Effects of reading strategies on grade one children’s phonemic awareness performance

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ABSTRACT
This study examined the effects of language teaching strategies in Amhara region, Ethiopia on children’s phonemic awareness reading performance. To this end, one hundred and two grade one children of two intact sections (n=50) and (n=52) were selected and participated as experimental and control groups, respectively. The research employed quasi-experimental pre- and post-test research design that aimed at examining the effects of reading strategies in children’s phonemic awareness performance. Besides, the researchers collected data through non-participant observation and teacher self-reflection reports. To analyze children’s phonemic awareness, paired samples t-test was computed using pre- and post-test scores of the children. To analyze the qualitative data, researchers employed narratives based on categories formed considering the basic themes of the research questions of this paper. Findings indicated that phonemic awareness reading strategies used in Amhara region could improve children’s phonemic awareness performance. Furthermore, observation and teachers’ reflections showed that there were positive results on the application of the strategies in improving children’s phonemic awareness. Eventually, recommendations and implications for further research were suggested.

Keywords: Awareness, Performance, Phonemic, Reading, Strategy

1. INTRODUCTION
Juel [1] and United States Agency for International Development/Improving Quality in Primary Education Program [hereafter USAID/IQPEP] [2] contended that gap in reading performance begins and continues from early grades 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 in their latter academic endeavor, and increasingly falling behind in other subjects too [3]. Children who fall behind in kindergarten and grade one 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 [4, 5].

There is, thus, keen interest in providing children with the most beneficial reading instruction early in life in formal education structure [6-8]. 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 (e.g., [9, 10]) made clear that unless teachers help children practice phonemic awareness through the alphabetic
principle in reading materials at their appropriate level; they remain poor readers. It was found that children who have sufficient knowledge on alphabetic sound principles (phonemic awareness) 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 sounds [6, 11].

Grade one 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 sounds and words in oral language [12, 9]. To help grade one children read letters and words properly; teachers need to work on phonemic awareness which is the ability to manipulate sounds in words [13-15, 9]. NRP [9] and Piper [16] argued that instruction in phonemic awareness influence children’s reading of letters and words. So, it is necessary for children to learn and understand phonemic awareness in order for them to achieve better reading success. Hence, it is suggested that phonemic awareness should be a necessary condition in developing reading skill among children [17].

Research (e.g., [15]) revealed that children who learn phonemic awareness of English language at an early age through relevant strategies were able to diminish problems associated with reading and spelling. For example, children taught through rhyming accustomed to enhanced intonation in word reading, letter and word fluency, aural reading fluency and mastery of letters and words, and repeated reading enhanced accuracy in word reading (e.g., [11, 18]). So, phonemic clues must be learned and practiced through rhyming, reading aloud, choral reading, and repeated readings.

Currently, Ethiopia has given high attention to developing first cycle primary grade students’ reading skill in their native language [L1] and in English. Particularly, Grade one English Syllabus (2008) suggests and focuses on teaching of children’s phonemic awareness as a foundation for reading fluency, vocabulary and comprehension [19]. Accordingly, children are learning phonemic awareness at grade one as stated in the minimum learning competencies (hereafter MLCs) of the English Syllabus for Grade one [17]. Therefore, it is high time to check the effect of the suggested reading strategies in children’s reading performance.

Tsehay’s [18] study in Amhara Region of Semein Gonder Zone Primary Schools on reading revealed that students’ early reading achievement was low. The children in kindergarten and grade one 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 phonemic awareness (letter sounds) skills. It was found very low as gauged against the expected reading competencies indicated by grade level [20]. The results appear to be similar with recent studies (e.g., [13, 21, 17]). It was concluded that even fourth grade children, who were about to complete the first cycle primary schooling of the Ethiopian education system could read only an average of 27 words per minute and the rest 7% of the groups missing all [18]. This researcher further confirmed that 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 [22, 13, 14, 16].

