

THE EFFECTS OF THE LEXIA READING CORE5 INTERVENTION
PROGRAM ON THE READING ACHIEVEMENT
OF THIRD-GRADE STUDENTS

A Thesis Presented to the Faculty
of
California State University, Stanislaus

In partial fulfillment
of the requirements for the Degree
of Master of Arts in Education

By
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May 2015

CERTIFICATION OF APPROVAL

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DEDICATION

To my family who mean the world to me! My husband Scott Tillery for his support and love. My beautiful daughters Audrey, Madison, and Hannah for their patience. My siblings Dora, Ana, Martha, Lorena, Gardenia, and Brian who are always there for me. My mother Lydia Navarrete who has given me strength and encouragement.

ACKNOWLEDGEMENTS

This has been a tremendously rewarding journey. I have learned so much during this experience. I could not have completed this accomplishment without the support and help of so many important people in my professional world.

I wish to thank Dr. John Borba for his dedication, time, guidance in the revision and editing of this thesis. He has been a thoughtful and caring advisor. I also wish to thank Dr. Chet Jensen for all the knowledge I gained about educational law.

In addition, I wish to thank Steve Kuykendall and Jose Aldaco for their assistance and inspiration during this journey. Thank you to my friends and colleagues for their encouragements and help: Kathleen Nyquist, Jessica Rodriguez, Maria Ayala, and Elena Gutierrez.

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ABSTRACT

There is no doubt that schools across the nation face the dilemma of students not reading at grade level. More than 20 years of reading reform and results remain unsatisfactory. During this study, the focus was to determine how the Lexia Reading Core5 intervention program affected the reading achievement of third grade students. Ninety-one third-grade students participated in the Lexia Reading Core5 computerized program, 3 times a week for 30 minutes each session. Students worked independently during each session with headphones and audio assistance. Assessments were administered to students prior to and after participation in the program. Results of the program were examined with the use of a paired sample *t*-test. The results revealed that Lexia Reading Core5 may contribute to improvement in three areas of reading (Lexile Levels, fiction, and nonfiction comprehension). However, there was no significant difference in fluency. Although, it is a promising program, there is a great need to continue with explicit and systematic instruction. In addition, students need to be exposed to other intervention opportunities for reading success.

CHAPTER I
INTRODUCTION TO THE STUDY

Background

Nationwide reading achievement continues to be stagnant. According to the National Report Card of 2013, 65% of 190,400 fourth graders scored basic or below and only 8% scored advanced in reading on the National Assessment of Educational Progress (National Center for Education Statistics [NCES], 2013).

It is evident that reading instruction needs to be a priority in the early grades. Research indicates that students must actively read on a daily basis, yet they are not getting an adequate amount of instructional time and the activities are ineffective (Nelson-Walker et al., 2013). In general, students are often given opportunities to practice their reading vocabulary, but rarely learn how to apply reading comprehension strategies (Luttenegger, 2012).

Students who receive early intensive reading intervention significantly show improvement when compared to those who only receive regular classroom instruction (Nelson-Walker et al., 2013). The components of effective reading instruction are phonemic awareness, phonics, fluency, vocabulary, and comprehension and should be embedded in the process. Without one or more components, students are in danger of failing academically.

Statement of Problem

Despite the many educational reforms in the past 20 years, results of national assessments consistently show students unable to read and comprehend (Wanzek, Wexler, Vaughn, & Ciullo, 2010). However, research shows that instructional quality is a major factor that contributes to the improvement of reading performance (Palincsar & Duke, 2004). Educators are unprepared to teach high level comprehension skills to meet the needs of struggling readers; as a result, the achievement gap continues to grow (Matsumura & Wang, 2014). Early intervention programs such as Lexia Reading Core5 may have the potential to assist teachers in helping students improve their reading comprehension and other skills.

Research Question

What are the effects of the Lexia Reading Core5 intervention program on the reading achievement of third-grade students?

