

The Effect of Scaffolding on Children's Reading Speed, Reading Anxiety, and Reading Proficiency

Carlo Magno
De La Salle University, Manila

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Abstract

The present experiment assessed the effect of scaffolding as a reading intervention. Scaffolding was done by a teacher providing feedback while the child is orally reading. Feedback was given in terms of the decoding (meaning of words), fluency (which involves correct pronunciation, proper rhythm, and speed), and modeling (pre practice procedure) while the child is orally reading an unfamiliar story. There were 60 first grade pupils who participated in the study. Reading speed and anxiety was measured before and after the scaffolding. Reading speed was measured by the rate of reading by seconds while reading anxiety was assessed by asking the pupils to respond in the Child Reading Anxiety Scale. The results indicate a significant increased the children's reading speed [$t(60) = 7.96, p < .05$], reading proficiency [$t(60) = 8.77, p < .05$], and significant decrease in the their reading anxiety [$t(60) = 15.76, p < .05$] from pre to post test. The study provides implications for reading instruction in the form of scaffolding.

Keywords: Reading speed, reading anxiety, scaffolding in reading

Introduction

The supervision of an adult is important in a child's ability to read. In the United States, the No Child Left Behind (NCLB) Act targets the literacy rate of the children which focuses on two main subjects that the government thinks the children needs improvement on: Reading and Mathematics. This research focused on testing an intervention on reading through adult supervision. Adult supervision in terms of assisting a child how to read is termed as scaffolding (Palmer, Zhang, Taylor, & Leclere, 2010). Scaffolding refers to the way the adult guides the child's learning via focused questions and positive interactions (Balaban, 1995). Scaffolding is the provision of support in reading skills when new and difficult terms are read by beginning readers (Cazden, 1983).

Knowledge on how to read words and being able to say them correctly are ways to determine how advanced, or delayed, a child in reading is. Decoding is one of the processes that need to be fulfilled in order for a student to fully comprehend what is being read. Decoding consists of different aspects; among them are word-recognition and fluency. Under this primary step in reading comprehension, it is mentioned by LaBerge and Samuels (1974) that "being able to sound out a word does not guarantee that the word will be understood as the child reads" (p. 125). It should follow that it takes a lot of effort from the student to be able to recognize the word and at the same time, understand its meaning. On the other hand, fluency in reading is also a mark of reading proficiency. Scholars and

teachers have found it difficult to define “fluency” because to arrive at a common ground is not as simple as one would think. The researchers have found different materials that could help in reducing the problem in defining “fluency” (Clay, 2005). Apparently, some materials say that fluency depends on the kind of text a reader comprehends, and that it is actually based on the familiarity of the reader towards the words used in the text. There is some agreement that it consists of rate, accuracy, and automaticity of word recognition, as well as smoothness, phrasing, and expressiveness (Worthy & Broaddus, 2001, Skinner & Carol, 1995). LaBerge and Samuel (1974) added that word recognition also plays an important role in a child’s oral reading performance.

Schools in the Philippines are implementing different reading interventions targeting oral reading performance through decoding, fluency, and word recognition. Although majority of the empirical evidences supporting such modes in reading intervention (see Reinking & Watkins, 2000) is not evident in local literature. Some of the reading interventions or reading initiatives in the Philippines that involves decoding, fluency, and word recognition are Round Robin Reading (RRR) and Drop Everything and Read (DEAR).

Modeling is also a teaching strategy that can be utilized in teaching reading to children. In this particular method, it is assumed that children could definitely learn faster if there was guidance from an adult. Modeling is also a means of scaffolding. To improve oral reading performance, pre practice procedures or modeling have been shown to improve oral reading accuracy. In this method, the teacher reads a passage aloud and the student is instructed to “follow along” silently in the text. After listening to the teacher read, the student reads the same passage aloud. The student will have a higher rate of words read correctly than without the listening procedure (Rose, 1984; Smith, 1979; Vadasy & Sanders, 2008).

Aside from facilitating reading through scaffolding, there are also instances when the child refuses to demonstrate reading because they feel anxiety (Pichette, 2009). Reading anxiety is defined as a specific fear towards the act of Reading (Zbornik, 2001). Zbornik (2001) also mentioned that not showing interest in reading could greatly affect the child’s academic achievement. This would pose as a concern for both teachers and parents alike. In this experiment it would be investigated if scaffolding could be used to decrease a child’s reading anxiety.

