

Examining the Effectiveness of the Corrective Reading Program for Special Education  
and Non-Special Education Students

Dissertation

Submitted to Northcentral University

Graduate Faculty of the School of Education  
in Partial Fulfillment of the  
Requirements for the Degree of

DOCTOR OF PHILOSOPHY

by

CATHERINE A. MCCUTCHEON

Prescott Valley, Arizona  
December 2013

UMI Number: 3578710

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.

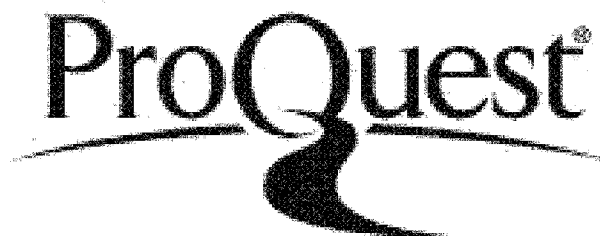


UMI 3578710

Published by ProQuest LLC 2014. Copyright in the Dissertation held by the Author.

Microform Edition © ProQuest LLC.

All rights reserved. This work is protected against unauthorized copying under Title 17, United States Code.



ProQuest LLC  
789 East Eisenhower Parkway  
P.O. Box 1346  
Ann Arbor, MI 48106-1346

PREVIEW

Copyright 2013

Catherine A. McCutcheon

APPROVAL PAGE

Examining the Effectiveness of the Corrective Reading Program for Special Education  
and Non-Special Education Students

by

Catherine A. McCutcheon

Approved by:

Dana Cleghorn 1-14-2014  
Chair: Dana Cleghorn, Ph.D. Date

Member: Rollen Fowler, Ph.D.

Certified by:

Dr. Cindy K. Guillaume 1/22/2014  
School Dean: Cindy K. Guillaume, Ed.D. Date

## Abstract

The traditional classroom educational approach has been unsuccessful in helping special education and non-special education students who are not proficient readers. The problem addressed in this study was that a large number of American children are experiencing difficulty learning to read. One possible way to help students learn to read is through programs that use direct instructional techniques based on the instructional theory into practice model. One such program, the Corrective Reading Program, has been successful in some situations, but the differential effectiveness of this program for special education students and non-special education students has not been addressed. Therefore, the purpose of this quantitative, quasi-experimental study was to determine if a direct instructional technique based on the instructional theory into practice model was effective for both special education and non-special education students in terms of phonological awareness improvements and attitudes toward reading. A quantitative, quasi-experimental research design was used in the current study. The population of interest in this study consisted of third-grade through fifth-grade students in rural school districts in the Northwest region of the United States who were currently engaged with the Corrective Reading Program. The sample consisted of all students in third through fifth grade in a Northwest rural school district who were enrolled in the Corrective Reading Program. There were 125 of these students in the target school district, of which 88 students were in the Corrective Reading Program based on at-risk status for academic failure and consequent participation in the Learning Assistance Program in the school district (the non-special education group), and 37 had a disability, determined through eligibility for special education services (the special education group). The results

showed that there were larger gains in Phonological Awareness scores for the special education group ( $M = 29.43$ ,  $SD = 9.11$ ) than for the non-special education group ( $M = 24.12$ ,  $SD = 9.68$ ) based on the Mann-Whitney U test,  $U = 1,046.50$ ,  $p = .002$ ,  $r^2 = .08$ . Whether this represents a meaningful difference in the comparison of the two groups is a subjective question, but a difference of more than 5 points (which is over one-half of a standard deviation of the pretest/posttest difference scores) may have practical significance. Thus, in the context of instructional practice, it appears that direct instruction can be more effective with some types of students (i.e., special education students) than with others (i.e., non-special education students), based on the statistical differences between the groups. However, the null hypothesis for no difference between the groups for reading attitudes was not rejected,  $U = 1,480.00$ ,  $p = .419$ ,  $r^2 = .01$ . Pre-test to post-test differences in reading attitude were not statistically significant for either group. It is recommended that researchers continue to explore the effectiveness of the Corrective Reading Program with a variety of types of students, address the apparent lack of progress in reading attitudes, and perform case studies on Corrective Reading Program implementations. It is also recommended that educators differentiate between special education students and non-special education in determining the most appropriate reading intervention.