Hypotheses

H1. There is no significant difference in overall reading achievement (Scranton Performance Assessment) of third graders after 20 weeks of participation in the Lexia Reading Core5 Intervention program.

H2. There is no significant difference in reading fluency (Scranton Performance Assessment) of third graders after 20 weeks of participation in the Lexia Reading Core5 Intervention program.

H3. There is no significant difference in reading comprehension (Fiction-Scranton Performance Assessment) of third graders after 20 weeks of participation in the Lexia Reading Core5 Intervention program.

H4. There is no significant difference in reading comprehension (Non Fiction-Scranton Performance Assessment) of third graders after 20 weeks of participation in the Lexia Reading Core5 Intervention program.

Significance of the Study

Students, who struggle in reading, need explicit systematic reading instruction in order to acquire literacy skills (Nelson-Walker et al., 2013). Readers who are fluent are able to focus on comprehension rather than on decoding (Conderman & Strobel, 2008). Reading intervention is considered the most effective way to help struggling readers improve reading comprehension and other skills (Nelson-Walker et al., 2013). This study will determine if the Lexia Reading Core5 program improves the reading fluency, comprehension, and the reading Lexile level of third-grade students.

Limitations and Delimitations

The study will be limited to third-grade students who attended a school located in the Central Valley of California during the 2014-2015 school year. For the purpose of this study, gender, socioeconomic status, and attendance of students will not be taken into consideration.

Definition of Terms

Comprehension. Construction of “meaning that is reasonable and accurate by connecting what has been read to what the reader already knows to understand the written text” (Learning Point Associates, 2004, p. 30).

Fluency. Recognizing the words in a text rapidly and accurately and using phrasing and emphasis in a way that makes what is read sound like spoken language (Learning Point Associates, 2004, p. 30)

Lexia Reading Core5. A computerized reading program that provides foundational skills for the enhancement of fluency, listening and reading comprehension.

Lexile. A scale that ranges from 0L to 2000L. It reflects the difficulty of text from beginning to advanced books (MetaMetrics, n.d.).

Reading. The ability to decode and comprehend written text (Carson, Gillion, & Boustead, 2013).

Scranton Performance Series. A web based, computerized adaptive assessment for K-12 students.

Zone of Proximal Development (ZPD). The gap between current level of development and the emerging level of development (Dixon-Krauss, 1996).

Summary

Chapter I took a brief look at reading achievement across the nation. This chapter provided the statement of the problem, as well as, the significance of the study. The research question was posed, and the null hypotheses were stated. In

addition, the limitations and delimitations were presented. Definitions of the terms used in this thesis were defined.

Chapter II provides the literature review. This chapter examines studies in relation to reading instruction, reading comprehension and intervention. Chapter III presents the methods and the procedures used. Chapter IV presents the statistical findings. Chapter V is composed of a summary, conclusions, and recommendations for future study.

CHAPTER II
LITERATURE REVIEW

Introduction

The purpose of this study was to determine the effects of the Lexia Reading Core5 Intervention program on the reading achievement of third grade students. This chapter will provide a literature review of related studies in reading intervention and instructional practices.

According to research, the best intervention for students who are struggling in acquiring reading is effective instruction. Over the last 20 years, effective reading instruction has been characterized as “systematic and explicit instruction” (Wanzek et al., 2010, p. 889) in the foundational skills of phonemic awareness, phonics, fluency, vocabulary, and comprehension. Students must have the foundational skills by third grade in order to achieve academically or they will fail and struggle in the upper grades.

It is estimated that 69% of all of fourth graders are not able to read at grade level despite the fact that educators are aware of the problem (Wanzek et al., 2010). Supplemental reading intervention is considered to be effective with struggling readers. Student reading achievement must improve; otherwise students are at risk of academic failure causing them to drop out of school (Wanzek et al., 2010).

