

# Intensive Interventions in Reading: Preparing Preservice Candidates to Teach

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## Abstract

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*Tutoring has become a familiar tool that schools use to reinforce classroom teaching and improve student achievement. While tutoring as a whole has been demonstrated to improve student learning across a variety of subjects and age groups, there is little published evidence for the effectiveness of preservice teachers providing tutoring to children that are struggling with reading skills. This research attempts to determine the effectiveness of preservice teachers providing tutoring and the impact that tutoring has on the preservice teachers' understanding of how children learn to read.*

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**Keywords:** tutoring, student engagement, explicit instruction, active learning, preservice teachers

## 1. Introduction

In today's classrooms, many teachers are seeking ways to help their students keep up with the ever increasing demands of a modern curriculum that has shifted what children learn in each grade. More and more children struggle to meet the demands of such a curriculum. Research has consistently shown that well-designed tutoring programs can be effective in improving children's reading skills, which are essential to a student's success in all areas of learning (Gibb, 2014). Tutoring refers to pairing a student with a trained individual using clear and individually designed instruction to address the student's specific learning needs. Well-implemented tutoring programs can result in significant improvement on test scores and have a positive impact on student attitudes towards reading and learning (Power & Cummings, 2011). The efficacy of tutoring is well established in research, but what remains unclear is the features that make tutoring effective.

### 1.1 Literature Review

There is no trend in data to suggest that, when given appropriate training and support, any particular volunteer tutor is more effective (Power & Cummunigs, 2011). The volunteer tutors in this study were preservice teachers who received training was given before each tutoring session and support was given following each session. Attempts were made to provide one-to-one instruction that was specifically designed for each child given their areas of weakness and interests. Tutoring is considered a best practice when tutors receive adequate training, the tutoring is done in small groups or individually, and the data is monitored in a systematic way then used to guide instruction (Dorn, 2014).

The volunteers in this study consisted of preservice teachers taking a class on how to help struggling readers. These volunteers seemed to be an ideal match as tutors because this opportunity allowed for hands-on experience to learn about topics discussed in class. This experience supports the fact that student engagement has emerged as one of the principal cornerstones and objectives of teaching and learning in higher education systems around the world (Shaun & Quaye, 2009; Wanner, 2015). Student engagement is based on the idea that the amount of attention and interest a student shows when they are learning directly impacts their motivation and in turn has a larger impact on learning. Trowler and Trowler (2010) explain that "the value of engagement is no longer questioned" meaning that it is something we have all come to value in our college courses. Teaching is no different than other professional field, we learn best by doing.

## 2. Methodology

A mixed methods approach was used in this research in an attempt to employ strategies of inquiry that involve collecting data to best understand the research questions.

### 2.1 Participants

The study included nineteen preservice students from a private college enrolled in a course designed to teach reading intervention strategies to struggling readers. They were all in their third year of study to become certified teachers and had all take several prerequisite courses related to how children learn to read. Schultz and Mueller (2007) discussed a meta-analysis of 29 studies showing that programs using college students as tutors produced the largest impact.

Preservice students were partnered with children from an area catholic school. The children in the study ranged from kindergarten to sixth grade and were referred by their classroom teachers because they were struggling with grade level reading skills. A request was made to each child's parent to allow them to participate in the semester long, after school tutoring program. One of the children had a diagnosis of dyslexia and none of the children were receiving any intervention or assistance outside of their regular class instruction. The children's difficulties in reading varied by age, but most centered on decoding and word attack skills. The tutoring program was housed in the library and several other areas of the participating elementary building.

### 2.2 Data Gathering and Analysis

The preservice teachers were instructed on how to administer several assessments before the tutoring sessions began: the Developmental Reading Assessment (DRA), Dynamic Indicators of Basic Early Literacy Skills (DIBELS), and an informal sight word recognition assessment. The DRA is an individually administered standardized assessment used to identify a child's reading level, accuracy, fluency, and comprehension. Using the assessment data the preservice teachers were able to plan individualized instruction during the tutoring sessions. The other assessment, DIBELS, is a set of measures used to assess the learning of reading skills from kindergarten through sixth grade. The measures consists of one minute probes used to monitor progress. The seven measures included in the DIBELS are phonemic awareness, alphabetic principle, accuracy and fluency with connected text, reading comprehension, and vocabulary. DIBELS were intended to assist in identifying struggling readers. With the information from each assessment, the preservice teachers could gather information about the child's reading level and oral reading fluency, as well as compare the child's memorized sight words to that of their grade level peers. Once the three assessments were complete, the preservice teachers met with their professor to determined areas of focus based on weaknesses and needs. They were also required to reach out to the children's classroom teachers asking for input as to areas of strength and weakness for each child. Ideas and activities to include during the tutoring sessions were looked at and discussed based on assessment results, professor feedback and teacher input