The findings of grade one indicated that phonemic awareness, as one component of reading skill, was not virtually practiced by teachers in the target grade level. Instead, teachers were observed teaching grade one students letter naming followed by word formation instead of letter sound association. Students during the early grade levels, particularly in grade one, were not able to identify letters and sounds. Researchers (e.g., [13, 16, 18]) administered tests to grade one children aimed at measuring their current reading performance in relation to the components of phonemic awareness or letter name knowledge association. The results unraveled that children’s performance on phonemic awareness was far from average.

Thus, there is a concern that the existing reading strategies used in first grade is helping students only little to improve their reading [13, 14]. Referring to primary school students’ current status of reading skills, research (e.g., [14, 21, 17, 16]) suggested that systematic targeting reading instruction is crucial. This, in fact, implies the need for training of teachers for primary schools in early grade reading strategies in order to facilitate students’ reading skills strategy and engagement. That is why this study was intended to intervene on primary school English language reading lessons, particularly focusing on grade one children. The rationale for studying grade one is that it is the level where the students are expected to acquire basic reading skills such as phonics and phonemic awareness and be ready to learn word reading at grade two. It seems that more research is necessary before children reach grade two to improve their reading skills [16, 2].

It could be argued that teacher support through reading strategies is very much useful to help children lay the core foundation for reading at grade one rather than making a teacher-dominating and one-way communication reading classes [22, 21, 17]. To date, in Ethiopia, few studies (e.g., [21, 17, 23, 24, 18, 10]) have been carried out at first cycle primary school on English language reading skills. However, to the best knowledge of the researchers, there were no studies that addressed reading strategy as an intervention to
improve kindergarten children are expected to be able to match letters to words and match words to pictures [20], grade one children were found unable to do this having attended kindergarten [18]. Besides, informal discussions held with Amharic and English language teachers, personal experiences as education senior experts and university instructors, mentoring experiences gained from the practicum supervision and preliminary observations made on grade one English language lesson at Dil Chibo, Kulkual Meda and Felege Abay Primary Schools of Bahr Dar town and others have revealed shortcomings in teaching phonemic awareness reading to early grade children.

Investigating reading strategies, is thus, needed; and this, the researchers thrust, requires an intervention on grade one children's phonemic awareness to improve their reading performance. Owing to reading deficiencies of grade one children’s and teachers’ low application of reading strategies, the researchers believe that there is a felt-need to investigate the effects of reading strategies on grade one children's letter-sound correspondence performance. Thus, the researchers formulated the following research objective.

The purpose of this study was to look into effects of reading strategies on grade one children’s phonemic awareness reading performance. Based on the research objective, the study attempted to respond to the following research question: What is the effect of reading strategies on grade one children’s phonemic awareness performance?

The results of this study may be crucial for the concerned stake-holders. Grade one 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 sound-letter correspondence and word reading. Second, the study possibly help teachers as classroom practitioners, build their capacity of teaching by phonemic awareness employing variety of reading strategies to improve children’s phonemic awareness 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.

Students’ success or failure in reading can be affected by many intervening factors, of which, reading strategy was considered in this study. Moreover, the study was delimited to investigating the effects of reading strategies on two intact sections of grade one children of Kosober First Cycle Primary School of Banja District (Woreda), Awi Administrative Zone, which is found in Amhara Regional State, Ethiopia.

2. RESEARCH METHOD

The study employed quasi-experimental pre- and post-test group comparison design. Participants of this study were grade one students in Kosober Primary School. There were two intact section students who were taught by one English language teacher. From these two sections, one section was assigned to intervention and the other section was non-intervention group for whom random assignment was not a mandate [25].

2.1. Sampling

With the consent of stakeholders, two sections of grade one 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 to both the control and experimental groups. Having administered the pre-test, researchers introduced grade two English language classroom teacher and trained her on reading strategies of teaching phonemics. Orientation was given for students by the researchers.

