 children from first through fourth grade. *Journal of Educational Psychology*, 80(4), 437-447.
- Lemons, C. J., Mrachko, A. A., Kostewicz, D. E., & Pattera, M. F. (2012). Effectiveness of decoding and phonological awareness interventions for children with Downs syndrome. *Exceptional Children*, 79(1), 67-90.
- Mesfin, D. (2008). The practice of teaching reading in English at first cycle primary schools: grade four in focus (Unpublished M.A Thesis), School of Graduate Studies, Addis Ababa University.
- MoE (2008). English Syllabus for Grades 1-4. Addis Abeba.
- MoE (2010) Curriculum Framework for Ethiopian Education (KG-Grade 12).Curriculum Development and Implementation Core-Process (CDICP). A.A.
- National Reading Panel (US), National Institute of Child Health, & Human Development (US). (2000) Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. National Institute of Child Health and Human Development, National Institutes of Health.
- Ontario Ministry of Education (2003). A Guide to effective instruction in reading: Kindergarten to Grade 3. Queen's Printer for Ontario.
- Piper, B. (2010). Ethiopia early grade reading assessment. Data analytic report: language and early learning. North Carolina: RTI International.
- Research Triangle Institute. (2009). Early grade reading assessment toolkit. Washington, DC: RTI International.
- Smith, C., Stone, R., & Comings, J. (2012). Field study report literacy policy and practice in Ethiopia: Building on the TELL Program and EGRA results. Amherst, MA: Center for International Education, University of Massachusetts, Amherst.
- Tsehay Jemberu. (2013). Reading assessment of early grade children of five Woredas in North Gonder of Amhara Region: A baseline data analytic report: Save the Children, Norway.
- USAID/IQPEP. (2011). Improving Quality Primary Education Program. Addis Abeba
- Vellutino, F. R., & Scanlon, D. M. (2002). The interactive strategies approach to reading intervention. *Contemporary Educational Psychology*, 27(4), 573-635. doi:10.1016/S0361-476X(02)00002-4
- Zenebe Beyene. (2000). An investigation of the minimum threshold level towards the end of the first cycle: Reading skills in focus (Unpublished M.A. thesis). Addis Ababa University.