## Dedication

I would like to dedicate this to my father Gordon E. Stein who passed away July, 2012. His enduring love and endless faith in me helped me become the person I am today. He never doubted in me and warded off skeptics.

I wish to acknowledge the following people:

Patrick, to my amazing husband whose unconditional love, encouragement and unwavering support allowed me to fulfill a dream I never thought I would be able to achieve.

Madisen, to my extraordinary daughter, I hope I am an inspiration to you and that I am proof that you can accomplish anything you set your mind too. You inspire me every day!

Cooper, to my vivacious son, your laughter and smile always brightened my days when I thought I could not continue.

Mom your incredible strength and advocacy allowed me to flourish when many people dismissed me. You fought teachers and school policies to ensure, I would be provided the best education. I know you were scared of the uncertainties, but your belief in me is why I am getting this degree.

Dr. Dana Cleghorn, my chair, your unfaltering support when I wanted to throw in the towel on several occasions, you kept picking me up. Thank you for never giving up on me!

My committee member, Dr. Rollen Fowler, thank you for the feedback and being a part of my journey.

To all my family and friends, thank you for your continued support, shoulders to cry on, prayers and all of your endless love.

## Table of Contents

List of Tables .....	ix
List of Figures .....	x
Chapter 1: Introduction .....	1
Background.....	2
Statement of the Problem.....	4
Purpose of the Study .....	5
Theoretical Framework.....	6
Research Questions.....	7
Hypotheses.....	8
Nature of the Study .....	8
Significance of the Study.....	9
Definitions .....	10
Summary.....	11
Chapter 2: Literature Review.....	14
Literacy Development .....	14
Effective Reading Programs .....	18
Phonological Awareness.....	19
Instructional Theory into Practice and Direct Instruction .....	27
Corrective Reading Program .....	28
Elementary Reading Attitudes.....	40
Summary.....	47
Chapter 3: Research Method.....	49
Research Methods and Design.....	50
Participants .....	52
Materials/Instruments .....	53
Operational Definition of Variables .....	56
Data Collection, Processing, and Analysis.....	58
Assumptions .....	60
Limitations.....	60
Delimitations.....	61
Ethical Assurances.....	62
Summary.....	63
Chapter 4: Findings.....	65
Results.....	66
Evaluation of Findings.....	72
Summary .....	76
Chapter 5: Implications, Recommendations, and Conclusions .....	78



Implications .....	81
Recommendations.....	85
Conclusion .....	88
References.....	90
Appendixes .....	98
Appendix A: Dynamic Indicator of Basic Literacy Skills.....	99
Appendix B: Elementary Reading Attitudes Scale.....	102
Appendix C: Elementary Reading Attitudes Scoring Sheet.....	103
Appendix D: Informed Consent Form.....	105

PREVIEW

## List of Tables

Table 1 <i>Descriptive Statistics for the Demographic and Background Characteristics of the Sample</i> (N = 125).....	67
Table 2 <i>Descriptive Statistics for the Dependent Variables</i> (N = 125) .....	68
Table 3 <i>Examination of Normality for the Dependent Variables</i> (N = 125) .....	69

PREVIEW

## List of Figures

<i>Figure 1.</i> Pyramid graph of Phonological Awareness pretest/posttest difference scores as a function of group.....	70
<i>Figure 2.</i> Pyramid graph of Reading Attitudes pretest/posttest difference scores as a function of group.....	72

PREVIEW

## **Chapter 1: Introduction**

Researchers and panels of experts in the field of reading are eager to address the problem of the number of American children who experience difficulty learning to read (Cheesman, McGuire, Shankweiler, & Coyne, 2009). Improving reading skills has become a national priority, but the debate of how reading should be taught continues to be a topic on which researchers and panels of experts cannot agree (Croninger & Valli, 2009). One significant question involves the causes of the difficulties experienced by below average readers, and one answer may be that many of those students exhibit deficits in phonological awareness (Savage & Frederickson, 2006). Phonological awareness is an essential component of learning how to read, and the inadequate development of phonological awareness may hinder the acquisition of skills necessary to reach crucial literacy milestones (Burke, Hagan-Burke, Kwok, & Parker, 2009). Inadequate development of phonological awareness may result from memory deficits (Jarrold, Stephens, & Thorn, 2009).