Preservice teachers were given a tutoring planning tool and instructed to provide a minimum of twenty minutes of instruction on reading requiring the child to read out loud and receive feedback from the tutor. Another twenty minutes was to be spent on "word work" were the preservice teacher provided instruction on phonics rules or skills that have been determined to be an area of weakness for the child. The child would spend time either writing, sorting, building, or interacting with daily focus words. During the hour long session, another twenty minutes was to be devoted to working on explicitly taught writing skills.

Within the tutoring planning tool, the preservice teachers were required to write a daily goal, create a plan for the day, and progress monitor the goal for each twenty minute area of focus (reading, writing, and word work). The preservice teachers formally met one-on-one with their professor once a month to go over the planning tools, discuss progress, and address any questions. The professor was also available during and after tutoring sessions for additional feedback.

Schultz and Mueller (2007) report that research shows that tutoring programs which produce the greatest impact are those in which tutors receive training that includes time spent on training prior to tutoring and ongoing training and feedback during the course of tutoring. In this study, the preservice teachers gathered for an hour long class after each tutoring session to discuss in depth the essential components of reading instruction. Lectures focused on phonological awareness, phonics, irregular and multisyllabic word reading, and assessment. Strategies were modeled for each lecture topic and tutors were given time to discuss and develop strategies specific to the child they were working with.

Qualitative data was collected by survey format from the preservice teachers. Upon completion of the course, all preservice teachers were given a survey to rate how they felt about the tutoring project. The survey asked if they felt the subject matter they learned during the class would be used in their everyday teaching life. Questions related to whether the tutoring experience helped them to understand the lectures better and if they felt the tutoring sessions were of benefit to the children. Preservice teachers rated questions about whether they felt personal responsibility for the learning of the children they worked with, if tutoring enhanced their understanding of how children read, and if the tutoring sessions improved their own problem solving skills.

### 3 Results

There were two research questions proposed to guide the analysis of the data gathered from the tutoring intervention by preservice teachers. Research question one states: Can an intensive after-school tutoring program implemented by preservice teachers improve reading scores in struggling readers?

There were very low numbers of reported scores in pre-test and post-test among the students who participated ( $N = 13$ ). Table 1 shows the means of the paired pre-test and post-test scores on the different tests. The lowest comparison had 1 student and the highest had 8 students. There were two (Non sense word fluency and Oral read fluency errors) pre-test and post-test comparisons that had no data and could not be processed. Paired samples  $t$ -tests (Dependent  $t$ -tests) compared the means between pre-test and post-test groups on the same continuous, dependent variable. These  $t$ -tests were done for data that was present. See Table 2 for results and interpretation.

Table1  
*Paired Samples Statistics*

		<i>M</i>	<i>N</i>	<i>SD</i>	<i>SE</i>
Pair 1	Pre-Test Letter identification	50.00	2	21.213	15.000
	Post-Test Letter identification	67.00	2	.000	.000
Pair 2	Pre-Test Letter sounds	82.50	2	3.536	2.500
	Post-Test Letter sounds	98.00	2	2.828	2.000
Pair 3	Pre-Test Phoneme Seg fluency	47.00	1	.	.
	Post-Test Phoneme Seg Fluency	42.00	1	.	.
Pair 4	Pre-Test Nonsense word fluency CLS	22.00	3	10.149	5.859
	Post-Test Nonsense word fluency CLS	20.00	3	6.557	3.786
Pair 5	Pre-Test Nonsense word fluency WRC	.	0	.	.
	Post-Test Nonsense word fluency WRC	.	0	.	.
Pair 6	Pre-Test Oral read fluency correct	59.25	8	22.147	7.830
	Post-Test Oral read fluency correct	78.75	8	23.813	8.419
Pair 7	Pre-Test Oral read fluency errors	.	0	.	.
	Post-Test Oral read fluency errors	.	0	.	.
Pair 8	Pre-Test Re-tell fluency	35.50	2	13.435	9.500
	Post-Test Re-tell fluency	48.50	2	20.506	14.500
Pair 9	Pre-Test DRA level	32.25	8	9.285	3.283
	Post-Test DRA level	32.75	8	9.677	3.421

The pre-test and post-test were not statistically significant ( $p > 0.05$ ) for the mean differences between pre-test and post-test scores on letter identification, letter sounds, nonsense word fluency CLS, re-tell fluency, and DRA level. However, the mean difference of an increase of 19.5 points from pre-test oral read fluency correct to posttest was found to be statistically significant at  $t(7) = -5.06$ ,  $p = 0.001$ . Please see Table 2.