Lexia Reading Core5

According to the 2013-2014 Lexia Reading Core5 research, 45,000 students in first through and including fifth grade across the United States used Lexia Reading Core5 on line literacy. Seventy-five percent of the high risk students showed gains of 2 or more grade levels in reading skills (CCSS; Rosetta Stone, n.d.).

Lexia Reading Core5 is a pre-kindergarten through fifth grade research based reading intervention program introduced by Rosetta Stone, which focuses on the five essential components of reading instruction (phonological awareness, phonics, fluency, vocabulary, and comprehension). It is a technology based program which provides an explicit and systematic instructional approach. The personalized learning program delivers norm- and criterion-referenced performance data and analysis without interrupting instruction. Lexia Reading Core5 is aligned to the Common Core State Standards (CCSS; Rosetta Stone, n.d.).

Lexia Learning Systems advertises that Lexia Reading Core5 increases reading skills development and predicts students' end-of-year performance based on results. Lesson plans and skill builders are provided to help with differentiation of instruction. In addition, Lexia Reading Core5 provides an individualized monthly plan for each student based on performance (Rosetta Stone, n.d.).

Reading Intervention Studies

Niedo, Lee, Breznitz, and Berninger (2014) conducted a study to examine three issues with at risk readers in fourth grade: transition to silent reading in the middle grades, treatment for silent reading comprehension, and computerized

instruction. The purpose of the study was to determine if the Breznitz's computerized Rapid Accelerated Reading Program (RAP) software improved silent word and sentence reading. The program was implemented to improve silent reading in English, which was word cloze, sentence logic, and comprehension. The treatment lasted one hour during each of the nine sessions. The control group did not receive extra intervention in reading. During the nine sessions, students took tests in the three areas completed and RAP scores were used to determine program effectiveness.

The participants were children who met the research inclusion criteria for experiencing difficulty with silent reading, oral reading accuracy, and comprehension. Six girls and eight boys were chosen to participate in the reading intervention. Three girls and four boys were randomly assigned to the control group.

The treatment group participated in nine RAP intervention sessions; each student participated in a comprehension pretest consisting of reading 13 sentences and answering multiple choice questions. Students completed six cloze sentences, four reading comprehension paragraphs, and four logical-judgment tasks to determine students' independent silent reading status. The control group only took the pre and posttests on silent word reading rate, silent contextual reading rate, and the sentence sense fluency.

The results of the study showed that the treatment group outperformed the control group in silent sentence reading for meaning ($p = .03$), sentence sense rate from pretest to posttest ($p = .026$), and silent contextual reading rate ($p = .036$).

The results suggested that students who experience a slower fluency rate require more time to process their reading, which means that more practice and specialized instruction in silent reading skills should be provided. In addition, students should receive self-regulation strategies to monitor their silent reading comprehension (Niedo et al., 2014).

Nelson-Walker et al. (2013) conducted a study to determine the effectiveness of systemic intervention called Enhancing Core Reading Instruction (ECRI) on the quality and the intensity of explicit and systematic instruction provided by teachers in Tier I reading instruction. Students were assigned to one of three tiers of instruction. Tier I was based on providing students with refined core reading instruction; Tier II students received the refined core reading and additional support in small group instruction; and Tier III received core reading and one on one intervention.

The 42 first-grade teachers were randomly selected from 16 schools in three districts in the Pacific Northwest. Twenty-three teachers were part of the treatment group and 19 were in the comparison group. The experience of the teachers averaged 14 years. There were 883 first-grade student participants who received Tier I core reading instruction and Tier II small group instruction. Of those students, 240 received Tier I and Tier II instruction as the required extra support based on their performance on the Stanford Achievement Test-Tenth Edition (SAT-10). Twenty percent of the students were identified as English language learners (ELLs); 46% received free and reduced price lunch; and 14% were identified as requiring special services.