Although an abundance of programs and materials are available for reading instruction, with financial cutbacks, school districts have limited resources to devote to reading improvement. Despite these current financial obstacles, school districts must invest in reading programs to reach students who are failing to learn how to read. The Corrective Reading Program (Hempenstall, 2008) is a remedial reading program created for students in third grade or above. In the school system involved in the current study, the Corrective Reading Program has been implemented, but not evaluated. The current study represented the first step in the evaluation of the Corrective Reading Program to

determine if it was equally effective in improving reading abilities and attitudes in special education and non-special education students.

The current chapter provides an introduction to the current study. First, background information on this topic is provided. Then, the specific problem addressed in this study and the purpose of the study are discussed. The theoretical framework that guides this study is discussed, and the research questions and hypotheses are stated. The nature and significance of the study are presented, key terms are defined, and the chapter ends with a summary.

## **Background**

Teaching reading can be a daunting task for any educator, whether he or she is a veteran teacher or a beginning teacher. Following the implementation of the No Child Left Behind Act (NCLB), the focus on accountability has increased, and the requirement that all students meet certain academic achievement criteria necessitates an examination of the effectiveness of reading intervention programs with disabled and non-disabled students. Foorman (2007) described the components of effective reading instruction as “phonemic awareness, letter knowledge, and concepts of print, the alphabetic code: phonics and decoding, fluency in word recognition and text processing, construction of meaning, vocabulary, spelling, and writing” (p. 24). Training in phonological awareness is necessary for effective reading instruction (Jarrold et al., 2009). Educators are faced with the question of how to teach explicit and systematic phonics to students with memory deficits and the inability to acquire phonological awareness.

Hempenstall (2008) examined recent theoretical and empirical research on reading development and instruction in English-speaking countries. The researcher

investigated the effects of a synthetic phonics-emphasis Direct Instruction remedial reading program on the phonological processes of students with teacher-identified serious reading problems. The study included 134 students plus 72 students in a control group, all between the ages of 7 to 13. The participants were individually assessed with the Corrective Reading: Decoding program placement test to ensure the presence of the program entry skills and the absence of the program outcome skills, originally developed by Engelmann, Carnine, and Johnson (1999). Hempenstall used the Test of Phonological Awareness (Torgeson & Bryant, 1994) to assess phoneme awareness skills. Hempenstall concluded that the phonemic awareness scores of the experimental group (i.e., those in the program focused on synthetic phonics) improved significantly more than the control group (i.e., those who were not in this program).

One of the key determinants of reading ability is a student's attitude toward reading. Numerous studies have indicated that students who have more positive attitudes toward reading have higher levels of reading achievement, as summarized in a meta-analysis performed by Petscher (2009). Theoretical arguments, primarily revolving around the affective role of reading attitude in determining reading ability, have also been offered (Kaniuka, 2010). Research has suggested that the Corrective Reading Program can have positive effects on students' attitude toward reading (Kaniuka, 2010). However, the current study expanded upon this work by differentiating between special education students and non-special education students while examining the effect of the Corrective Reading Program on students' attitude toward reading. The study by Kaniuka (2010), like most studies in this area, grouped special education students and non-special education students together when examining the Corrective Reading Program.

McKenna and Kear (1990) developed the Elementary Reading Attitudes Survey (ERAS) to measure students' attitudes toward reading to "enable teachers to estimate attitude levels efficiently and reliably" (p. 626). While studies on the effects of reading attitude on reading achievement have been conducted, none of these studies has specifically examined special education and non-special education students in terms of phonological awareness improvements. Due to the importance of attitude toward reading in determining reading achievement and the fact that it has not been studied with such students, the ERAS was used in the current study to measure attitudes toward reading in an academic context and a recreational context.