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

2.2. Instruments of data collection

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

2.3. Pre- and post-tests

In Ethiopia, there are no available standardized tests that could measure children's phonemic performance for primary schools. The researchers adapted the tests prepared and used by [14] English Early
Grade Reading Assessment [hereafter EGRA] and [18]. The researchers further invited two grade one English language teachers to evaluate whether or not the pre- and the post-tests were appropriate for grade one children's phonemic skill. They suggested that pre-and post-test was in line with the formats and test procedures of grade one in Bahir Dar town primary schools and [20] corresponding minimum learning competencies (MLCs) as suggested by the syllabus.

Phonemic awareness pre- and post-tests were administered to children. In the children's Phonemic Awareness test, the administrator reads three words in which one of them begins with a different sound and the child tells which word begins with a different sound having 10 sets of words in which time was not limited in minutes (NOT TIMED) and where the administrator asked to read the sound of the letters, and then read the first word using Phonemic Clues (Timed). The score was the number of words read correctly.

2.4. The intervention

The intervention group was taught using phonemic 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- and post-tests 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- and post-tests. Time for intervention, testing, instrumentation, maturation, and mortality were considered uniform for the two groups to reduce problems of internal-validity [26].

2.5. Teacher self-reflection grid and observation

Teacher self-reflection grid consisting of reading strategies, teacher’s role, and challenges she encountered was prepared by the researchers to self-check her practice in teaching phonemics. 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 for. Non-participant observation was planned and implemented for ten rounds.

3. RESULTS AND DISCUSSION

3.1. Quantitative data analysis

Table 1 revealed 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 intervention-non-intervention 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 difference is observed between the experimental and the control groups after intervention, it may be attributed to the intervention.

<table>
<thead>
<tr>
<th>Intervention-non-intervention group pre-test mean difference</th>
<th>N</th>
<th>Mean Difference</th>
<th>df</th>
<th>Std</th>
<th>t</th>
<th>Sig. (2-tailed)</th>
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<tr>
<td></td>
<td>50</td>
<td>1.68</td>
<td>49</td>
<td>0.71</td>
<td>1.29</td>
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Table 2 discloses 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>
<thead>
<tr>
<th>Intervention-non-intervention group post-test pre-test mean difference</th>
<th>N</th>
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<th>Sig. (2-tailed)</th>
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<tr>
<td></td>
<td>50</td>
<td>3.68</td>
<td>49</td>
<td>2.71</td>
<td>12.29</td>
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Table 3 shows that intervention-non-intervention group phonemic awareness mean difference (3.46) is significant as the t-calculated (5.32) is greater than t-critical (2.38) at alpha value of 0.05. The result implies that students who were taught via the modern approach had shown a significant increase in phonemic awareness, i.e., they listen and identify a word which has a different sound better than those students who were taught using the traditional method.
Table 3. Independent samples t-test analysis of Intervention-non-intervention group phonemic awareness mean difference

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<thead>
<tr>
<th>Intervention-non-intervention group pre-test mean difference</th>
<th>N</th>
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<tr>
<td></td>
<td>50</td>
<td>3.46</td>
<td>49</td>
<td>0.43</td>
<td>5.32</td>
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Table 4 uncovers the fact that intervention-non-intervention group mean difference of using phonemic clues to read new words (3.98) is significant as the t-calculated (5.32) is greater than t-critical (2.38) at alpha value of 0.05. The result implies that students who were taught via the modern approach had shown a significant increase in using phonemic clues to read new words better than those students who were taught using the traditional method.

Table 4. Independent samples t-test analysis of Intervention-non-intervention group mean difference of using phonemic clues to read new words

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<tr>
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<tr>
<td></td>
<td>50</td>
<td>3.98</td>
<td>49</td>
<td>0.32</td>
<td>6.32</td>
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5. DISCUSSION

The findings revealed that students who were taught through phonemic awareness strategies showed a significant increase in awareness than those students who were taught using the usual method. Supporting the current finding, NRP [9] unraveled that phonemic awareness instruction had a large overall effect on phonemic awareness (ES=.86). Effects of phonemic awareness instruction were significant on formal and informal assessments suggesting that teaching children to manipulate phonemes was an effective way to increase literacy skills [9].

The results of the study supported the initial predictions that phonemic awareness strategies have a positive effect on children’s phonemic awareness performance scores. This finding is also in line with the previous studies (e.g., [27]). These researchers made intervention on phonemic awareness instruction and found that the intervention had significant and positive effects on children’s phonemic awareness performance scores. Their results suggested that students who participated in early intervention made more progress in primary grades and are at lower risk for later reading failure. This is further supported by other studies too (e.g., [15, 28]). They support the claim that strategies can enhance children’s motivation and engagement in learning to read.

5.1 Analyses and findings of 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 phonemic awareness 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. Classroom observation also showed that the teacher motivated students 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 reads properly. Then, the teacher would invite the students to read orally for further improvement. Then, teacher guided and assisted students to apply the reading strategies in reading. The teacher would make rounds and give both individual and group supports as needed. Finally, teacher invited children to reread individually and improve their phonemic awareness. 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. Thus, in succeeding reading classes, the teacher and children were observed employing the reading strategies in phonemic awareness reading activities.

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 using 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 resulted from employing strategies.

5.2 Analyses and findings of teacher’s self-reflection reports

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, the teacher used strategies efficiently and assisted children in learning phonemic awareness [14]. 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 phonemic awareness). 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. Phonemic awareness activities focused on self-reflections at different time. Children were taught phonemic strategies employing letter clues in reading classes and analyzing letter-sound correspondence. Phonemic awareness was taught through rhyming, word naming, reading aloud, choral reading, and repeated reading to show them how spellings are related to speech sounds in systematic ways.

The classroom teacher reflected that students who were frustrated and reluctant before the intervention showed improvements and became active participants in reading loudly in front of their respective class, in their group activities and while individually answering classroom questions related to phonemic awareness. The teacher felt that this gradual progress is a very good success for the students who had low performance in reading and strategy use. This could be attributed to the fruits of reading strategies in promoting students’ phonemic awareness reading performance.

The self-reflection grid also 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 phonemic awareness 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, the teacher reported that in the while and post-intervention, students became familiar with reading strategies and improved their phonemic awareness. Children also learnt about the importance of strategies and their employment in enhancing their reading ability. 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.

6. CONCLUSION

Findings indicated that phonemic awareness reading strategies could improve children’s phonemic awareness performance. Furthermore, observation and teacher’s reflections showed that there were positive results on the application of the strategies in improving children’s phonemic awareness. 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 language learners within classroom. English language learners may have many backgrounds and many problems in their personal life which might prevent them from becoming fully engaged in the teaching and learning process.

It is recommended that training be given for language teachers on strategies to help them to adapt and link the texts to strategies for the children at different grade levels. Courses and teaching materials should also be revisited to incorporate reading strategies for enhancing children’s phonemic awareness. Further research is needed to examine longitudinal effect of reading strategies on primary school children’s phonemic awareness performance. Eventually, other variables such as students’ attitude, gender, age, motivation, learning styles and group dynamics in relation to the effect of reading strategies should be considered in future research.
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REFERENCES


Effects of reading strategies on grade one children’s phonemic awareness performance (Solomon Melesse)
Solomon Melesse completed his First Degree in Pedagogical Sciences, Master’s Degree in Curriculum and Instruction, and his PhD in Curriculum Design and Development both from Addis Ababa University, Ethiopia. He had been a high school principal for 5 years and Education Senior Expert at Amhara Region for 4 years. Moreover, he has been teaching at Bahir Dar University for the last 18 years. He has published more than forty articles in national and international journals and two books in the area of teacher professional development, curriculum, and instruction. He is now an Associate Professor in Curriculum Design & Development.

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