The ECRI intervention was developed to increase the quality of explicit instruction by engaging the learner through frequent individual and choral responses, and through checking for understanding. The teachers in the treatment group were trained to provide higher quality instruction in reading. They received 8 hours of training a day for 5 days. The training was provided during 3 days in the fall and 2 days in the spring. The sessions provided teachers with training on the principles of effective instruction in beginning reading strategies and procedures in the use of instructional templates and maps. In addition, the intervention training provided explicit instruction and routines for whole and small groups.

The ECRI treatment groups received 90 minutes of Tier I whole group core reading instruction, and an additional 30 minutes of small group instruction per day for a year. The teachers utilized the instructional templates and lesson maps, as well as the explicit instructional strategies and scaffolds from the trainings. The control group only received the 90 minutes of reading instruction and small group activities (e.g., supplemental resources and other core program materials) per day for a year. The classrooms (treatment and comparison) were observed by trained data collectors three times a year. Data were collected in the following areas: quality of explicit instruction, teacher demonstrations, student practice, and confirmatory or corrective feedback (i.e., phonemic awareness, the alphabetic principle, accuracy of fluent reading, vocabulary, and comprehension).

The results based on the Quality of Explicit Instruction (QEI) scale showed that over all, the treated group outperformed the control group ($p = .003$). The results

for specific areas were phonological awareness ($p = .001$), alphabetic principle ($p = .002$) and word reading ($p = .018$). The instructional intensity was measured by the Classroom Observation of Student-Teacher Interactions (COSTI) tool, which showed higher rates of group interaction for the treatment group ($p = .001$).

The observations suggested that the teachers in the treatment condition were more effective in offering explicit instruction, increased opportunities for choral responses among students and frequent independent student responses, as opposed to the comparison group.

Gilbert et al. (2013) conducted a study on the efficacy of the Response to Intervention (RtI) prevention model for struggling readers. The purpose of the study was to determine the efficacy of a three-tiered model during 14 weeks of tutoring and its effectiveness on reading performance in first through third grades. The implementation phase included the following steps: screening to identify at-risk students, monitoring student progress, grouping students based on their instructional needs, providing targeted explicit and systematic instruction, and implementing a Tier III standardized tutoring program.

The study included 649 participants who were recruited from 11 schools to participate in the 2 consecutive year intervention program. Students were assessed in rapid letter recognition and in high frequency word recognition during the start of the school year. Two hundred and twelve students were identified as at risk in reading. They were categorized as unresponsive and were placed in Tier I (i.e., classroom instruction). One hundred and thirty-four of the 212 students were randomly placed

in Tier II (i.e., small group tutoring). Tutors followed a scripted plan to provide a consistent form of instruction in letter-sound correspondence, sight word recognition (chorally reading sight words), phonemic awareness (tapping sounds in words), and decoding and reading fluency (chorally read words and sentences). Students received small group tutoring for 45 minutes, 3 days a week. Twenty-four students were placed in Tier III (one-on-one intervention), 5 days a week for 30 minutes each session, similar to the Tier II intervention group. Tier III received intervention in the same focus areas.

Descriptive results of pre and post assessments of Tier II and Tier III showed an increase in word attack skills, sight word efficiency, and decoding. However, there was no change between pre and post assessments for students in Tier I intervention. Although, students showed growth, there was no correlation between first-grade performance in the RtI intervention and the prediction of reading achievement in third grade (Gilbert et al., 2013).

Goss and Brown-Chidsey (2012) compared two Tier II reading intervention programs, Reading Mastery (RM) and Foundations Double Dose (FDD). The purpose of the study was to identify benefits of the two intervention programs. Reading Mastery is a direct and systematic scripted intervention program developed during the 1960s. The emphasis of the program is to teach beginning readers how to read through phonics instruction. The focus is on letter and sound relationships and blending routines. The program provides multiple opportunities for student participation through repetition. Foundations, which includes a core and a small group

intervention program known as FDD, was developed to help students improve their reading skills. It is based on the Wilson Reading System, a research based small group intensive intervention program. The multisensory program teaches students to tap sounds of words and then blend using their fingers.