### **Statement of the Problem**

Many American children experience difficulty learning to read (Cheesman et al., 2009; Croninger & Valli, 2009). Reading is essential for success in school and in life, and when students do not have appropriate reading skills, the effects are felt not only in school, but within their community and society (Burke et al., 2009). Direct instruction, based on Hunter's (1993, 1994) instructional practice into theory (ITIP) model, may provide a tool through which struggling readers can be helped, as direct instruction methods have been shown to be effective in promoting student learning (Leno & Daugherty, 2007; Skjold et al., 2010). However, direct instruction methods based on ITIP theory are not applicable to all types of students (Cicciarelli, 2007). Therefore, it is important to determine whether direct instruction methods based on ITIP theory are applicable to both struggling readers who have a disability and struggling readers who do not have a disability. The direct instruction method used in the current study to represent ITIP theory was the Corrective Reading Program. This program has been empirically

validated for struggling readers, but its differential effectiveness for special education and non-special education students had not been examined (Benner, Nelson, Stage, & Ralston, 2010; Kaniuka, 2010). The Florida Center for Reading Research (2008) concluded that “the existing research base provides only preliminary support for the program’s efficacy” (p. 4). Through the comparison of the effectiveness of the Corrective Reading Program with special education and non-special education students, the generality of this ITIP theory-based direct instruction method was tested. If this study had not been performed, educators would have continued to lack an empirical basis for determining if special education or non-special education students should be referred to programs like the Corrective Reading Program; the generality of the ITIP-theory based direct instruction approach for these two student groups would have remained untested.

### **Purpose of the Study**

The purpose of this quantitative, quasi-experimental study was to determine if a direct instructional technique based on the instructional theory into practice model is effective for both special education and non-special education students in terms of phonological awareness improvements and attitudes toward reading. The participants were 37 special education students and 88 non-special education students for a total sample size of 125. All students were involved in the Corrective Reading Program. A power analysis was conducted, indicating that 98 students would provide sufficient statistical power for this study, but 125 students were available and were included. The site of this study was a small public school district in a Northwest rural area. The independent variable in this research study was whether the student is participating in the Corrective Reading Program through special education or a non-special education



referral. The dependent variables were phonological awareness skills, as measured using the Dynamic Indicators of Basic Literacy Skills (DIBELS; Good & Kaminski, 2002), and attitudes toward reading, as measured using the ERAS created by McKenna and Kear (1990). Two Mann-Whitney *U*-tests were performed with special education or non-special education status as the independent variable and DIBELS Phonological Awareness pretest/posttest difference scores and ERAS Reading Attitude pretest/posttest difference scores as dependent variables.

### **Theoretical Framework**

The theoretical framework for the current study was Hunter's (1993, 1994) ITIP, which forms the basis for the direct instruction model of education. According to Hunter's ITIP theory (1993), direct instruction is a teaching method that requires the following seven components: (a) well-defined and appropriate learning objectives, (b) an anticipatory set in which the students are introduced to the topic by relating the topic to prior knowledge, (c) sharing the lesson objectives with the students so that students will know what it is that they are supposed to learn, (d) presentation of the primary skills and concepts (referred to as the input), (e) checking the students' understanding, (f) providing the opportunity for guided practice, and (g) providing the opportunity for independent study.

The Corrective Reading Program examined in the current study was based on the method of direct instruction which in turn is based on Hunter's (1993, 1994) ITIP theory. Direct instruction techniques based in ITIP theory have been shown to be effective in promoting student learning (e.g., Leno & Daugherty, 2007; Skjold et al., 2010), but "critics of the direct instruction theory note that the application of this theory should be

used with caution because it is not appropriate for all educational objectives and all students” (Cicciarelli, 2007). Therefore, it is important to examine the applicability of direct instruction techniques such as the Corrective Reading Program to various student groups. In the current study, the applicability of direct instruction delivered through the Corrective Reading Program was compared between two student groups: special education and non-special education students. This resulted in both a test of the generality of the ITIP theory and direct instruction across student types, and an applied test of the Corrective Reading Program for promoting student reading ability.

