Reading Strategies of Struggling Readers

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Abstract

The present study investigated the reading strategies struggling readers might consciously rely on when they encountered difficulty. Sixty-one first- and second-grade struggling readers individually participated in a reading interview. The interview included five open-ended questions, and the responses were coded with different “strategies” categories. Results showed that struggling readers were likely to rely on the strategy of examining word parts, consulting outside resources and using context to determine word. Suggested future research and implications for practice were also discussed.

Although reading experts have identified basic skills (e.g., phonological awareness, decoding, fluency, and vocabulary knowledge) that are important for successful reading, it has become clear that higher-order reading skills or those involved in comprehension itself are also essential to successful reading (National Reading Panel, 2000; Oakhill, Cain, & Bryant, 2000; Paris & Paris, 2003; Snow, 2002; van den Broek, Kendeou, Kremer, Lynch, Butler, & White, 2005). Some of these higher-order skills include print exposure and metacognitive strategies about reading (McBride-Chang & Chang, 1995), and the construction of a coherent representation of text in memory (Rapp, van den Broek, McMaster, Kendeou, & Espin, 2007).

Proficient readers and struggling readers perform differently in these basic skills and higher-order reading skills. Generally speaking, struggling readers were found to be deficient in decoding (Foorman, 1995; Goswami & Bryant, 1990; Perfetti, 1985), cognitive processing (Garner, 1987, Paris, Lipson & Wixson, 1994), metacognitive processing (Baker & Brown, 1984; Dole, Brown & Trathen, 1996; Garner, 1987) and working memory processes (Just & Carpenter, 1992; Swanson & Alexander, 1997).

Decoding skills include phonological awareness and letter and word identification. Struggling readers benefited from programs which taught students to transform letters into sounds and to blend the sounds to form recognizable words (Ehri, Nunes, Stahl, & Willows, 2001), which focused on phonemic awareness and phonemically based decoding skills (Ryder, Tunmer, & Greaney, 2008), and which practiced associations between letter patterns and pronunciations for pronounceable parts of words (Penney, 2002).

From a review of literature on the cognitive processes in text comprehension, Rapp, van den Broek, McMaster, Kendeou and Espin (2007) summarized possible sources of comprehension difficulties. With a limited attentional capacity, struggling readers were unable to adjust and allocate attention. Even when struggling readers had access to appropriate comprehension processes, they were unable to use them properly and incorrectly selected inappropriate information for constructing inferences. The quantity and quality of relevant background knowledge of struggling readers also prevented the activation of appropriate background knowledge.
Struggling readers are not good at knowing or applying metacognitive strategies to aid in reading comprehension. However, reading programs focusing on the use of metacognitive strategies improved the reading comprehension of struggling readers. These metacognitive strategies included reciprocal teaching, buddy journals, and the think aloud strategy (Guerlene, 2002); and strategies for word identification, vocabulary, visualizing, paraphrasing, self-questioning, and sentence writing (Cantrell, Almasi, Carter, Rintamaa, & Madden, 2010).

Working memory was a good predictor of comprehension (Daneman & Merikle, 1996; Swanson & O’Connor, 2009). Swanson, Howard, and Saez (2006) found that struggling readers showed deficits in the storage and executive processing component of working memory. Struggling readers had fewer attentional resources available to them, and had difficulty suppressing irrelevant information under high processing demand conditions.

The above studies located the deficiencies within the struggling readers. However, Triplett (2007) suggested that the deficiencies were socially constructed in school literacy contexts, curriculum, and relationships. She collected data from field notes of first-, second-, and third-grade students identified for reading intervention at their school, and semistructured interviews with classroom teachers, a reading teacher and a principal during a 4-month period. She found that students were struggling in contexts where teachers made assumptions about them based on class issues, teachers lacked the necessary education to work with them, and teachers made decisions in response to local and state accountability requirements. Students were also found to be struggling in curriculum that required them to read at a frustration level, answer questions at the end of chapters without any comprehension instruction, and lacked discussion as a vital comprehension strategy. In addition, students were struggling in relationships with teachers who did not invite them to talk about their reading or about themselves, and making them feel invisible, interrupted, and not cared for.