First grade students participated in the Foundations (Tier I) core reading program. Participants were screened using the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessment and were categorized into six dyads to compare similar student progress. Twelve participants were chosen from two classrooms from a public elementary classroom in a suburban town in the Northeast United States and were randomly assigned to the intervention programs. Four first-grade girls and two boys were assigned to RM intervention and four boys and two girls were assigned to FDD. They participated in small group instruction (intervention) 4 days a week, 30 minutes per day for 8 weeks. The indicators of reading achievement were Nonsense Word Fluency (NWF) and Oral Reading Fluency (ORF). The students completed the DIBELS subset assessments once a week. They were monitored through observation and teacher self-report scales. The benchmark goals for nonsense word fluency after 16 weeks of instruction was for students to read 37 sounds in one minute and to read 10 words correctly in one minute for ORF.

The results indicated that all students made progress. The students in the RM intervention program performed higher than those who participated in the FDD intervention. An average correct letter sequence gain per week showed the following results: RM (i.e., an average of five more words per minute) compared with FDD

(i.e., an average of three more words per minute). It is important to note that the study had some limitations. Twelve participants were selected from two classrooms and one assessment (DIBELS) was used to assess progress.

Conderman and Strobel (2008) conducted a study on an intervention program designated to improve fluency among readers with decoding difficulties. Fluency Flyers Club was an ORF intervention program formed after a group of teachers reviewed students' reading data from the Measures of Academic Progress (MAP), a computerized standardized assessment that measures and monitors individual student progress throughout the year. Seventeen students were selected to participate in the fluency intervention program due to the fact that their scores were below the 33rd percentile on the MAP assessment.

Students participated 5 days a week for 5 to 7 minutes a day to work on repeated reading using the Read Naturally passages. Students were placed in groups of three during the fluency intervention. A passage was read chorally by all three students 3 to 4 times a week and progress was monitored throughout the week.

After 6 weeks of participation in the fluency intervention program, the students were assessed using the MAP assessment. Descriptive results indicated students showed an increase of 16 Rasch Units (RITs). A RIT measures the difficulty per item and estimates student achievement. The average growth for a student per year is 10 RITs. Participants showed 22 RITs of growth after a year of participating in the Fluency Flyers Club compared to 16.4 RITs for students who did not participate in the program. In addition, the MAP assessment showed that the students

who had participated in the fluency program had maintained their reading skills for one year. Upon completion of the program, surveys were distributed to 17 students, 17 parents, and 7 teachers. One hundred percent of the students indicated they were better readers as a result of the program. One hundred percent of the parents reported that their children were reading more at home and 100% of the teachers revealed that students made progress and that the Fluency Flyers Club Intervention program was effective (Conderman & Strobel, 2008).

Soriano, Miranda, Soriano, Nievas, and Félix (2011) conducted a study to determine the efficacy of a reading intervention multi-component program with children who had reading disabilities (RD). The intervention training provided teachers with 2 hours of phonological awareness and repeated reading training. In addition, the teachers attended 2 hours of program application.

The participants ($n = 22$) for this study consisted of 17 males and five females, ages 10 to 13 years from low to mid social economic status. Students attended resource classes (i.e., special education) daily for 3 hours a week. Twelve students (nine male and three female) received the additional reading intervention, while 10 students (eight male and two female) were part of the comparison group with no additional support.

The intervention program was provided one-on-one during approximately 20 weeks for 40 study sessions three times a week, lasting 45 minutes each session. Students were taught specific sounds and blends to form words. The focus was on phoneme manipulation and blending of the alphabetic sounds such as initial, middle,

and ending sounds of words. The reading program included repeated passage readings of 100 to 200 words. During the passage readings, there were three steps followed (i.e., teacher read aloud, student read aloud, student silently read four times) and teacher feedback was provided on reading errors.