The use of scaffolding supported by an adult who can use decoding, fluency, word recognition, and modeling is explained in Vygotsky’s Zone of Proximal Development (ZPD). A child can further improve his/her reading speed, and overcome anxiety with the help of an intervention from a guardian, teacher or a parent. The help given by the adult is called scaffolding. In Vygotskiy’s theory of Zone of Proximal Development, it is stated that a child can achieve their potential level of development if scaffolding is given or applied to the child. As time progresses, the child develop the skill and can read independently later on. Vygotsky saw development as social origin and reliant tools and signs for the mediation of mental processes (Smagorinsky, 1995). The Zone of Proximal Development explains that the consciousness has a social origin and claims that mental processes are mediated by tools and signs (Wertsch, 1985). The theme points out that mental process, one of which is reading, can be directly affected by external factors, such as the supervision of an adult.

Other studies have applied Vygotsky’s Zone of Proximal Development (ZPD) through scaffolding. Scaffolding was used to describe the presence of an aid or a guardian in assisting a child in reading (Kamps, Barbetta, Leonard, & Delquadri, 1994). Modeling is

used where the teacher or an adult guides the child the pronunciation of the words as a form of scaffold. In this experiment, modeling is used as a form of scaffolding for the participants.

The present study hypothesize that scaffolding in the form of adult supervision giving feedback on decoding, fluency, word recognition, decoding, and modeling reading increases beginning readers rate of reading and oral reading performance and decrease reading anxiety.

Method

Research Design

This experiment utilized a pre-test and post-test design. It is assumed in this design that there are two events in an experiment where one can clearly point out if there has been an improvement in the experiment conducted; these two events would be the beginning of the experiment, and after the introduction of scaffolding. In this kind of design, the rate of the child to read will be measured before scaffolding is given, and later on, after scaffolding is applied.

Participants

The participants are 60 randomly selected first grade students coming from a private school with age ranging from 6 - 7 years old. As a requirement, these students know the basics of how to read and write, and are expected to be able to read short stories. It was ensured that the participants do not possess any reading disabilities to prevent the pronunciation difficult words.

Materials

Two short stories were used, namely, "The Lion with Bad Breath" and "The Lion and the Mouse." This is the text that is preferred because these types of text that is at par with the reading skills of young children. The words that make up the two short stories are simple enough to be known to children and also, these short stories are useful to children because of the moral lessons that are implied by the story. The participants indicated that they are not familiar with the story and it is their first time reading it. There are several words that are similar in the two stories.

A stopwatch was used to measure the reading speed of the participants. The timer started when the experimenter hears the child utter the first word of the story, and consequently, the timer halts when the child says the last word of the story. The unit of minutes' was used to measure the child's reading speed.

The Reading Anxiety by Mills, Pajares, and Herron (2006) was adapted for children to measure reading anxiety. The scale is composed of 18 items and each is responded using a five point Lickert scale. Example of items would be "Listening to English speakers makes me feel uneasy and confused" and "I get an uneasy feeling when I think of trying to read a difficult English passage." The items were read to each child and

then each scale is represented by five faces. The child points to happiest face if they strongly agree and the most sad face for strongly disagree. Internal consistency of the 18 items resulted to a Cronbach's alpha value of .92. A principal components analysis was conducted and all items loaded highly under one factor.

The Gray Oral Reading Diagnostic (GORT-D) was used to measure the oral reading performance of the child (Merz, 1992). This rubric for paragraph reading was only used to measure the child's ability in pronunciation, intonation, and clarity in reading. The OPT consists of five ratings, zero being the lowest and four being the highest. Reliability of the GORT-D is measured by correlating alternate forms and by examining internal consistency. Alphas range from .96 (Decoding) to .72 (Morphemic Analysis).

Procedure

The participants were first informed what they will undergo in the experiment. All selected students agreed to participate. They were asked to enter the room one at a time. Each child was first asked to read a story "The Lion with Bad Breath" and their rate of reading was measured. While reading, they were rated using the GORT-D. Then they were requested to respond to the Child Reading Anxiety Scale. Each child was again asked to read the same story and this time a newly introduced teacher provided the scaffolding. In the scaffolding, some meaning of the words found in the story was given (decoding) with their correct pronunciation (fluency). Then the teacher read the story to the participants (modeling). Each child is then asked to read again the story. Each mispronounced word was corrected while reading and if a child stops the teacher gives the sound of the next initial letter. The correct expression is also called for while the child is reading (fluency). After these scaffolding activities with each child, the child is asked to read the next story "The Lion and the Mouse" with some equivalent words from the first story. Their reading proficiency was rated by a judge on the other side of a one-way mirror. The researcher timed the rate of reading of each child. After reading, the child is once again asked to respond in the anxiety scale.

Results

The t-test for repeated measures was used to compute for the difference between the pre and post measurement of the reading speed and reading anxiety. A decrease in the amount of time the stories were read means faster rate of reading. By comparing the means of the reading speed of the students before ($M=6.13$, $SD=1.08$) and after ($M=4.13$, $SD=.85$), significant differences were attained, $t(60) = 7.96$, $p < .05$, with an large effect size of $d=1.93$. There was significant improvement in reading speed after scaffolding is applied.

The same result was obtained for reading anxiety using the t-test. Using the reading anxiety rating scale, there was a significant decrease in the students reading anxiety from $M=5.94$ to $M=4.91$ when the scaffolding was applied, $t(60) = 15.76$, $p < .05$, with a large effect size of $d=3.92$.

Lastly, the oral reading proficiency test also yielded significant difference between the pre and post test. There was a significant increase from the oral reading ratings from the pre ($M=1.35$, $SD=0.78$) to the post test ($M=3.2$, $SD=0.60$), $t(60)=8.77$, $p < .05$, with a large effect size of $d=2.12$.

Discussion

The present study hypothesized that reading intervention through scaffolding improves reading proficiency, increased rate of reading, and reduce reading anxiety. This hypothesis is confirmed by the results in the present study with large effect sizes for each dependent variable. Results show clearly that students benefitted from scaffolding in terms of improving oral reading, faster reading, and reduced reading anxiety. It has been mentioned in several studies that the supervision of an adult, a teacher or a parent, who provides the scaffold by providing feedback and modeling can improve students reading ability. This present study provides a new exertion in reading improvement because several reading outcomes were assessed that includes reading anxiety, reading speed, and oral reading performance.

The present study reiterates that there is an increase in the reading speed and the oral reading performance of the children after scaffolding was initiated. Regarding the reading anxiety of the children, it is clear that it has decreased after the introduction of scaffolding. It strengthens the points raised by Vygotsky's Zone of Proximal Development where the intervention of an adult facilitates in the learning process of a child especially in different reading measures.

The present study's objective is to provide teachers some possible intervention to improve a child in reading better and faster. After the experiment, it has become clear that the kind of intervention to improve reading performance can be effective by working with an adult and more expert type of learners.

The intervention which is scaffolding had yield a large effect size considering the varied type of scaffolding it contains. The scaffold contains not only modeling but decoding and fluency strategies through feedback were implemented. The intervention undertaken was more like instruction and feedback was provided every time a child needs help in the process which ensured improvement through post test gains. Instruction for young children in reading should contain the necessary scaffold to help them improve such reading skills. Teachers should consider conducting the scaffolding while the child is reading the text.

The scaffolding given to the child showed large gains on speed reading. When the respondents were given the meaning of words which enhanced their recognition and proper pronunciation are areas that increased the rate of reading. The respondents did not struggle through the difficult words in the post test that improved the speed. The thorough comprehension of the words used also contributed to the reading speed. The intervention also facilitated a context where the respondents do not only read for themselves but for a specific audience.

The scaffolding provided also showed gains in the reduction of reading anxiety. The scaffolding reduced the unpleasant emotional reaction towards reading because of the guide provided. The teacher who served as a model, decoder, and feedback provider provided the necessary support to reduce their anxiety in reading.

Finally, the scaffolding also showed significant gains of reading proficiency. There was improvement in the degree of facility in speaking with good control of pronunciation, stress, rhythm, intonation patterns, and speed.

The present study contributes to existing literature on reading interventions by looking at the specific compositions of scaffolding that can be used in instruction. Not only proper instruction is recommended, the effectiveness of the scaffolding is marked to be useful in improving reading speed, proficiency and the reduction of anxiety.

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About the Author

Dr. Carlo Magno is presently a faculty of the Counseling and Educational Psychology Department of De La Salle University, Manila, Philippines. He conducts studies on language learning, self-regulation, metacognition, and educational assessment. Correspondence can be addressed to him at crlmgn@yahoo.com.