Table 2  
*Paired Samples t-tests*

	Paired Differences					<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>SE</i>	95%	Confidence			
				Interval	of the			
			Difference	Difference	Lower	Upper		
Pre-Test Letter identification – Post- Test Letter identification	-17.00	21.21	15.00	-207.59	173.59	-1.13	1	.46
Pre-Test Letter sounds – Post-Test Letter sounds	-15.50	6.36	4.50	-72.67	41.67	-3.44	1	.18
Pre-Test Nonsense word fluency CLS – Post-Test Nonsense word fluency CLS	2.00	3.60	2.08	-6.95	10.95	.96	2	.43
Pre-Test Oral read fluency correct – Post-Test Oral read fluency correct	-19.50	10.88	3.85	-28.60	-10.39	-5.06	7	.001
Pre-Test Re-tell fluency – Post-Test Re-tell fluency	-13.00	7.07	5.00	-76.53	50.53	-2.60	1	.23
Pre-Test DRA level – Post-Test DRA level	-.50	.92	.32	-1.27	.27	-1.52	7	.17

Research question two states: Are preservice teachers adequately prepared to teach reading to struggling readers in their future classrooms?

The preservice teachers answered the following survey questions at the end of the tutoring program with questions that related to how knowledgeable and confident they felt about working with struggling readers. Then, they were asked to provide qualitative comments on their experience. As can be seen in Table 3, preservice teachers ( $N = 19$ ) reported that the majority of them agreed ( $n = 13$ , 68.4%) that “Subject matter used in everyday life?” followed by strongly agreed ( $n = 4$ , 21.1%) and neutral ( $n = 2$ , 10.5%).

Table 3  
*Subject matter used in everyday life?*

	Frequency	Percent
Neutral	2	10.5
Agree	13	68.4
Strongly Agree	4	21.1
Total	19	100.0

As can be seen in Table 4, preservice teachers ( $N = 19$ ) reported that the majority of them agreed ( $n = 12$ , 62.6%) that “Understand the lectures?” followed by neutral ( $n = 4$ , 21.1%) and strongly agreed ( $n = 3$ , 15.8%).

Table 4  
*Understand the lectures?*

	Frequency	Percent
Neutral	4	21.1
Agree	12	63.2
Strongly Agree	3	15.8
Total	19	100.0

As can be seen in Table 5, preservice teachers ( $N = 19$ ) reported that the majority of them agreed ( $n = 11$ , 57.9%) that what they do “Benefitted the community?” followed by strongly agreed ( $n = 5$ , 26.3%) and neutral ( $n = 3$ , 15.8%).

Table 5  
*Benefitted the community?*

	Frequency	Percent
Neutral	3	15.8
Agree	11	57.9
Strongly Agree	5	26.3
Total	19	100.0

As can be seen in Table 6, preservice teachers ( $N = 19$ ) reported that the majority of them agreed ( $n = 10$ , 52.6%) with “Personal responsibility?” followed by strongly agreed ( $n = 8$ , 42.1%) and neutral ( $n = 1$ , 5.3%).

Table 6  
*Personal responsibility?*

	Frequency	Valid Percent
Neutral	1	5.3
Agree	10	52.6
Strongly Agree	8	42.1
Total	19	100.0

As can be seen in Table 7, preservice teachers ( $N = 19$ ) reported that the majority of them agreed ( $n = 9$ , 47.4%) that what they do “Enhanced Learning?” followed by strongly agreed ( $n = 7$ , 36.3%) and neutral ( $n = 3$ , 15.8%).

Table 7  
*Enhance learning?*

	Frequency	Percent
Neutral	3	15.8
Agree	9	47.4
Strongly Agree	7	36.8
Total	19	100.0

As can be seen in Table 8, preservice teachers ( $N = 19$ ) reported that the majority of them strongly agreed ( $n = 10$ , 52.6%) they were “Confident in problem solving skills?” followed by agreed ( $n = 8$ , 42.1%) and neutral ( $n = 1$ , 5.3%).