Multivariate analysis of covariance (MANCOVA) and analysis of variance (ANCOVA) post intervention analyzes showed that the treatment group made significantly more progress than the control group: word reading skills ($p = .001$), pseudo-word reading skills ($p = .001$), text reading fluency ($p = .001$), and in text reading accuracy ($p = .002$). There were no gains in reading comprehension for both groups. The results indicate that individualized instruction in phonemic awareness and fluency instruction are effective (Soriano et al., 2011)

Summary

Chapter II stated that the best form of reading intervention in the last 20 years continues to be explicit and systematic instruction in phonemic awareness, phonics, fluency, vocabulary, and comprehension programs. A description of the reading intervention program (Lexia Reading Core 5) was provided. Six studies on reading intervention programs were reported. Chapter III will focus on the methodology and the procedures used in this study.

CHAPTER III
METHODS AND PROCEDURES

Introduction

The purpose of this study was to determine the effects of the Lexia Reading Core5 Intervention program on the reading achievement of third-grade students. Chapter III will describe the sample population, data collection, instrumentation, and statistical analysis.

Participants

This study involved 91 third-grade students from the 2014-2015 school year at an elementary school located in the Central Valley of California. The K-3 school that was selected for this study consisted of approximately 540 students. Of which, 63% are Latino, 32% Caucasian, 2% African American, 1% Asian, and 2% other. Eighty-one percent of the student population participates in the free and reduced priced lunch program (California School Ratings, n.d.).

Program Description

The 91 third graders participated in the Lexia Core 5 Reading program for 20 weeks. The computerized program reinforces foundational reading skills in phonics, structural analysis, fluency, vocabulary, and comprehension. The participants received 90 minutes of Lexia Core5 Reading program instruction each week. The intervention sessions lasted 30 minutes, three times a week.

This program provided practice for the students according to their reading skill needs. Participants were required to use headphones during the intervention for audio support. They were presented with multiple choice questions after receiving instruction in reading foundational skills and in reading passages. The program provided multiple opportunities for students to practice skills until mastery was acquired. In addition, Lexia Core5 Reading provided teachers with focus lessons for individual student instruction.

Data Collection

The Scantron assessment was used to measure student performance in reading. The reading scaled scores were derived from numeric ranges. The Lexile reading range was from BR50 to 1700L indicating the level of overall reading; the range for reading comprehension (fiction, nonfiction) was from 1300 to 3700; and the fluency rate was calculated by taking the total number of words divided by the total time it took to read the passage. Scantron is a computer adaptive assessment designed to test the students at their instructional level. Students took the first assessment in August 2014, and posttest in February of 2015.

Statistical Analysis

Before and after a 20-week period, Scantron assessments were utilized to compare reading achievement among each of the 91 third graders. For each hypothesis, a paired sample *t*-test was used to determine if there was significant change in mean scores between pre and posttests in overall reading (Lexile level), comprehension (fiction and nonfiction), and fluency rates. Data were analyzed using

the Statistical Package for Social Sciences (SPSS). An alpha level of .05 was used to determine significance.

Summary

Chapter III presented and described the sample population, program description, data selection, and the method used for statistical analysis. Chapter IV will explain the results of the study.

CHAPTER IV
DATA COLLECTION AND RESULTS

Introduction

The purpose of this study was to determine the effects of the Lexia Reading Core5 Intervention program on the reading achievement of third grade students. Chapter V will present the summary, conclusions, implications, and recommendations for this study. Chapter IV will explain the data collection and results of this study.

Analysis

Scores from 91 third-grade students in four reading categories were gathered and analyzed. All of the 91 students took pre and posttests using the newly implemented assessment tool (Scantron). These scores were used to test four null hypotheses.

Data generated from pre and posttests were entered into Statistical Package for Social Sciences (SPSS) for analysis. In order to determine if there was a significant change in mean scores between pre and posttests, a paired sample *t*-test was used to test each hypothesis. The results indicated whether to reject or accept the null hypotheses. An alpha level of .05 was established to determine statistical significance.

Findings Related to the Hypotheses

H1. There is no significant difference in overall reading achievement (Scranton Performance Assessment) of third graders after 20 weeks of participation in the Lexia Reading Core5 Intervention program.

The results of the analysis indicated that there was a significant difference ($p = .001$) in mean scores in overall reading between the pre and posttests (see Table 1). The mean posttest score ($M = 450.33$) was significantly higher than the mean pretest score ($M = 308.63$). Therefore, the null hypothesis was rejected. The results suggest that the Lexia Reading Core5 intervention program contributed to improvement in overall reading achievement of third-grade students.

Table 1

Student Pre and Posttests, Third-Grade Overall Reading (Lexile Levels)

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>P</i>
Pretest Lexile	91	308.63	207.38	-10.84	.001*
Posttest Lexile	91	450.33	218.31		

* $p < .05$

H2: There is no significant difference in reading fluency (Scranton Performance Assessment) of third graders after 20 weeks of participation in the Lexia Reading Core5 Intervention program.

The results of the analysis indicated that there was no significant difference ($p = .556$) in mean fluency scores between pre and posttests (see Table 2). Therefore the null hypothesis was accepted.

Table 2

Student Pre and Posttests, Third-Grade Reading Fluency

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>P</i>
Pretest Fluency	91	100.60	127.26	-.556	.579
Posttest Fluency	91	110.66	128.25		

H3. There is no significant difference in reading comprehension (Fiction-Scranton Performance Assessment) of third graders after 20 weeks of participation in the Lexia Reading Core5 Intervention program.

The results of the analysis indicated that there was a significant difference ($p = .001$) in mean comprehension (fiction) scores between the pre and posttests (see Table 3). The mean posttest score ($M = 2337.87$) was significantly higher than the mean pretest score ($M = 2133.48$). Therefore, the null hypothesis was rejected. The results suggest that the Lexia Reading Core5 intervention program contributed to improvement in reading comprehension (fiction) of third-grade students.

Table 3

Student Pre and Posttests, Third-Grade Reading Fiction Comprehension

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>P</i>
Pretest Fiction	91	2133.48	295.84	-8.292	.001
Posttest Fiction	91	2337.87	280.11		

$p < 0.05$

H4. There is no significant difference in reading comprehension (Non Fiction-Scranton Performance Assessment) of third graders after 20 weeks of participation in the Lexia Reading Core5 Intervention program.

The results of the analysis indicated that there was a significant difference ($p = .001$) in mean comprehension (nonfiction) scores between the pre and posttests (see Table 4). The mean posttest score ($M = 2306.91$) was significantly higher than the mean pretest score ($M = 2116.36$). Therefore, the null hypothesis was rejected. The results suggest that the Lexia Reading Core5 intervention program contributed to improvement in reading comprehension (nonfiction) of third-grade students.

Table 4

Student Pre and Posttests, Third-Grade Reading Nonfiction Comprehension

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>P</i>
Pretest Nonfiction	91	2116.36	293.11	-6.999	.001*
Posttest Nonfiction	91	2306.91	272.34		

* $p < .05$

Summary

Chapter IV presented the results of the statistical analyzes on the effects of the Lexia Core5 Reading on the achievement of third-grade students. There was a significant difference in the mean scores between pre and posttests for three of the four hypotheses (e.g., Lexile levels, fiction, and nonfiction comprehension levels), but there was no significant difference in the reading fluency mean scores. Chapter V will present the summary, conclusions, implications, and recommendations for this study.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Introduction

The purpose of this study was to determine the effects of the Lexia Reading Core5 Intervention program on the reading achievement of third-grade students. Ninety-one third grade students from a K-3 school in central California participated in a study during a 20-week period.

The study utilized quantitative data generated from Scantron in four reading areas (i.e., Lexile levels, fluency, and fiction and nonfiction comprehension). The statistical analyzes were conducted through the use of paired sample *t*-tests to determine if there was a significant difference in mean scores between the pre and posttests. Chapter V discloses a summary of this study, a summary of conclusions, implications and recommendations for future research of the Lexia Reading Core5 reading intervention program.

Summary

It has been evident that in the past 20 years that educational reform has not significantly increased the number of students who can read and comprehend at grade level (Wanzek et al., 2010). Research has shown that instructional quality is a major factor that contributes to improved reading performance (Palincsar & Duke, 2004). Intensive early reading intervention may be the only answer (Nelson-Walker et al.,

2013). The present study assessed the efficacy of a new intervention program that is designed to increase reading achievement among students who are below grade level.

Conclusions

Paired sample *t*-tests were conducted to determine if there was a significant difference in mean scores between pre and posttests in overall reading performance, fluency rate, and fiction and nonfiction comprehension among third grade students who participated in the Lexia Reading Core5 reading program. Scores were entered into the Statistical Package for Social Sciences (SPSS) program and an alpha level of .05 was set for the analysis. The results of the paired sample *t*-tests found a significant difference in mean scores between the pre and posttests in overall reading (Lexile levels), fiction and nonfiction comprehension. Therefore, the results suggest that the third-grade students who participated in the 20-week participation in Lexia Reading Core5 program improved their overall reading performance. However, the results of the paired sample *t*-test for fluency did not show significance. Students did not improve in their overall fluency rate.

Implications

It is evident that the results of the paired sample *t*-test results suggest that students improved their overall reading performance when participating in the computerized Lexia Reading Core5 program. However, the fluency reading rate did not improve significantly.

Lexia Reading Core5 is a promising reading intervention program. It should continue to be utilized and monitored closely for at least 3 to 5 years to determine if positive results remain among the students in third grade.

The researcher believes that the weakness of the program lies in the lack of improvement in the students' reading fluency. Students need to read with proper intonation, pace, use of punctuation, phrasing, stress on words, and with consistent reading rate to be successful readers (Fountas & Pinnell, 2006). Although, Lexia Reading Core5 provides a fluency score, there is limited information about the progress of oral or silent reading fluency.

The teachers should monitor fluency through running records (150 to 200 word passages) to determine how the students process what they are reading. In addition to assessing reading fluency, students should have various opportunities to build fluency. This could be accomplished through whole class instruction, small group instruction, and individually.

Students should be provided with a variety of instructional reading opportunities. One strategy is whole group instruction that includes: demonstrations of fluency, shared and choral reading; multiple opportunities to read easy material independently; and interactive read-alouds to work on meaning. Another strategy is small group instruction, which should include repeated readings of instructional text (not too difficult); pre teaching of text structures and text features; demonstrations of how to read with punctuation; self-evaluation of fluency; shared and choral reading; and the use of dialogue in text. Finally, individual students should be prompted to

read with fluency, use appropriate language and text structure, repeat readings when needed, recognize words effortlessly, read without finger pointing, and write with fluency (Fountas & Pinnell, 2006).

The researcher recommends that students continue to receive early explicit and systematic reading instruction as well as receive intervention in small group settings. Teachers must provide early reading intervention to students who are not performing at grade level and monitor reading to ensure that they are practicing fluent reading on a consistent basis.

Recommendations

The focus of the study was limited to 91 third-grade students in a K-3 school in the Central Valley of California. Suggestions for further this study may include the following:

1. Conduct a qualitative study to observe teacher use of suggested lessons for individual student reading intervention provided by Lexia Reading Core5.
2. Conduct a 3 to 5 year longitudinal study using Lexia Reading Core5 with third-grade students who are not reading at grade level.
3. Conduct a multi-year cohort longitudinal study using the Lexia Reading Core5 with the same students to determine if positive effects continue over time.

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