### **Research Questions**

The purpose of this quantitative, quasi-experimental study was to determine if a direct instructional technique based on the ITIP theory was effective for both special education and non-special education students in terms of phonological awareness improvements and attitudes toward reading. Using the Corrective Reading Program as an example of a direct instruction technique based on the ITIP theory, two research questions were developed to guide the current study and examine specific variables:

**Q1.** Is there a difference in the effectiveness of the Corrective Reading Program for special education students and non-special education students in terms of phonological awareness improvements?

**Q2.** Is there a difference in the effectiveness of the Corrective Reading Program for special education students and non-special education students in terms of reading attitude improvements?

## **Hypotheses**

Based on the two research questions in this study, two sets of null and alternative hypotheses were developed.

**H1<sub>o</sub>.** There is no difference in the effectiveness of the Corrective Reading Program for special education students and non-special education students in terms phonological awareness improvements.

**H1<sub>a</sub>.** There is a difference in the effectiveness of the Corrective Reading Program for special education students and non-special education students in terms phonological awareness improvements.

**H2<sub>o</sub>.** There is no difference in the effectiveness of the Corrective Reading Program for special education students and non-special education students in terms reading attitude improvements.

**H2<sub>a</sub>.** There is a difference in the effectiveness of the Corrective Reading Program for special education students and non-special education students in terms reading attitude improvements.

## **Nature of the Study**

This quantitative study included students who had been identified as special education and non-special education students. A quantitative, quasi-experimental research design was used in this study. The experiment was conducted for 15 weeks, Monday-Thursday. The Corrective Reading Program was administered 1 hour each day in a before school program. Pretest assessments on the dependent variables and posttest assessments on the dependent variables were compared to determine if there have been changes following participation in the Corrective Reading Program. The rationale for the

choice of the quantitative approach was that it is best suited to address the purposes of this study because they involved quantitative variables (Creswell & Plano Clark, 2007) such as phonological awareness skill and reading attitudes. A quasi-experimental design was selected as most appropriate for this study because random assignment of students to groups was not possible; rather, preexisting group differences were examined.

The primary data for this study consisted of Phonological Awareness scores from the DIBELS (Good & Kaminski, 2002). Additional data consisted of a survey administered to students regarding their attitudes toward reading, the ERAS (McKenna & Kear, 1990). The independent variable in this research study was whether the student is participating in the Corrective Reading Program through special education or a non-special education referral. The dependent variables were phonological awareness skills, as measured using the DIBELS (Good & Kaminski, 2002), and attitudes toward reading, as measured using the ERAS (McKenna & Kear, 1990). Two Mann-Whitney *U*-tests were conducted with special education or non-special education status as the independent variable and DIBELS Phonological Awareness pretest/posttest difference scores and ERAS Reading Attitude pretest/posttest difference scores as dependent variables.

### **Significance of the Study**

This study provides important information and answers for educators, so they can expand their knowledge on how to provide reading instruction to those students who experience deficits related to reading ability. The evidence from the current study would confirm or refute the effectiveness of the Corrective Reading Program in helping special education and non-special education students learn how to read. The data would further support the effectiveness of a specific reading program, the Corrective Reading Program.

Research has identified at-risk students as those who do not have a solid foundation in the area of phonological awareness (Burke et al., 2009). The current study would be of interest to individuals who work with students who struggle with reading. Understanding which students can be effectively taught with the Corrective Reading Program is important for ensuring that students receive appropriate interventions that have been shown to be effective based on student characteristics.

### **Definitions**

**Corrective Reading Program.** The Corrective Reading Program is an intervention reading program designed to help struggling students in the third grade or beyond develop decoding, fluency, and comprehension skills (U.S. Department of Education, 2007). The Corrective Reading Program used in the current study had several defining characteristics: (a) a structured format, (b) an emphasis on the lessons occurring daily, (c) sufficient daily spaced practice to reduce the risk of forgetting, (d) immediate correction of errors to guide the student towards mastery, and (e) on-going assessment of progress to validate the effectiveness of the teaching (Hempenstall, 2008).