No matter whether these deficiencies reside within the struggling readers or in school literacy contexts, curriculum and relationships, these deficiencies may hinder struggling readers from moving to a higher level of discourse comprehension proposed by Johnson-Laird (1983, p. 407). The first level is phonemic or graphemic representation at which readers are concerned with decoding the sounds or letters of the language. Readers in the early stage of learning to read are frequently concerned with this level of reading to the exclusion of other levels. The second level is propositional representation at which readers are concerned with the surface structure of the language. Readers at this level identify the underlying propositions contained in the text and understand their relationships. The third level is the mental model at which readers are concerned with the true meaning of the language. Readers integrate the meaning of the sentence, its context of utterance, and the implicit inferences with their existing knowledge.

To remediate struggling readers’ deficiencies in basic and higher-order reading skills, reading instruction programs have adopted different strategies to improve their reading comprehension. In fact, studies on strategy instruction found positive results on the reading comprehension and strategies use of struggling readers. For example, adolescent struggling readers receiving daily instruction in six strategies (word identification, visual imagery, self questioning, paraphrasing, and sentence writing) significantly outperformed readers who did not receive these instruction on a standardized measure of reading comprehension and reported using problem-solving strategies in reading to a greater extent (Cantrell, Almasi, Carter, Rintamaa, & Madden, 2010). In addition, Ryder, Tunmer and Greaney (2008) found that 6- and 7-year-old struggling readers benefited from explicit
instruction in phonemic awareness and phonemically based decoding skills, and outperformed measures of phonemic awareness, pseudoword decoding, context free word recognition, and reading comprehension.

Many of these reading instruction programs are based on what proficient readers do as they read (Pressley & Harris, 2006; Snowling & Hulme, 2005). Even though the National Reading Panel (2000) supported the idea of teaching such processes explicitly to all students, one challenge facing reading instruction studies is to better understand the strategies in which struggling readers are engaged. The understanding of struggling readers’ reading strategies would be useful in developing reading instruction programs that directly influence their comprehension processes. If educators understand more about the reading strategies of struggling readers, educators are more likely to tailor a reading program which will meet the needs of struggling readers.

Vlach and Burice (2010) encouraged teachers to understand their students’ interest and attitude toward reading at the beginning of the semester so that teachers could provide texts, set attainable goals, and created learning opportunities that reflected students’ interests and attitude. They suggested asking whether students thought themselves as good readers, what students would do when they came to a word they did not understand, and what types of books were their favorites.

To explore strategies that children could potentially use when meeting unfamiliar words in reading text, Beech (2010) asked children aged 7 to 11 years old what they did when they were reading a book or something and they came across a word that they could not read. He found that most children irrespective of underlying skills prefer to identify an unfamiliar or difficult word in text by breaking it down and sounding out its constituent sounds. In addition to the explicit phonological strategy, many struggling readers did not have alternative strategies readily available apart from seeking help from teachers.

Conducting semi-structured interviews with first graders, Long, Manning, and Manning (1985) studied whether proficient and struggling readers held the same views about how they learned to read, what they and others did as they read, their reading ability, and why people read. Without any statistical analyses, the responses of the highest and lowest readers to the interview questions were compared and reported. Most readers stated that sounding out the word was the most frequent strategy they would use. The second strategy struggling readers used was asking their mothers while the second strategy proficient readers used was asking their teachers.

To further expand the studies of Beech (2010), the present study did not only ask struggling readers the strategies they used, but also the strategies they thought proficient readers would use, the strategies they and teachers would use to help someone struggling in reading, and the strategies they would use to make themselves better readers. Even though the present study used a similar instrument as the one used by Long, Manning, and Manning (1985), the present study conducted statistical analysis of the responses of struggling readers, not only readers with the highest and lowest reading scores.

Therefore, the purpose of the present study was to investigate the reading strategies struggling readers might consciously rely on when they encountered difficulty. Specifically, two research questions were asked. First, what were the reading strategies struggling readers could verbalize? Second, was there significant difference among the reading strategies struggling readers verbalized?
Method

Participants

Twenty-six first-grade (male 17, female 9) and 35 second-grade struggling readers (male 19, female 16) participated in the present study. The Developmental Reading Assessment (DRA; Beaver, 2003) was administered to all first- and second-graders at a suburban elementary school. Those students who scored at the bottom quartile were identified as struggling readers and invited to participate in the present study. All procedures followed the regulations of the institutional review board.

Procedure

The Reading Interview (Goodman, Watson, & Burke, 1987) investigated student perceptions of the reading process, the model the student believed teachers held about reading, and how a student’s learning-to-read history affected his or her perceptions of reading. Five questions coded with “strategies” categories were used in the present study (Table 1). These five questions were open-ended and included the reading strategies that the reader could verbalize, the student’s notion of what an effective reader was and did, and what students had seen teachers did to help students and what they thought teachers ought to do. All participants were administered the five questions of the Reading Interview individually in a quiet classroom of an elementary school at Midwest.

Data Analysis

The five questions of the Reading Interview (Goodman, Watson, & Burke, 1987) were coded by the researcher with the “strategies” categories according to the coding directions associated with the instrument. The “strategies” categories included using context to determine word, examining word parts, consulting outside resources, omitting, using word meaning, depending on classroom procedures, using word identification, reading text, attending to reading speed, taking interest in reading, and unclassifiable.

When a student provided several answers to one question, the codes were recorded in the order the student provided the answers. When a student provided several answers to one question and the answers, though different, received the same code, code the different answers only once. When it was not entirely clear what a student might mean by an answer, previous or succeeding answers might be consulted for clarification.

Results

Reading Strategies Struggling Readers Verbalized

To answer the first research question about the reading strategies struggling readers could verbalize, Table 2 showed that struggling readers verbalized ten identified reading strategies. The first identified reading strategy was the use of text information to determine word. Examples included: figure out the word, read it over again, look for the pictures, go on to the next word, etc. The second strategy was the examination of word parts, such as letters, the alphabet, syllables, vowels, and endings. Examples
included: sound out the words, blend it and sound it out, underline the word and break it up, get the mouth ready to sound out the first letter, etc.

The third strategy was the consultation of resources outside the reader, either another person or a written source such as a dictionary. Examples included: ask help from someone including peers, teachers, siblings, parents and grandparents; look it up in dictionary, etc. The fourth strategy was the complete omission of a word. Examples included: skip the word, read other words, read something else, pass the word up, etc. The fifth strategy was the explanation of the meaning of a word. Examples included: tell them the word, help them with the words, put the word in a sentence, etc.

The sixth strategy was the classroom procedures involving physical movement, classroom materials or groupings, or diagnostic procedures. Examples included: write it on the board, take it to the back table, raise hand for teacher, do work at the reading level, figure out what the trouble was, etc. The seventh strategy was the identification of a whole word or the practice of whole words. Examples included: read every word, read bigger words easier, learn big words, ask what the word would be, identify new words, practice with the words, draw pictures to show what the words mean, etc. The eighth strategy was the reading, buying, or borrowing of books, stories, or other text. Examples included: read with me, read books to them, read bigger books, find a different book, read every day, read more books, read more and different things, etc.

The ninth strategy was the attending to reading speed. Examples included: read faster, read slowly & steadily, read fluently, stop at periods, smoothing it out, etc. The tenth strategy was the interest in reading. Examples included: learn from the reading, read more books, etc. The eleventh strategy was the unclassifiable or unintelligible answers that did not fall into any categories of reading strategies. Examples included: I wouldn’t read anyway, just read better, make a book, I get mad, etc.

Differences among the Reading Strategies Struggling Readers Verbalized

To answer the second research question about the differences among the reading strategies struggling readers verbalized, the percentage of the frequency of each reading strategy was computed (Table 3). The percentage was then analyzed in a multivariate Analysis of Variance (ANOVA), with reading strategy as the dependent variable and \( p < .05 \) as the significant level.

Results showed a main effect of strategy, \( F(10, 51) = 407.3, p < .001 \), partial \( \eta^2 = .988 \). Further pairwise comparisons using a Bonferroni correction showed that the percentage of examining word parts was significantly higher than the rest of the strategies (\( M = 42.46\%, SD = .23 \)). The second most verbalized strategy was consulting outside resources (\( M = 21.02\%, SD = .17 \)), and the third one was using context to determine word (\( M = 10.5\%, SD = .13 \)). The percentage of using the rest of the reading strategies was less than 10%, and these strategies did not differ from each other.

Discussion

The reading strategy struggling readers verbalized with the highest frequency was examining word parts. This included sounding out the words, blending the word and sounding it out, underlining the word and breaking it up, and getting the mouth ready to sound out the first letter. These findings corresponded to those findings from Beech (2010) and Long, Manning, and Manning (1985).
half of the struggling readers in the present study consciously rely on these strategies when they encountered difficulty in reading. Trippett (2007) stated that struggling readers were placed in curriculum that lacked comprehension strategy. Sounding out may be the primary strategy these struggling readers have learned from the curriculum they are placed in. Such a lack of knowledge of comprehension strategies may further put the struggling readers in disadvantaged positions.

In addition, the use of examining word parts indicates that struggling readers are at the first level of phonemic or graphemic representation of discourse comprehension proposed by Johnson-Laird (1983). They are concerned with decoding the sounds or letters of the language, rather than constructing meaning from the text. To them, reading is all about sounding out the words. As long as they are able to sound out the words, they think they are able to read. This misconception of reading may come from the fact that sounding out is all they have learned about reading.

The other reading strategies struggling readers verbalized were consulting outside resources and using context to determine word. Consulting outside resources includes asking help from peers, teachers, siblings, parents and grandparents or looking the word up in dictionary. These findings also corresponded to those findings from Beech (2010) and Long, Manning, and Manning (1985). About 20% of struggling readers noted asking help from teachers. It is encouraging that struggling readers consider teachers as the primary outside resources when they encounter difficulties in reading. Teachers may take up the role as the more knowledgeable adult who scaffolds the reading of struggling readers. However, it is discouraging that only a small number of struggling readers seek outside resources. Over half of the struggling readers opt for dealing with the difficulties in sounding out the words by themselves.

Using context to determine word includes reading it over, going on to the next word, or looking for the pictures to figure out the word. Previous studies (Beech, 2010; Long, Manning, & Manning, 1985) did not mention that struggling readers used this strategy. The present study showed that only 10% of struggling readers used the strategy of reading it over to figure out the word. This may be because struggling readers use sounding out as the primary strategy when they encounter difficulties in reading. In fact, should struggling readers use the other information from the text to figure out the part they do not understand, they would have moved to the second level of propositional representation or the third level of mental model of discourse comprehension postulated by Johnson-Laird (1983). Again, the dominance of sounding out and the scarcity of using context to determine word and other strategies indicate a limited repertoire of reading strategies struggling readers are engaged in.

Limitations of the Study

Since the present study was conducted in one elementary school in the Midwest, the results may not be able to generalize to the other elementary struggling readers across the nation. However, it may give an insight into the reading strategies struggling readers are able to verbalize.

Suggested Future Research

The reading interview may be administered to understand the reading strategies verbalized by various types of readers, e.g., readers of different reading abilities (i.e., proficient readers, average readers,
struggling readers), readers of different age group (i.e., elementary, secondary, college, adult), or readers of different content areas (i.e., scientific reading, social studies reading, language arts readings).

With a better understanding of the reading strategies struggling readers are consciously relying on, future studies may also focus on the reading strategies struggling readers can verbalize after receiving reading intervention. This could be used to determine the effectiveness of reading intervention programs.

**Implications for Practice**

In addition to teaching the reading strategies of proficient readers to struggling readers, reading intervention programs should also understand the strategies in which struggling readers are engaged. The present study found that examining word parts was the strategy struggling readers were more likely to consciously rely on when they met difficulties in reading. An effective reading intervention program should go beyond the reading strategies of proficient readers and empower struggling readers to use strategies other than sounding out.

With sounding out the word as the dominant strategy, struggling readers are actually in a disadvantaged position in reading. Teachers should be aware of the impact of school literacy contexts, curriculum, and relationships on the limited strategy struggling readers use in reading. Were teachers equipped with the knowledge to work with struggling readers? Were struggling readers asked to answer questions at the end of chapters with any comprehension instruction? Were struggling readers invited to talk about their reading or about themselves?

To overcome such disadvantage, teachers may expose struggling readers to higher-order reading skills. Teachers may teach directly different reading strategies to struggling readers so that they will be able to understand the structure of language and construct meanings from the text. In addition, struggling readers may be paired up with proficient readers to learn reading strategies other fellow students are engaged in so that they know sounding out is not the only strategy they may use.

**Conclusions**

Teaching reading strategies of proficient readers to struggling readers is not the whole of an effective reading intervention program. Educators should also understand the reading strategies struggling readers are engaged in. Such an understanding is necessary for educators to encourage struggling readers to use strategies other than those they are familiar with.
References


The author wishes to express special thanks to those teacher candidates who worked with the struggling readers and collected the data.

Table 1

*Reading Interview Questions*

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<table>
<thead>
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<tbody>
<tr>
<td>1</td>
<td>When you are reading and come to something you don’t know, what do you do? Do you ever do anything else?</td>
</tr>
<tr>
<td>2</td>
<td>When a good reader does come to something s/he doesn’t know, what do you think s/he does?</td>
</tr>
<tr>
<td>3</td>
<td>If you know someone was having trouble reading, how would you help that person?</td>
</tr>
<tr>
<td>4</td>
<td>What would a/your teacher do to help that person?</td>
</tr>
<tr>
<td>5</td>
<td>What would you like to do better as a reader?</td>
</tr>
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</table>

Table 2
*Reading Strategies Struggling Readers Verbalized*

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Use context to determine word.</td>
<td>figure out the word; read it over again look for the pictures; go on to the next word</td>
</tr>
<tr>
<td>2. Examine word parts.</td>
<td>sound out the words; blend it and sound it out underline the word and break it up get the mouth ready to sound out the first letter</td>
</tr>
<tr>
<td>3. Consult outside resources.</td>
<td>ask help from someone including peers, teachers, siblings, parents and grandparents look it up in dictionary</td>
</tr>
<tr>
<td>4. Omit.</td>
<td>skip the word; read other words read something else; pass the word up</td>
</tr>
<tr>
<td>5. Word meaning.</td>
<td>tell them the word; help them with the words put the word in a sentence</td>
</tr>
<tr>
<td>6. Classroom procedures.</td>
<td>write it on the board; take it to the back table raise hand for teacher; do work at the reading level figure out what the trouble was</td>
</tr>
<tr>
<td>7. Word identification.</td>
<td>read every word; read bigger words easier learn big words; ask what the word would be identify new words; practice with the words draw pictures to show what the words mean</td>
</tr>
<tr>
<td>8. Read text.</td>
<td>read with me; read books to them read bigger books; find a different book read every day; read more books read more and different things</td>
</tr>
<tr>
<td>9. Attend to reading speed.</td>
<td>Smoothing it out; Read faster Read fluently; Stop at periods Read slowly &amp; steadily</td>
</tr>
<tr>
<td>10. Take interest in reading.</td>
<td>Learn from my reading Read more books</td>
</tr>
<tr>
<td>11. Unclassifiable.</td>
<td>I wouldn’t read anyway; Just read better Make a book; I get mad</td>
</tr>
</tbody>
</table>
Table 3
The Percentage of Reading Strategies Verbalized by Struggling Readers (N=61)

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Percentage (Standard Deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Use context to determine word.</td>
<td>10.5% (.13)</td>
</tr>
<tr>
<td>2. Examine word parts.</td>
<td>42.46% (.23)</td>
</tr>
<tr>
<td>3. Consult outside resources.</td>
<td>21.02% (.17)</td>
</tr>
<tr>
<td>4. Omit.</td>
<td>1.78% (.05)</td>
</tr>
<tr>
<td>5. Word meaning.</td>
<td>2.15% (.06)</td>
</tr>
<tr>
<td>6. Classroom procedures.</td>
<td>4.03% (.09)</td>
</tr>
<tr>
<td>7. Word identification.</td>
<td>2.61% (.07)</td>
</tr>
<tr>
<td>8. Read text.</td>
<td>3.51% (.07)</td>
</tr>
<tr>
<td>9. Attend to reading speed.</td>
<td>2.83% (.07)</td>
</tr>
<tr>
<td>10. Take interest in reading.</td>
<td>1.04% (.04)</td>
</tr>
<tr>
<td>11. Unclassifiable.</td>
<td>8.06% (.11)</td>
</tr>
</tbody>
</table>