Table 8  
*Confident in your Problem Solving Skills?*

	Frequency	Percent
Neutral	1	5.3
Agree	8	42.1
Strongly Agree	10	52.6
Total	19	100.0

The answers in Table 9 are qualitative comments by each preservice teacher. Four preservice teachers reported problems with the tutoring program and 14 preservice teachers found the program beneficial to either themselves as teachers or to the students.

Table 9  
*Preservice Teacher Comments*

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Comments

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- a. A worthwhile learning activity that allowed us to think out of the box.
  - b. Able to see student's struggles in personal and come up with solutions.
  - c. I gained a lot of insight on how students read.
  - d. I got to watch them progress and gain reading skills.
  - e. I learned a lot about myself as an instructor and how testing can accurately be used to see progress.
  - f. I learned how to teach children to read.
  - g. I learned that repetition can really help students.
  - h. It gave me a lot of insight into early and emergent literacy skills.
  - i. It was nice to see exactly how a student learns to read.
  - j. It was really tough to gasp insight because the student already had a full day of school and wasn't giving their all at tutoring .
  - k. Learned I need to find the students strengths first.
  - l. My student was so uncooperative that much of the time was wasted.
  - m. The only set back was that tutoring was split with class time so I felt like I missed out on some needed instruction.
  - n. This provided practical experience and helped us use the strategies we learned in class to benefit struggling readers .
  - o. We didn't have enough time with the children.
  - p. We had the chance to work one-on-one with a student and see their progress.
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#### 4 Discussion

There were a total of 13 students that participated in the study. The number of students was determined by the number of preservice teachers that enrolled for the spring course. The intervention was tutoring performed by preservice teachers. Research question one asked, "Can an intensive after-school tutoring program implemented by preservice teachers improve reading scores in struggling readers?" There were two (Non sense word fluency and Oral read fluency errors) pre-test and post-test comparisons that had no data and could not be processed. Paired samples *t*-tests (Dependent *t*-tests) compared the means between pre-test and post-test groups on the same continuous, dependent variable. The results indicated that the intervention did not significantly increase post-intervention scores on letter identification, letter sounds, nonsense word fluency CLS, re-tell fluency, and DRA level. However, the mean difference from pre-test oral read fluency correct to post-test was found to be statistically significant. So, there was some evidence based on the oral read fluency test that supports research question one.

Research question two asked, "Are preservice teachers adequately prepared to teach reading to struggling readers in their future classrooms?" The majority of preservice teachers either agreed or strongly agreed that their knowledge and confidence in their abilities as measured by six survey questions. In the comments made on the survey by preservice teachers, four preservice teachers reported problems with the tutoring program and 14 preservice teachers found the program beneficial to either themselves as teachers or to the students.

##### 4.1 Limitations

Findings suggest that this model of tutoring/teaching may have an impact on teaching and learning outcomes, there are limitations to this study. First, although preservice teachers received instruction after each tutoring session it was mostly done in a group or class setting. It may be more beneficial to provide more one-on-one instruction based on the needs of the preservice teacher and the child being tutored. Second, the group size and the large variation of the age of children being tutored make it difficult to extract some data. It may be helpful to tutor groups of children in the same grade to see if this approach to tutoring has a larger impact on a specific age group. Third, the type instrument used to collect data may have limited the study. Although both reading assessments are widely used in the school setting it, measures are dependent on the age and grade of the child thus giving different data for different age groups.

Lastly, this study tried to look at the effects on pre-service teachers and children being tutored, a study that looks at just one group may be able to better determine the impact a program designed in this manner may have.

## 5. Conclusion

While tutoring maybe the oldest form of teaching, the design and critique of tutoring programs seems endless, especially when the field of education has so many stakeholders (Schultz & Mueller 2007). The aim of this study was to find a meaningful way to teach preservice teachers how to teach children how to read so that as soon as they began to teach they could make a significant impact on the children they work with and their reading skills. The finding of this study offers convincing evidence that this model of teaching preservice teacher how children learn to read is a practical and worthwhile way for them to gain the necessary understanding to become highly effective teachers within their own classrooms. Not only did it help preservice teachers to better understand the learning to read process but it also made an impact on children in the local area that were struggling in their classrooms with reading skills.

Sailors & Price (2015) explain that teachers need time and intensive support in their classrooms by highly qualified coaches in order to improve their practices and the same holds true for those learning to teach. Receiving immediate feedback from the instructor helped preservice teachers to see what worked and what could be improved upon. Having daily contact and discussion with instructor gave the preservice teachers an opportunity to ask questions and stretch their learning to new lengths. Hands on, real life experiences were provided that these soon to be teachers will be able to apply in their own classrooms in the very near future.

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