**Direct Instruction.** Direct Instruction (DI) is a model for teaching that emphasizes well-developed and carefully planned lessons designed around small learning increments and clearly defined and prescribed teaching tasks. It is based on the theory that clear instruction that eliminates misinterpretations can greatly improve and accelerate learning (National Institute for Direct Instruction, n.d.).

**Instructional Theory into Practice.** Hunter's (1993, 1994) ITIP theory forms the basis for the direct instruction model of education. In this theory, direct instruction requires seven components: (a) well-defined and appropriate learning objectives, (b) an

anticipatory set in which the students are introduced to the topic by relating the topic to prior knowledge, (c) sharing the lesson objectives with the students so that students will know what it is that they are supposed to learn, (d) presentation of the primary skills and concepts (referred to as the input), (e) checking the students' understanding, (f) providing the opportunity for guided practice, and (g) providing the opportunity for independent study (Hunter, 1993).

**Phonological Awareness.** Researchers tend to concur that phonological awareness is a meta-linguistic skill which facilitates the reader's awareness that words are composed of smaller component sounds called phonemes (Jarrold et al., 2009). The connection between phonological impairment and phonological awareness is that exact word pronunciation stimulates and supports awareness of decoding and spelling patterns. As a result, the presence of phonological impairment may impede the reaching of two essential literacy milestones: (a) the accurate manipulation of speech sounds that phonological awareness entails, and (b) understanding that speech sounds in words are represented by certain patterns of letters and applying phonologically-based decoding and spelling skills (Pershey & Clickner, 2007).

**Reading Attitude.** As measured by the ERAS (McKenna & Kear, 2000), reading attitudes are composed of two facets: academic reading attitudes and recreational reading attitudes. A student's positive or negative perceptions about reading are the student's reading attitude (McKenna & Kear, 1990).

## **Summary**

The problem addressed in this study was that the differential effectiveness of the Corrective Reading Program, a direct instruction method based on the ITIP theory, for

special education and non-special education students was unknown. Consequently, valuable information regarding the best way to address reading problems for special education students and non-special education students was unknown. This was a problem because the number of American children who have difficulty learning to read (Cheesman et al., 2009; Croninger & Valli, 2009) and the negative outcomes when children fail to learn to read (Burke et al., 2009).

Therefore, the purpose of this quantitative, quasi-experimental study was to determine if a direct instructional technique based on the ITIP theory is effective for both special education and non-special education students in terms of phonological awareness improvements and attitudes toward reading. A total of 125 students participated in this study, including 37 special education students in the Corrective Reading Program and 85 non-special education students in the Corrective Reading Program. The research site was a small, rural public school district. The independent variable in this study was whether the student was participating in the Corrective Reading Program through special education or a non-special education referral. The dependent variables were phonological awareness skills, as measured using the DIBELS (Good & Kaminski, 2002) and attitudes toward reading, as measured using the ERAS (McKenna & Kear, 1990). The dependent variables in this study were selected because phonological awareness is an essential component of learning how to read (Burke et al., 2009; Foorman, 2007; Jarrold et al., 2009) and because attitudes toward reading are associated with reading success (Kaniuka, 2010).

Although there have been some studies that have found support for the Corrective Reading Program, the research base was inadequate (Florida Center for Reading

Research, 2008). Furthermore, the types of students for which the Corrective Reading Program would be more or less effective is not known. This chapter has presented an introduction to the current topic. In the next chapter, a review of the literature is provided, and Chapter 3 presents the methodology employed to answer the two research questions of this study. The answers to these questions contributed to the literature by evaluating the need for programs, such as the Corrective Reading Program, for students with and without disabilities and the inability to acquire phonological awareness.

The current chapter has presented an introduction to this topic including the problem statement, purpose of the study, theoretical framework, and research questions. The problem addressed in this study was the lack of research regarding the effectiveness of the Corrective Reading Program for special education and non-special education students in terms of phonological awareness improvements and reading attitudes: