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THE EFFECTIVENESS OF DIRECT INSTRUCTION IN INCREASING ENGLISH
READING FLUENCY FOR ARABIC SPEAKING ENGLISH LANGUAGE LEARNER
STUDENTS IN QATAR: A RESEARCH CASE STUDY

by

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A capstone submitted in partial fulfillment of the
requirements for the degree of Master of Arts in ESL.

Hamline University

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TABLE OF CONTENTS

CHAPTER ONE: INTRODUCTION

Presentation of Topic.....	1
Writer’s Purpose and Background.....	3
Summary.....	6

CHAPTER TWO: LITERATURE REVIEW

Reading Acquisition.....	8
What is Direct Instruction?.....	9
History of Direct Instruction.....	11
Efficacy of Direct Instruction.....	12
Direct Instruction and Reading.....	14
Direct Instruction and Secondary School.....	17
Direct Instruction and English Learner Students.....	21
Direct Instruction Abroad.....	24
Societal and Cultural Assumptions Found in Direct Instruction.....	26
Research Relation to Personal Experience.....	26
Conclusion.....	28

CHAPTER THREE: METHODOLOGY

Participants.....	30
Setting.....	31

Method.....	31
Implementation of Method.....	32
Conclusion.....	35
CHAPTER FOUR: RESULTS	
R-CBM Pretest and Posttest Data.....	36
MAZE Pretest and Posttest Data.....	40
Student Interviews.....	43
Conclusion.....	46
CHAPTER FIVE: CONCLUSIONS	
The Writing Process.....	47
The Research Process.....	49
The Literature Review Revisited.....	50
Implications, Limitations, and Future Study.....	52
Conclusion.....	53
APPENDICES	
Appendix A: Consent Letter.....	54
Appendix B: AIMSweb Reading-Curriculum Based Measurement (R-CBM).....	57
Appendix C: AIMSweb Progress Monitoring (MAZE).....	59
REFERENCES.....	61

CHAPTER ONE: INTRODUCTION

Presentation of Topic

As an English teacher, the development of reading fluency in students is an area of vital importance, not only for myself, but also for millions of educators across the globe. Students must learn to efficiently decode and comprehend meaning from text if they hope to achieve both academic and future professional success. Students who fall behind in reading ability often face an increasingly difficult road as they are exposed to more complex texts and are expected to understand and summarize sizeable amounts of text-based information. Strong reading fluency in the middle school and secondary years becomes increasingly critical as classes become more content focused and less time is devoted to explicit reading instruction (Cole & McLeskey, 1997; Olson & Platt, 2004). Falvey, Gage, and Eshilian (1995) demonstrated that secondary instructors might serve up to 180 diverse students during a school day. The challenge of meeting the varied needs of all these students is immense, especially students behind in reading fluency. English learners (ELs) especially, can face unique challenges in this regard. Many ELs do not have the groundwork of basic interpersonal communications skills (BICS) or cognitive academic language proficiency (CALP) that native-speakers may take for granted. ELs also face the daunting task of learning to read a language for which they possess little oral context.

Teachers whose main objective it is to educate such students are eager for curriculum or approaches that assist ELs in reaching grade level reading ability. One

approach to reading instruction that seems to increase reading fluency quickly is Direct Instruction. Initially developed by Breiter and Engelman (1966), Direct Instruction (DI) is an education theory that advocates for explicit, scripted, teacher guided lessons taught to small groups of students. The DI approach, while controversial, has experienced success. Longitudinal (Becker & Gersten, 1982) as well as short term studies (Carlson & Frances, 2002) have demonstrated the effectiveness of DI programs in producing reading achievement. DI has proven especially effective for students who are behind grade level in reading (Wiltz & Wilson, 2005) and for students with emotional or behavioral disorders (Strong, Wehby, Falk & Lane, 2004).

While a wealth of DI research has been conducted over the past few decades, much of it has focused on primary school aged students. Far less research exists regarding middle school and secondary student exposure to Direct Instruction. Furthermore, even less research examines the effectiveness of DI with English language learners. This lack of research is curious given numerous examples of DI's effectiveness in increasing reading fluency in a short period of time. For middle school and secondary students struggling to catch up in reading, an approach that brings them up to speed quickly would be critical to their overall academic achievement. Given this gap in research, the topic of this study will examine the effectiveness of DI with EL middle school students, and more specifically, given my current Middle East context, EL middle school students who speak Arabic as their first language. My topic question is as follows: *“What effect does Direct Instruction reading curriculum have on improving the reading fluency of Arabic speaking, English language middle school students?”*

Writer's Purpose and Background

My associational research will focus on three reading groups receiving DI for reading fluency. Using a pretest / posttest model, I will examine whether students increase their scores on assessments measuring reading comprehension and decoding after being exposed to DI for a six week period. Insights into the effectiveness of the program will hopefully assist other English and EL teachers in choosing curriculum to best service the needs of their students. Furthermore, my research will begin to address the rather sizeable gap in research pertaining to Direct Instruction and middle school students, and more specifically, EL middle school students.

The reader may be wondering why I chose to research the effectiveness of DI methods with EL students, specifically Arabic speaking students. The quickest explanation is that I am simply following the writer's axiom: write what you know. During the writing of this capstone, I am a sixth grade classroom teacher at a college preparatory school in Doha, Qatar. My wife (Corinne) and I are currently in our third year of teaching in the Middle East. Our desire to teach overseas dates back to before we were married and was always our life plan as we worked to complete our initial licensures. During an advisor meeting with Dr. Ann Mabbott, the department head of Education at Hamline University, I mentioned my interest in teaching overseas. Dr. Mabbott suggested I consider the Middle East as an option. This piqued my interest in the region and after further research it soon became our preferred destination. Corinne and I attended an international teaching job fair soon after our licensure work was completed and were both hired together.

Qatar is a fascinating part of the world. Fifty or so years ago, there was almost nothing here but sand and dessert. Now, there's a teeming metropolis that is growing by the day. Buoyed by their oil and natural gas output, Qatar is developing into a country of innovation and industry. The education of its citizens is a top priority of the Qatari government and through a number of education initiatives it seeks to accomplish this goal. Doha boasts several universities, private pre-university schools, medical facilities, and research centers. The facilities and institutions are world-class and almost any conceivable educational resource is made available to teachers, and students. Qatar continues to expand with ambitious projects that will culminate in the World Cup being hosted in Doha in 2022.

Our first year in Qatar was a whirlwind of new beginnings. Day-to-day necessities I took for granted back in the United States like a driver's license, bank account, or having a car, now had to be reacquired. I was 32 years old at the time, but I felt like I was back in high school, restarting my life, going through experiences and stages I'd assumed were complete. Our new apartment, while spacious and modern, lacked the personal style and charm of our home back in Minneapolis. I was like a college freshman again on Orientation Day, walking into the stark empty room of my college dormitory. The process of obtaining a Qatari driver's license took several weeks and thus being immobile and dependent on others jarred with my more independent, self-reliant nature. I learned patience, I learned to go with the flow, I discovered how I, like most immigrants arriving in a new place, feel unempowered and out of step with drastically distinctive culture and norms from my own. Things fell into place, slowly but surely, and after a couple of months Corinne and I were up and running. Life felt more or less normal again.

Our new apartment began to feel like a home. New friends helped to ease the ache of missing family and friends back in the United States.

Throughout this adjustment time, we'd both started new jobs. Corinne was teaching 1st grade and I was teaching 4th grade Reading classes. During the orientation weeks at our new school, we were primarily focused on learning Direct Instruction methods and interacting with DI curricula. I came into the job without any experience with DI. I knew there were mixed opinions on the method, but I resolved to keep an open mind and judge for myself. It was initially difficult to come away with anything but a positive impression of DI based on the enthusiastic endorsements of many highly educated administrators who were championing the programs. They pointed to study after study where students in the United States were making great gains in reading proficiency using DI. Moreover, our school in Qatar was serving as a research school for the University of Oregon to determine whether DI could be successful in a foreign setting.

My school utilizes DI reading and writing curricula in almost every classroom. DI is not used as a remedial measure; DI is the mainstream program. Given that many of the students are two to three years behind in both their oral and reading English fluency, the hope is that these DI programs will quickly bring the students we service up to speed in an expedited amount of time. Qatari EL students provide a unique challenge, however. Most of my students only speak English at school during the day for a few hours. The subjects Reading, Writing, Oral Language, and Math are taught in English. All other classes are typically taught in Arabic. This means that many of my students are only using English three to four hours a day. Furthermore, many of the students prefer to converse in Arabic during lunch, recess, and activity time. Students also primarily speak Arabic at home with

their parents and siblings. While most Qatari have a basic to intermediate proficiency in English, fluent English speakers are rare. The result of this is that much of the English my students are exposed to outside of the classroom is below fluent proficiency. This is different from EL students in a country like the United States who are exposed to a higher degree of fluent English in society, during after-school programs, and in movies and television.

During my second year, I was a 6th grade classroom teacher. It was during this time I began to have some initial doubts regarding whether DI was the best method for my students. I noticed that most of the students were not making the gains predicted by the DI programs. I wondered if the programs were actually as effective as many DI advocates claimed. While all teachers kept data on their students' reading proficiency, the data was often used to determine whether the DI program was being taught with fidelity, not whether the program was actually helping the students to make gains. The overall assumption was that DI worked. So if a student wasn't making gains, it was because the teacher wasn't teaching it the right way. Toward the end of that year, a DI guru from the states came to perform fidelity checks on each teacher. I was given a perfect score; demonstrating I was teaching the programs about as well as anyone could from a fidelity standpoint.

Summary

Why then weren't my students catching up like they should? Something wasn't adding up in my mind. It was during this time that I was taking Research Methodology at Hamline, the pre-cursor course to the Capstone. As I considered different avenues of research, I decided to take a closer look at DI research and my own student's experiences

to determine if it was effective program. From there my topic questions was formed:

“What effect does Direct Instruction reading curriculum have on improving the reading fluency of Arabic speaking, English language middle school students?”

The next chapters will examine whether Direct Instruction provides such a model. In Chapter 2, I present a review of Direct Instruction research. Chapter 3 provides an overview of my methodology. In Chapter 4, I present the results of my own research and in Chapter 5 I offer my conclusions.

CHAPTER TWO: LITERATURE REVIEW

The purpose of this study is to answer the question “*What effect does Direct Instruction reading curriculum have on improving the reading fluency of Arabic speaking, English language learner middle school students?*” The following literature review examines five areas of research integral to the topic question: (1) a brief summary of the process of reading acquisition (2) a general explanation and summary of Direct Instruction (DI, (3) DI and reading achievement, (4) middle school students and DI, and (5) ELL/Arabic students and DI.

Reading Acquisition

Reading is a process that begins with listening to and speaking oral language. Children develop listening and speaking vocabulary, allowing them to form ideas and concepts. This prior knowledge is crucial for learning to read (Pressley, 2000). The two basic components of reading are decoding and comprehension. Decoding involves the student determining how a given word should be pronounced (by comparing the decoded word with their experience of orally pronouncing the word) which then leads to the student comprehending what the word means (Harris & Hodges, 1995). Once a student has successfully decoded the word and determined the correct pronunciation, they are able to assign the proper meaning of that word by accessing their prior knowledge. For example, if a student reads the word “bike”, their experiences talking about bikes, listening about bikes, and riding bikes, gives the printed word “bike” meaning.

Children and beginning readers go through several stages of reading development (Rupley, Wilson & Nichols, 1998) and I'll provide a cursory description of the major stages as put forth by Cooper and Kiger (2009). The first two stages involve the emergence of literacy. During the initial stage, children, typically before entering kindergarten, develop oral language in their primary language, begin to write by drawing or scribbling, and become interested in the printed word. This moves into a more advanced emergent literacy phase where the child solidifies basic oral language patterns and learns to recognize and print letters.

From these primary emergent literacy stages, the child then moves (typically throughout first, second and third grade) into a beginning reading stage where he or she is able to decode the pronunciation of words and understand the meaning of an increasing amount of words. During this stage, the child also develops fluency through the ability to "recognize words automatically, accurately, and rapidly" (p. 9). From this stage, the child progresses (usually from second through fourth and fifth grade) to a stage where they are almost fluently reading. He or she possesses a larger oral language vocabulary and displays the ability to read silently (p. 10). The child enters the final stage (usually around fourth grade and into middle school and high school) as they have mastered the skills needed for reading and begin to read for various daily purposes (p.10).

What is Direct Instruction?

Direct Instruction (DI) is an education theory grounded in the belief that the most effective way to teach is through explicit, guided instruction. DI lessons are quickly paced, scripted, sharply focused lessons, typically taught to small groups of students. Students give both individual and choral responses to teacher prompted questions or

directions, and are given immediate feedback on their response using specific corrective procedures (Swanson, Hoskyn, & Lee, 1999). Teachers typically utilize a three-step sequence when presenting the lesson. An instructor models the correct response, then signals for the students to respond with the modeled response, and finally completes the sequence by providing immediate feedback. Typically, prompts are repeated until all or the majority (usually 80%) of the students master the response (Shippen, Houchins, Steventon, & Sartor, 2005). One of the basic assumptions of DI is that all students can succeed. If a student isn't succeeding in the classroom, the fault lies in the instruction. In fact, Engelmann & Carnine (1991) emphatically state:

“...we begin with the obvious fact that the children we work with are perfectly capable of learning anything that we can teach...We know that the intellectual crippling of children is caused by faulty instruction – not by faulty children” (p. 376).

Direct Instruction programs provide scripted lessons utilizing the most effective wording, allowing teachers to present prompts and tasks at a brisk pace. The amount of new instructional material presented in each lesson is precisely regulated and prompts become increasingly complex throughout a single lesson or series of lessons (Stockard, 2010). The content of each lesson is designed to lay the groundwork for more difficult or complex subject matter in future lessons. (Carnine, Grossen, & Silbert, 1992).

A typical DI reading lesson, for example, would be conducted as follows. Students sit around a small table with their reading books and workbooks in front of them. The teacher sits at the table with the students and reads from the Teacher's Edition.

The students are first presented with a sentence that emphasizes key vocabulary and letter sounds they will encounter in the lesson. An example of this opening sentence would be “The horses traversed the dangerous route.” The purpose here is to give students practice using the words “traversed” and “route”, and to also give definitions for these words. Students will read the sentence along with the teacher until they can repeat the sentence from memory. Next, students read through several columns of vocabulary words. The teacher reads each word and then the students repeat the word with a choral response. Any mistakes of pronunciation or decoding are immediately addressed and corrected. Students are given a chance to then read the words individually. Next, students take turns reading through an information passage pertaining to the next story and then read the story itself. Each student reads one or two paragraphs at a time. The instructor interjects to ask scripted comprehension questions that students answer either chorally or individually. Again, any decoding errors or incorrect answers are corrected. Students then read the story in pairs, each reading half of the story aloud. Students correct each other’s errors orally. Finally, students complete workbook and textbook questions pertaining to the new vocabulary, story, and information from past lessons. The teacher corrects the students’ workbook and textbook answers and provides feedback.

History of Direct Instruction

Instructional programs based on DI (originally known as DISTAR) were developed by Bereiter and Engelmann (1966), and published by Science Research Associates. Participating in a decade long government-funded education initiative called Project Follow Through, DISTAR sought to develop and provide education specifically for economically disadvantaged prekindergarten students who were identified as being at

risk for below grade level reading fluency (Wiltz & Wilson, 2005). According to a 1977 DISTAR report, students who were taught using the DI program initially outperformed non-DI instructed student on both achievement and IQ assessments (Engelmann, 1980). These gains, however, declined by the end of second grade and the DI instructed students no longer achieved benchmark achievement standards using the Bereiter-Engelmann program (Miller & Dyer, 1975). The DISTAR program underwent several revisions and was widely field-tested in classrooms across the United States. Today, McGraw-Hill Education, Sopris West, and the University of Oregon Bookstore produce most Direct Instruction curriculum. Programs cover most school subjects including, reading, oral language, writing, mathematics, and spelling.

Efficacy of Direct Instructions

The efficacy of Direct Instruction has been extensively researched, producing a mixed bag of findings. Several meta-analyses have yielded positive appraisals of Direct Instruction. Adams and Engelmann (1996) conducted a meta-analysis of 34 selected studies showing DI programs to be highly effective. Similarly, Borman, Hewes, Overman, and Brown (2003) examined 29 comprehensive school reform models and concluded that among all interventions demonstrating the most compelling evidence of effectiveness, Direct Instruction was found to have the largest average effect size. Furthermore, Hattie (2009) conducted a synthesis of previous meta-analyses of various factors pertaining to student achievement. Direct Instruction was found to be a highly effective teaching strategy.

Several studies have demonstrated DI's positive impact on reading fluency, language skills, and math scores. A study of 53 students age 6 through 8 showed DI

students scored significantly higher on reading and recognition assessments over Palo Alto Reading Program students (Stein and Goldman, 1980). Meyer (1984) concluded that DI-students performed higher on the California Achievement Test compared to the control group in the subjects of math and reading. Also, a study of 45 kindergarten students showed significant differences favoring DI-students on all subsets of the Test of Auditory Comprehension (Benner et al., 2002).

A few studies have demonstrated DI's effectiveness for students with cognitive delays. One research project (Maggs & Morath, 1976) tracked twenty-eight developmentally delayed students who used the beginning level DI program DISTAR Language I. The students received one hour of DI each day, along with other precision teaching. The experimental group using DI scored significantly higher on oral language assessments than the control group. Over two years, participants demonstrated normal intellectual growth rates compared to their control group counterparts which did not. Similarly, two different studies by Lloyd, Cullinan, Heins, and Epstein (1980) and Lloyd, Epstein, and Cullinan (1981) found that learning disabled students using the Corrective Reading program scored higher on reading comprehension tests than students who were not taught the program.

Other studies have provided mixed conclusions regarding the efficacy of Direct Instruction. Summerell and Brannigan (1977) found that pre-test to post-test gains on the Paragraph Meaning subtest of the Stanford Achievement Test for 24 second grade DI-students were significantly higher, but these same students performed the same as their counterparts on the Word Meaning subtest. A study of 140 students from Head Start classes concluded that the DI-student group achieved significantly higher pre-test to post-

test gains on the Illinois Test of Psycholinguistic Abilities compared to the control group (Mosley & Pue, 1980). The DI-students in this study however did not outperform students using the Ginn Language Development Program, and students using the Peabody Language Development Kit scored significantly higher gains than the DI group. Yu and Rachor (2000) studied DI students in fourth, fifth, and sixth grade and determined that the DI instructed students did not outperform the control groups in grades four and five, however, the sixth grade DI students significantly outperformed their counterparts in reading proficiency scores.

Other research shows no significant positive effects for students using DI methods. A study of 72 second through sixth graders found no significant differences between DI students and control groups (Richardson, et al., 1978). Similarly, a study by Traweck and Berninger (1997) comparing first grade students in the Integrated Reading-Writing program to DI students yielded no significant results. Cole, Dale, and Mills (1991) studied 107 special-education students and found no significant differences between groups when assessing reading and language skills.

Direct Instruction and Reading

In the previous, more general explanation of DI, some studies regarding reading decoding and comprehension were mentioned briefly. In this section, several studies involving DI and reading will be more closely examined.

The most significant longitudinal study examining DI and reading achievement was conducted by Becker and Gersten (1982). The researchers studied the progress of low-income, fifth and sixth-grade students at five different schools. All the students had completed grades 1 through 3 using DI methods. These students' scores on the Wide

Range Achievement Test (WRAT) and the Metropolitan Achievement Test were compared with those of demographically similar, non-DI students. Data was gathered during two different years and included the total scores of the two previously mentioned assessments. A summary of the research concluded that students who had received DI based teaching in the early grades had significantly higher achievement in fifth and sixth grade than their non-DI counterparts. Becker and Gersten found that reading decoding scores were especially strong and consistent for DI-students. Although the DI-students scored better than their fellow non-DI groups, their scores, when compared to national standards, declined after third grade. Becker and Gersten concluded that DI principles should carry on to the middle school grades to avoid similar achievement drop-offs.

Ryder, Burton and Silberg (2006) performed a longitudinal study (three years) on the effectiveness of DI on student reading achievement. They examined participating schools from the Milwaukee Public Schools and Franklin Public Schools (a district within the Milwaukee metro area). Their research produced several interesting results. First, DI phonics instruction was shown to be no more effective than other approaches. Second, the researchers concluded from their research that “certain characteristics of teachers, rather than the instruction method that they embrace, is the factor that correlates with high-achieving classrooms” (pg. 189). The authors go on to state, “effective instruction of DI and non-DI teachers is not characterized by conformity and adherence to a structured instructional paradigm, but, rather, is based on intuition, student need, and previous training” (pg. 189). Finally, although results showed that DI was effective for teaching decoding to primary students, the authors concluded DI was less effective in improving student reading comprehension skills. This particular finding supports

previous research on reading comprehension of urban second grade students (Mac Iver & Kemper, 2002).

Other research has studied DI-students over shorter periods of time. Carlson and Francis (2002) compared the reading achievement of third-grade students using the DI program, *Reading Mastery*, to demographically similar control groups. Their research concluded that students with more exposure to DI experienced significantly higher reading achievement at the end of third grade. Kamps et al. (2003) likewise, compared primary students using *Reading Mastery* to student groups using different reading programs. The research found that the students in the *Reading Mastery* class enjoyed the highest growth. Another study compared two DI cohorts to control groups (Mac Iver & Kemper, 2002). One group began DI based learning in kindergarten and continued with DI through third grade. The other groups started with DI in the second grade and continued through fifth grade. DI was found to have a strong impact on vocabulary knowledge and oral reading fluency.

Stockard (2010) conducted one of the more recent examinations of DI and reading achievement. This research acknowledged that much of the literature devoted to DI had failed to examine “the relationship of DI to changes in achievement from first grade to end of elementary school, a time period that is especially important to predicting later academic success” (p. 222). Stockard’s research committed to following the impact of DI on student achievement from first through fifth grade. The results of this research concluded that students who were exposed to DI reading programs experienced “significantly greater gains than student using other curricula” (p. 233). Not only were the fifth-grade reading scores higher than students using non-DI programs, the scores

were also above national reading score averages. Stockard noted that DI programs might assist schools in helping low-income students overcome the “fourth-grade slump” which Stockard describes as a critical point in the education timeline when “students from low-income background begin to fall progressively farther behind their more advantaged peers” (p. 233).

Direct Instruction and Secondary School

As students move into middle school and high school, classroom instruction becomes increasingly content driven and reading-centered instruction is often times rarely provided (Cole & McLeskey, 1997). A middle school teacher with 3-4 content centered classes might serve 100+ students in a given day. Providing differentiated instruction to this many students, including students who are behind grade level in reading, can be quite challenging. Do DI reading programs provide much needed support for these students? Unfortunately, the amount of literature examining both DI and middle school students is limited. Much of the research examining DI has focused on K-5 grade students. The research that does examine secondary students and DI reading programs tends to focus on students with behavioral, emotional, or learning challenges.

Unlike most of the literature regarding DI, Kozloff, LaNunziata, Cowardin, and Bessellieu’s (2001) specifically advocate for the use of DI in the secondary school. Unique to their argument is an emphasis on the philosophical and moral superiority of Direct Instruction. They begin with a critique of current constructivist values. Constructivism is a learning approach that asserts that learning occurs through construction of meaning, not just from the receiving of information (Piaget, 1977). Advocates of constructivist methods seek to foster an “inquiry” based learning where

student are free to discover academic topics and develop understanding through experience (Kelly, 1991). Koziuff, LaNunziata, Cowardin, and Bessellieu argue that the constructivist model “fails to foster in students strong and broad sets of competencies; favors affluent children entering school well-prepared by literate parents; and (ironically) instead of yielding equality and social justice, exacerbate the unequal disruption of knowledge and life-chances” (pg.55). The authors seem to view proponents of DI as social and civil rights advocates, stating:

“Instructivist educators were among the first to create programs to improve education for disadvantaged children and their families; to prevent or replace antisocial behavior in children; to humanize large custodial training schools that warehoused persons with disabilities; and to develop effective treatments for persons with a variety of illnesses or conditions...” (pg. 57).

The authors also criticize constructivist ideals for holding to a belief that “all truth is relative” and that “knowledge cannot be transmitted” (pg. 55). They go on to state their belief that DI provides the best model for student involvement and content mastery. They begin their advocacy of DI by stating that historically, the role of teachers has been to provide students with a set of principles or knowledge which in turn allows the student to form their own or new knowledge. These principles of knowledge include concepts, principles of rules, cognitive strategies, and physical operations. The authors believe this is best achieved through teaching that is focused, explicit, and objective focused. To prove this assertion they draw on decades of DI instruction research, citing research from Englemann and Breiter, to more contemporary DI proponents.

After providing a thorough overview of the basic principles of DI, the authors address why the model works well for secondary schools. A number of field-tested curriculums are listed ranging from US History to Chemistry to Mathematics. These curriculum are considered effective because there is research to back them, they allow for instruction that is logically coherent and explicit, which gives students and teachers clear knowledge objectives. The basic takeaway is that any educator or administrator, who is concerned with achievement for students and teachers alike, must be an advocate for DI. Unfortunately, no research or real-world examples of secondary schools that have fully adopted a DI model are offered or examined. There seems to be an underlying premise that DI curriculum makes students successful. Teachers, administrators, parents, funding, etc, play a secondary role.

Kozloff, LaNunziata, Cowardin, and Bessellieu conclude their paper by addressing some of the common critiques, or “myths” as they refer to them, regarding Direct Instruction. First, the authors encourage the reader to not be put off by DI’s technical jargon that some educators deem to be dehumanizing. They argue that all fields of study have and use similar technical language. Second, they deny that DI is primarily a drill-based approach. They state that the repetitious practice inherent to DI simply allows students to “iron out the bugs” (69). Third, the authors claim that scripted lessons are not dehumanizing for teachers. Anyone following a protocol, such as a dancer, athlete, or doctor is free to show forth his or her own style or proclivities. Furthermore, once an instructor is familiar with DI, he or she is free to modify or emphasize the material as they see fit.

Shippen, Houchins, Steventon, and Sartor (2005) researched the effect that DI reading programs had on 7th grade students who were two to four years behind in reading achievement. The programs were taught by four, seventh-grade, content-area teachers who were picked by the school principal to participate in the study. The teachers were trained to use three different programs: *Corrective Reading Decoding B2* (Engelman, Johnson, et al., 1999), *Corrective Reading Decoding C* (Engelmann, Meyer, Johnson, & Carnine, 1999), and REWARDS (*Reading Excellence: Word Attach and Rate Development Strategies*) (Archer, Gleason, & Vachon, 2000). Two pre-post assessments were utilized to determine student reading levels. The first assessment was the *Test of Word Reading Efficiency* (Torgesen, Wagner, & Rashotte, 1999), which measures phonemic decoding efficiency, sight word reading efficiency, and overall word reading efficiency. The second assessment was the *Gray Oral Reading Test* (Wiederholt & Bryant, 2001), which measured reading rate, reading fluency, reading accuracy, and reading comprehension.

The results of the study showed that DI programs helped students make significant gains in the areas of reading efficiency, reading rate, reading accuracy, and reading fluency. Students were also given a survey regarding their experience using the DI programs. While 67% of students agreed that DI had improved their reading, and 56% agreed that DI helped them read better in other classes, only 38% of the students wished to continue using DI programs, and 38% reported enjoying the DI instruction. The authors state “this study continues to confirm the effectiveness of highly structured, explicit, teacher-directed instruction for struggling readers” (pg. 180).

Much of the available research on DI and middle school students examines the program's effect on students with learning challenges. Strong, Wehby, Falk and Lane (2004) sought to determine what effect the DI program, *Corrective Reading* (Engelman, Meyer, Carnine, Becker, Eisele & Johnson, 1999), could have on middle school students with emotional and/or behavioral disorders. The results of the study showed that students experienced moderate gains in oral reading fluency during the implementation of *Corrective Reading*. The author concluded, however, "although the intervention detailed in this study might be deemed effective, it is apparent that the improvement in reading performance was probably not significant enough to overcome the struggles in reading displayed by the participants" (pg. 576).

Flores and Ganz (2009) investigated the effects of DI reading comprehension programs on middle school aged students with autism and other developmental delays. Their research also sought to determine the effect of DI programs on these students' overall reading comprehension. Results showed DI to be effective with students meeting assessment criterion in the areas of picture analogies, deductions, inductions, and opposites conditions. Likewise, all students improved on curriculum-based assessments included in the DI program.

Direct Instruction and English Learner Students

Research analyzing Direct Instruction and EL (English Learner) students, and more specifically, native-speaking (L1) Arabic speakers, is sparse. Most research has focused on English speaking students located in the United States who are learning to read their L1. Researching the ELL and Arabic subtext of Direct Instruction reinforced for me the need for further research on this particular topic. The following section will

begin by focusing on the available research regarding EL instruction in the United States and then broaden to explore research pertaining to EL students globally.

EL students are the fastest growing segment of the US public school student population. It is estimated that in 2011-2012 the percentage of EL students was 9.1% or 4.4 million students (NCED, 2013). By 2015, the number of EL students may reach 10 million and, by 2025, it's estimated that one out of every four students will qualify for EL services (NEA, 2012). Providing reading instruction or any type of instruction for EL students presents a unique challenge for educators. The inability for teachers to communicate with students, parents, or other members of the EL student's community is often viewed as an insurmountable barrier to effective instruction. Teachers often point to the lack of professional development and continuing education regarding how to effectively reach, teach, and assess ELL students.

Like their native English-speaking counterparts, EL students need to develop the skills of phonemic awareness, phonics, vocabulary, comprehension, and fluency to become strong readers. Teachers instructing ELs must understand that the sounds of English and other phonetic languages differ, creating potential difficulty for students to learn English word structures. Furthermore, teachers should be aware that low vocabulary proficiency also negatively affects an EL's ability to access and comprehend text (The National Reading Panel, 2000). With these essential skills in mind and the unique challenges presented, is there a best practice approach? Some research suggests that DI programs can be effective.

The research conducted by Foorman, et al. (1998) indicates that for struggling readers, instruction should be evidence-based, explicitly taught, and that the curriculum

should include a scope and sequence of essential reading skills. Direct Instruction would seem to fit the bill for these criteria. Gunn, Biglan, Smolkowski, and Ary (2000) conducted a study of 122 Hispanic and non-Hispanic kindergarten students using the DI programs *Reading Mastery* and *Corrective Reading*. The study found that after two years of small-group learning, the students using the DI curriculum scored significantly higher on letter identification, fluency, vocabulary, and passage comprehension. The findings lend credence to the efficacy of systematic curriculum, like DI, when teaching both ELs and native English-speaking students.

Further evidence in support of DI programs for ELs comes in the form of two studies looking at student monitoring and intensity of learning. Weekly progress monitoring and immediate follow-up regarding error correction is a staple of DI. A study of ELs found that regular teacher support with student monitoring was vital for student reading growth (Haager & Windmueller, 2001). With regard to lesson intensity, also a norm of DI with its quickly paced lessons, daily instruction (sometimes two times a day), and small groups, Torgesen (2000) found that low-performing students made gains when learning took place in smaller groups with daily intervention.

DI programs are often taught within a response-to-intervention (RTI) model that allows for multi-tiered levels of support for students based on their ability levels. The first tier is the general education classroom or classes where EL students and native English-speaking students learn together. Student assessment determines whether students qualify for Tier 1 instruction. If testing shows that a student has failed to reach Tier 1 benchmarks, they then qualify for Tier 2 intervention. Here they receive small group instruction that allows the student to make gains necessary to move back into the

Tier 1. DI programs are often a staple of Tier 2 intervention. A general education instructor or a reading specialist will teach a small group of students using a direct instruction program. If a student continues to struggle despite Tier 2 intervention, they may then be eligible for Tier 3 support where they receive individual support from a reading or special education instructor.

Some research indicates that EL students can thrive in a multi-tiered system. EL students whose language deficiencies prevent them from performing well in the general education or Tier 1 environment are good candidates for Tier 2. Here they can focus on reading or oral language instruction, all within a small group setting taught by an EL or Reading specialist. Kamps, et. al (2007) compared ELL students using DI within a Tier 2 setting to other reading intervention programs. The results of the study showed “greater outcomes for EL students...specifically those participating in secondary-tier interventions using curricula with a direct instruction approach and delivered in small groups” (pg. 160).

Direct Instruction Abroad

Grossen and Kelly (1992) studied the efficacy of DI programs in a third-world setting. Their work looked specifically at students of Gazankulu in South Africa who spoke Tsonga as their first language. The authors describe the poor state of education in Gazankulu where materials are scarce, class sizes range up to 120 students, and teachers are under-qualified. They cite a report by Kunstel (1990) showing that students who graduate 12th grade and enroll in teacher-training colleges typically speak very little English. Grossen and Kelly’s research found that DI curriculum greatly increased the effectiveness of Gazankulu teachers. Likewise, second grade student who were taught

using DI methods outperformed non-DI students on assessments measuring English language, English reading, and mathematics. Furthermore, assessments given to the same students at the end of their second grade year showed they also outperformed students who were taught by a qualified English-speaking teacher in a multi-racial school, as well as English-speaking students from a well regarded school located in Johannesburg.

Another study researched the effectiveness of teaching English language using Direct Instruction to Arabic speaking students in Kuwait (Al-Shammari, Al-Sharoufi, & Yawkey, 2008). Their study examined two groups of 5th grade public school students. The first group received English language instruction using a DI lesson plan that was developed to teach a particular curricular unit. The control group was not taught with the DI lesson plan. The research showed that the DI-students performed significantly higher on the English unit assessments than the control group. The authors believe their research indicates that DI may be the answer to improving reading comprehension in EL classrooms given how effectively DI seemed to increase reading comprehension skills in a short period of time. Based on their research, “the philosophy of direct instruction stems from the important corollary that teaching should be very compact, concentrated, and penetrating. From this logical and pedagogical stance, direct instruction can be the most effective answer to solving comprehension problems in English language teaching among non-native learners of English” (pg. 88). The authors conclude with a recommendation that DI methods be extended to other school subjects besides English and that teachers in Kuwaiti schools be educated on how to include DI in their classrooms.

Societal and Cultural Assumptions Found in Direct Instruction

One component of DI that goes unaddressed in much of the research is the program's assumption of familiarity with particular societal norms, history, and literacy activities. Most of the informational passages and stories assume the reader is familiar with the geography, history, and culture of the United States. Ryder, Burton, and Silberg (2006) address this point in the discussion section of their paper. They cite two different studies showing how these assumptions can hinder a low-income, minority student's ability to access a text or reading curriculum. One study cited illustrates how the deficit of culture and literacy that some economically disadvantaged students exhibit (Ladson-Billings, 1994) could be an academic disadvantage. The second study (Villegas, 1991) argues that students who cannot identify with the societal or cultural norms presented in the materials may struggle to be successful. This would seem to be a relevant point for EL students, regardless of their socio-economic background. The Ryder, Burton, and Silberg (2006) study states that teachers were particularly critical of DI regarding this very subject. The authors state, "many teachers augmented the DI materials through the use of stories that were culturally relevant to the students to allow students to engage their knowledge of story structures and provide a more enjoyable reading selection" (pg. 190). This augmentation of stories and materials may be a necessary component for successfully using a DI approach with ELs.

Research Relation to Personal Experience

Most of the research pertaining to how DI is taught in the classroom conforms to my experience. Lessons are scripted, tightly focused, and are taught at a quick pace. Time and time again Reading coaches have encouraged me to keep a "perky" pace. Typically

this means completing a lesson every one to two class periods. This can be quite frustrating when it becomes clear to me that the pace is too fast for some students. While I generally agree that an upbeat, enthusiastic progression of teaching should be encouraged, many times, especially with EL students, the lesson must be slowed down to allow for more vocabulary instruction and scaffolding. Given that DI curricula assumes students already have the oral language English proficiency of native speakers, scaffolding (showing pictures, videos, more in depth explanation of vocabulary, answering student questions) time necessary and crucial for ELs isn't accounted for in the lesson-pacing schedule or scripted lesson plans.

When I raise this issue, coaches and administrators often give mixed messages. Some will allow for "off-script" scaffolding, but then also expect that the pacing-schedule be followed. This is impossible because the scaffolded lessons are longer than the standard lesson. Other administrators or coaches will be less adamant about the schedule and advocate for, "Mastery over pacing." This however creates an environment where fidelity to the programs is not being fully enforced. If one administrator is allowing for certain exceptions with regard to pacing and content, and another administrator is not, teachers can feel confused or caught in the middle between opposing opinions. It is not uncommon to get feedback on fidelity checks where an administrative observer contradicts previous feedback by another observer.

My experience with student achievement doesn't often square with research showing positive results for DI (Adams and Engelmann, 1996; Becker and Gersten 1982). Many of my students remain two to three grades below grade-level in Reading, despite having been taught with DI curricula for the last few years. Again, I attribute this

mostly in part to DI's many curricula assumptions, namely that students are already fluent English speakers and are exposed to English throughout their entire day. When administrators compare DI students in the United States with my students, they are essentially comparing apples and oranges.

The research that highlighted DI's cultural, societal, and often American-centric assumptions (Ryder, Burton, and Silberg, 200; Ladson-Billings, 1994) is quite relevant to my experience and that of my fellow teachers. Often times the amount of cultural or vocabulary scaffolding needed to get through a story or lesson, especially with EL students from a Middle Eastern country, detracts from the actual lesson objectives. Given that fidelity to the scripted program is often required by administration or reading instruction coaches, it can be difficult for teachers to know just how much they can adlib or how far off script they can stray in order to explain certain social or cultural concepts to students. Also, it is clear that DI programs were not created with some students' religious sensibilities in mind. This can require teachers to skip certain stories or concepts that may be deemed offensive or simply require unwanted attention to or prompt discussion regarding a particular topic or image.

Conclusion

The review of the current literature seems to give inconclusive answer to my topic question, *What effect does Direct Instruction reading curriculum have on improving the reading fluency of Arabic speaking, English language middle school students?* Research by Engelman (1980), Kamps (2003), Stockard (2010), and others certainly would seem to indicate that DI methods can effectively increase reading fluency, especially with students from disadvantaged socio-economic backgrounds or students who fall behind

peers in reading achievement. Much of this research, however, focuses on primary grade students in the United States who speak English as their first language. Research regarding middle school and secondary grades becomes increasingly hard to come by. The lack of DI research involving middle school and high-school students seems to lend credence to those who argue that DI is best used with younger students, particularly in grades K-2. Furthermore, research examining DI and EL students, specifically Arabic L1 students, is even scarcer. After completing the literature review, I'm convinced more than ever that my topic addresses a significant gap in current DI research. Using the research methodology plan outlined in the next chapter, I hope to achieve a concentrated examination of the middle school, Arabic L1 niche.

Chapter 3 presents the method of research to answer the topic question “*What effect does Direct Instruction reading curriculum have on improving the reading fluency of Arabic speaking, English language learner middle school students?*” Student subjects, assessments, Direct Instruction (DI) programs, and research timelines will be described.

CHAPTER THREE: METHODOLOGY

This chapter presents the method of research to answer the topic question “*What effect does Direct Instruction reading curriculum have on improving the reading fluency of Arabic speaking, English language learner middle school students?*” Subjects, assessment, Direct Instruction (DI) programs, and a research timeline will be described.

Participants

The participants in this study were 14 middle school students who speak Arabic as their first language. These students were 2-4 grade levels behind in English reading fluency and qualify for English learner (EL) support. The students came from highly privileged socio-economic backgrounds where little to no expense is spared for their academic development. Most of the students enjoyed a stable, two-parent home and were supplied with tutors and nannies to assist in their academics and day-to-day life.

As previously stated in Chapter 1, the students in this study were unique in that they typically only speak English for a few hours at school each day. Math, Reading, Writing, and Science classes are taught in English. Students are encouraged to only speak English during these classes, however many students would converse in Arabic during group work. This means students were only engaged in English based instruction for about three to four hours a day. Physical Education, Arabic, and Islamic Studies courses were typically taught in Arabic. Moreover, students generally conversed and functioned

in Arabic outside of the classroom during lunch, recess, free time, arrival and dismissal, etc.

Students attended daily reading groups and were taught decoding and reading comprehension using a Direct Instruction program. Teachers were routinely evaluated both formally and informally by way of program fidelity checks and observations by instructional coaches or other administrators. Bi-weekly data meetings were conducted where student performance in the program was analyzed and discussed.

Setting

All students attended the same private prep school in Doha, Qatar. Reading groups were typically comprised of 4-6 students and took place in a classroom. Reading groups were conducted for 45 minutes each day, and 2-3 reading lessons were completed each week.

Method

Given that my question seeks to find a correlation between DI reading programs and increased reading fluency, a quantitative study seemed most appropriate for my research. According to Mackey and Gass (2005), my research design type classifies as *associational* research where the researcher tests the relationship “between or among variables” (p.145). Common to quantitative research, a pretest/posttest design was employed to measure the effects of the DI reading programs on student reading fluency. The use of this design assisted in giving immediate feedback regarding the efficacy of the DI approach.

My method paid strict adherence to the rules and guidelines set forth by the Human Subject Committee (HSC) of Hamline University. Parent or guardian signatures

on informed consent agreements predicated all student participation in the study. Furthermore, teachers were routinely “fidelity-checked” throughout the academic year by Direct Instruction coaches to ensure adherence to proper DI guidelines and methods.

Implementation of method

Prior to beginning the *Reading Mastery* or *Corrective Reading* programs, students were assessed using a Fall benchmark pretest comprised of both the *AIMSweb Progress Monitoring* (referred to as MAZE) (Shinn & Shinn, 2002) assessment and the *AIMSweb Reading-Curriculum Based Measurement (R-CBM)* (Pearson Education, Inc., 2012) assessment. The MAZE is a multiple-choice assessment that measures reading comprehension. Students read a 150 - 400 word passage for three minutes. Every 7th word, students are given a choice of three different words (placed in parenthesis) and must choose and circle the correct word that makes the most sense given the context of the sentence. Students complete as much of the passage as they can in three minutes and the number of correct responses and errors are recorded. An excerpt of a sample prompt is shown below with the correct answer underlined:

“Once upon a time there were was a merchant whose wife died, leaving him with three daughters. The two older daughters were good-looking (**but, stand, then**) very disagreeable. They cared only for (**until, themselves, himself**) and for their appearance; they spent (**palace, wicked, most**) of the time admiring their reflections (**in, of, turned**) a looking glass.” (p. 9)

The second Fall benchmark assessment, *AIMSweb R-CBM*, measures student decoding skills and tracks words-per-minute read. This assessment is conducted and scored on the AIMSweb website. Students are given one minute to read aloud as much of

the 250 to 350 word passage as they can. A word is considered to be read correctly when it is pronounced correctly, read in the correct order, and read within 3 seconds. The teacher records an error if a student mispronounces or substitutes a word, skips a word, does not read the word within 3 seconds, or transposes the order of two words (pg. 7). An excerpt from a sample prompt appears below:

Jellyfish are creatures found in most bodies of salt water from the tropical 13
waters of the Caribbean Sea, to the cold, dark waters of the Arctic Ocean. 27
Jellyfish are unusual creatures. When seen in water, it's hard to believe 40
they are a species from this planet. 47

After taking the initial pretest assessments, students will began reading instruction using the *Reading Mastery* or *Corrective Reading* DI programs for the entire school year. Students attended reading groups daily for 45 minutes. A *Reading Mastery* or *Corrective Reading* lesson typically takes one to two class sessions to complete. A typical DI lesson using one of the previously stated curricula adheres to the following basic plan. The lesson starts with students reviewing vocabulary needed to access the story and or informational passages found in each lesson. The initial vocabulary review consists of the teacher reading the words aloud and then signaling for the students to orally produce the same words. Sometimes the DI script will provide definitions for certain words, but typically it is assumed that students already have the prior knowledge to comprehend the vocabulary.

Students then take turns reading the informational and story passages aloud. The informational passages provide context information for the story. For example, a series of stories about a spaceship journey to the planet Jupiter will each have a preceding passage

where basic information about the solar system, gravity, and space is presented. Students take turns reading blocks of the text aloud while the rest of the students track with their finger and follow along silently. The DI scripted lessons assign breaks throughout the story reading where the teacher asks the students comprehension or critical thinking questions. These questions are scripted and typically involve students chorally answering the prompt. After completing the story with the teacher, students are then grouped into pairs where they read the story aloud to their partner. Each student in the pair reads about half of the story to their partner who is supposed to follow along and correct decoding errors. Students then complete workbook and textbook assignments that gauge their understanding of the story and review information from previous informational readings.

The duration of this study was an entire academic year. Reading groups began the second week of September and ended during the second week of June. Fall benchmark pretest and Spring benchmark posttest results (MAZE and R-CBM) were compared to determine whether students had increased reading fluency.

In addition, students were also be asked to respond orally to a questionnaire regarding their experience the reading curricula and assessments throughout the year and offer a personal appraisal. I plan to schedule an interview time where I'll ask each participant the following questions:

1. What do you like best about your Direct Instruction (DI) reading program?
2. What don't you like about your DI Reading program?
3. Are the stories in the program interesting? Why or why not?
4. Tell me about the workbook questions. Are they difficult or easy?
5. Tell me about the textbook questions. Are they difficult or easy?

6. Do you feel the DI Reading program has made you a better reader?
7. What is your favorite class during the day? Why?
8. Tell me about the R-CBM assessment? Do you like this assessment? Why or why not? How do you feel after you take it?
9. Tell me about the MAZE assessment? Do you like this assessment? Why or why not? How do you feel after you take it?
10. If you could change anything about Reading class, what would it be?
11. What do you like best about your particular Reading group?
12. What don't you like about your particular Reading group?

From these questions I hoped to provide a more personal response to DI from the actual students engaged in the programs. There's next to nothing that I've read in the research on DI that considers or draws out a student perspective.

Conclusion

In summary, my quantitative research study using a pretest/posttest design measured the effect of the *Reading Mastery* program on student reading fluency. From this data I hope to provide an answer to my topic question: “*What effect does Direct Instruction reading curriculum have on improving the reading fluency of Arabic speaking, English language learner middle school students?*” The following chapter will show the results of my research and offer a summarization / analysis of the data.

CHAPTER FOUR: RESULTS

This chapter presents the results of my research to answer the topic question: “*What effect does Direct Instruction reading curriculum have on improving the reading fluency of Arabic speaking, English language learner middle school students?*” This chapter is broken down into the following sections. First, pretest and posttest data from the *AIMSweb Reading-Curriculum Based Measurement (R-CBM)* will be presented and analyzed. Second, pretest and posttest data from the *AIMSweb Progress Monitoring* (referred to as MAZE) will be presented and analyzed. Third, participant responses to the interview questions regarding Direct Instruction (DI) and the assessments will be shared and I’ll comment on the responses. Finally, I’ll interpret the data to show whether DI is having a significant effect on the participants’ reading fluency and comprehension.

R-CBM Pretest and Posttest

The pretest benchmark *AIMSweb Reading-Curriculum Based Measurement (R-CBM)* assessment was given to all students in September of 2014. Reading coaches administered the test to participants in order to establish baseline fluency levels for each participant. Students read a passage of text for one minute. The coaches recorded the total number of words read correctly, along with the number of errors. An overall accuracy score was calculated by dividing the number of words correctly read by the number of words attempted. These scores were then used to form individual benchmark growth targets for each student that were automatically calculated by the *AIMSweb* software. The scores for the Fall R-CBM assessment are as follows:

Fall Benchmark *AIMSweb Reading-Curriculum Based Measurement (R-CBM)* scores

<u>Participant</u>	<u>Words Read Correctly</u>	<u>Errors</u>	<u>Accuracy</u>
Participant 1	70	5	93.30%
Participant 2	30	14	68.20%
Participant 3	39	7	84.80%
Participant 4	147	3	98%
Participant 5	120	3	97.60%
Participant 6	110	2	98.20%
Participant 7	94	4	95.90%
Participant 8	35	14	71.40%
Participant 9	60	7	89.60%
Participant 10	77	5	93.90%
Participant 11	32	3	91.40%
Participant 12	97	5	95.10%
Participant 13	119	3	97.50%
Participant 14	33	4	89.20%

The posttest benchmark *AIMSweb Reading-Curriculum Based Measurement (R-CBM)* assessment was given to all students in May of 2015. These results showed what reading fluency growth students had achieved throughout the year. Again, students read a passage of text for one minute. The coaches recorded the total number of words read correctly, along with the number of errors. An overall accuracy score was calculated by dividing the number of words correctly read by the number of words attempted. The scores for the Spring R-CBM assessment are as follows:

Spring Benchmark *AIMSweb Reading-Curriculum Based Measurement (R-CBM)* scores:

<u>Participant</u>	<u>Words Read Correctly</u>	<u>Errors</u>	<u>Accuracy</u>
Participant 1	76	1	98.70%
Participant 2	90	6	93.80%
Participant 3	68	6	91.90%
Participant 4	138	3	98%
Participant 5	127	4	96.90%
Participant 6	126	3	97.70%
Participant 7	99	4	96.10%
Participant 8	45	17	72.60%
Participant 9	83	7	92.20%
Participant 10	138	3	97.90%
Participant 11	35	4	89.70%
Participant 12	134	2	98.50%
Participant 13	145	1	99.30%
Participant 14	48	4	92.30%

Comparing the fall and spring testing, the overall growth or regression of each student can be calculated. The following data shows how participants increased or decreased the number of words read correctly, the number of errors, and their overall accuracy.

Fluency Growth or Regression from Fall to Spring *AIMSweb Reading-Curriculum Based Measurement (R-CBM)* scores:

<u>Participant</u>	<u>Words Read +/-</u>	<u>Errors +/-</u>	<u>Accuracy +/-</u>
Participant 1	+6	-4	+5.40%
Participant 2	+60	-8	+25.60%
Participant 3	+29	-1	+7.10%
Participant 4	-19	0	-0.10%
Participant 5	+7	+1	-0.70%
Participant 6	+16	+1	-0.50%

Participant 7	+5	0	+0.20%
Participant 8	+10	+3	+1.20%
Participant 9	+23	0	+2.60%
Participant 10	+61	-2	+4.00%
Participant 11	+3	+1	-1.70%
Participant 12	+37	-3	+3.40%
Participant 13	+26	-2	+1.8%
Participant 14	+15	0	+3.10%

Looking at the data, we see that all but one (Participant 4) increased the number of words read correctly. The average increase in words read correctly by the participant group was 19.93 words. We also see that eleven out of the fourteen participants either decreased the number of errors or maintained the same number of errors. Also, ten out of the fourteen participants had positive accuracy growth. These growth numbers however do not indicate a significant amount of progress. According to the AIMSweb standards, not a single participant achieved their benchmark targets that were generated from their Fall assessment scores. Put another way, while most of the participants exhibited some progress, their progress fell short of the expected growth rates. Moreover, all of the students fell below the average of 150 words correct per minute (WCPM) expected for a sixth or seventh grade student (Hasbrouck, J. & Tindal, G.A., 2006).

Participant performance on the first assessment does not indicate these students have reached grade-level reading fluency. This would seem to indicate that the DI curricula that participants have engaged with the entire year have not succeeded in producing the desired growth.

MAZE Pretest and Posttest

The second assessment used to measure participants' reading comprehensions is the *AIMSweb Progress Monitoring (MAZE)*. As described in Chapter 3, the MAZE consists of a three-minute paper and pencil assessment. Participants read a story and every 7th word, are given a choice of three different words (placed in parenthesis) and must choose and circle the correct word that makes the most sense given the context of the sentence. The pretest benchmark MAZE assessment was given to all students in September of 2015. Reading coaches administered the test to participants in order to establish baseline reading comprehension levels for each participant. The scores for the Fall MAZE assessment are as follows:

Fall Benchmark *AIMSweb Progress Monitoring (MAZE)* scores:

Participant	Corrects	Errors	Accuracy
Participant 1	12	2	85.70%
Participant 2	4	3	57.10%
Participant 3	4	4	50%
Participant 4	22	5	81.48%
Participant 5	7	7	50%
Participant 6	18	4	81.20%
Participant 7	4	2	66.67%
Participant 8	2	7	22.22%
Participant 9	6	7	46.15%
Participant 10	7	8	46.67
Participant 11	2	2	50%
Participant 12	13	1	92.86%
Participant 13	11	2	84.62%
Participant 14	6	7	46.15%

The posttest benchmark *AIMSweb Progress Monitoring (MAZE)* assessment was given to all students in May of 2015. These results showed what reading comprehension growth students had achieved throughout the year. The scores for the Spring MAZE assessments are as follows

Spring Benchmark *AIMSweb Progress Monitoring (MAZE)* scores:

Participant	Corrects	Errors	Accuracy
Participant 1	9	2	81.80%
Participant 2	3	3	50.00%
Participant 3	8	6	57.10%
Participant 4	21	6	77.80%
Participant 5	16	3	84.21%
Participant 6	23	3	88.46%
Participant 7	7	2	77.78%
Participant 8	5	4	55.56%
Participant 9	10	8	55.56%
Participant 10	18	3	85.71%
Participant 11	4	1	80.00%
Participant 12	12	0	100.00%
Participant 13	28	3	90.32%
Participant 14	6	1	85.71%

Comparing the fall and spring testing, the overall growth or regression of each student can be calculated. The following data shows how participants increased or decreased the number of correct words selected, the number of errors, and their overall accuracy.

Comprehension Growth or Regression from Fall to Spring *AIMSweb Progress*
Monitoring (MAZE) scores:

Participant	Corrects +/-	Errors +/-	Accuracy +/-
Participant 1	-3	0	-3.90%
Participant 2	-1	0	-7.10%
Participant 3	+4	+2	+7.10%
Participant 4	-1	+1	-3.70%
Participant 5	+9	-4	+34.21%
Participant 6	+5	-1	+6.64%
Participant 7	+3	0	+11.11%
Participant 8	+3	-3	+33.34%
Participant 9	+4	+1	+9.41%
Participant 10	+11	-5	+39.04%
Participant 11	+2	-1	+30.00%
Participant 12	-1	0	+7.14%
Participant 13	+17	+1	+5.70%
Participant 14	0	-5	+39.56%

Looking at this comparison of the Fall and Spring scores, we see that nine out of the fourteen participants increased the number of correct word choices on the MAZE assessment. Moreover, ten out of the fourteen participants reduced or maintained the number of incorrect word choices. The accuracy for eleven of the participants increased as well. However, only one of the participants achieved the benchmark target of 27 correct word choices. The other thirteen participants fell below the average, with twelve of these participants scoring below the 25th percentile. It is also concerning that only half of the participants attempted more overall word choices on the Spring assessment than they did on the Fall. One would think that a Reading student's comprehension skills and

stamina would increase throughout the year, allowing them to attempt more of the assessment prompts.

The R-CBM and MAZE assessments seem to indicate that students are not demonstrating adequate growth in both reading fluency and comprehension. None of the students achieved benchmark standards for fluency, and only a single participant achieved an above average score for reading comprehension. With regard to the topic question, Direct Instruction curriculum does not seem to be achieving results for my Qatari students.

Student Interviews

Along with the assessments, I wanted to get a more personal appraisal of the DI curricula from the participants. I created a short answer questionnaire that students could respond to orally during a scheduled interview time. I was somewhat disappointed with the quality of many of the answers. Some of the students simply lacked the vocabulary or language skills necessary to communicate cogent or thoughtful ruminations on the curricula. Others seemed to have not critically considered DI in any capacity. I realized that many of these students had been attending DI reading classes for several years now, so perhaps they don't have any alternative with which to compare it. Despite my disappointment with the overall quality of the responses, I was able to glean some interesting insights from the interviews.

The first question sought out participant opinions of Direct Instruction curricula as an approach to instruction. I quickly discovered that few students understood that DI was a philosophy or approach to teaching. For many of them, it was simply how they'd always been taught. Many students simply answered by commenting on different

components of the curriculum: “I like when we read the stories” or “I don’t like reading the same story. I want to read a new story.” One participant did reply that they liked how organized the lessons were. I think they were referring to how uniform the daily lesson schedule and process can be with DI. Another student mentioned, “I’m confused by the signaling.” He went on to say that sometimes he didn’t know when to answer because the teacher would use inconsistent signals.

I asked the participants if they enjoyed the stories that make up the daily lessons. One student replied, “Some of them. The ‘Con Man’ stories. They are funny and interesting. It’s funny how he robs people. How he tricks them.” One participant replied that they enjoyed a series of stories set in outer space because “I’ve never heard of spaceships.” Another participant liked the creativity of the stories. I found it interesting that while all of the participants have access to any number of video games, TV shows and movies with far more “whiz-bang” qualities, they genuinely enjoyed the more subdued storylines found in the program.

I went on to ask the students how they felt about taking the R-CBM and MAZE assessments. Many said they enjoyed taking the tests because the teachers often gave them positive feedback and praised their progress. One participant said, “If I get a high score, I feel proud.” None of the students realized that their scores on these assessments were below average. This is due large in part to the fact that teachers rarely if ever reveal to the students that their scores fall below achievement norms. Very few students have any realization that their English reading skills lag behind their native-speaking peers. This is mainly attributed to the fact that there are few fluent English speakers enrolled at

the school. Participants simply have no other peer standard by which to base their own English proficiency.

I asked participants about the difficulty of the workbook and textbook questions that accompany each Reading lesson. Most students expressed that they thought the questions were easy. One student said, “If you concentrate, it’s easy. If not, or you’re behind, it’s medium hard.” Another student answered, “For me, the book that we’re doing right now, the first 20 lessons were easy, but they’ve started to get more complicated.” Some of the students expressed that questions that required them to access info from past stories or informational texts was harder because they had to go back and reread the content to get the correct answer.

When asked to evaluate their current, particular Reading group, most students focused on the teacher or the other students in the class. One participant expressed, “The teacher is nice. She’s from Wisconsin- she’s a good person.” One student said his classmates annoyed him: “Other students bother me. I feel like I’m surrounded by idiots. The other students are naughty and they fight.” Another participant replied, “I don’t like getting in trouble with the teacher. I don’t like getting referred to the office.”

I asked students what they would change about Reading groups. A general theme that emerged was that students thought the lessons were too long and that it took too long to move through the program. A common frustration for many students, including students outside of this study, is that they often do not progress to the next level quickly. One participant expressed frustration that units of measurement like miles, feet, and pounds were used in the stories because they were too hard to understand.

Finally, I asked the students if they felt they were becoming better readers using the DI programs. Almost all of them replied with an emphatic, “Yes!” Despite my frustration with DI, this was a good reminder for me that students were gaining confidence using the program and felt they were improving. I also sensed that students appreciated the structure of the program. They come in each day knowing what to expect and what was expected from them as students.

Conclusion

Based on the R-CBM and MAZE assessment results, it would seem my Qatari participants are not making adequate progress on reading fluency and comprehension. Every participant failed to achieve an average words correct per minute score and none achieved their benchmark targets generated by AIMSweb. Likewise, only one participant achieved an above average score on the MAZE test, while most of the students scored somewhere below the 25th percentile. *“What effect does Direct Instruction reading curriculum have on improving the reading fluency of Arabic speaking, English language learner middle school students?”* Based on the data, DI’s effect seems to be rather lacking. Despite students general positivity towards the DI curricula based on the interviews, students are not making the gains one would expect to achieve from such a intensive, direct approach to teaching.

The concluding Chapter 5 will present a summary of the processes, findings, and reflections of my capstone which set out to consider the topic question: *“What effect does Direct Instruction reading curriculum have on improving the reading fluency of Arabic speaking, English language learner middle school students?”*

CHAPTER FIVE: CONCLUSIONS

This chapter presents a summary of the processes and findings of my capstone which set out to consider the topic question: “*What effect does Direct Instruction reading curriculum have on improving the reading fluency of Arabic speaking, English language learner middle school students?*” This chapter is broken into five sections. First, I reflect on the process of writing the capstone. Second, I reflect on the process of researching my topic. Third, I reexamine the literature review and compare findings. Fourth, I consider the implications and limitations of the study, as well as offer suggestions for further research. Finally, I offer a brief summary of the chapter.

The Writing Process

This capstone has occupied space in my daily thoughts for the last year and a half. Starting in February of 2014 with the capstone precursor class, *Research Methodology*, not a day has passed without me either pondering, agonizing over, or feverishly working on some aspect of the paper. During *Research Methodology*, I studied the ins-and-outs of action research. I learned the particulars of how to research in the classroom setting in accordance to both school and academic guidelines. The class also taught me how to produce pure academic writing, which was particularly helpful for my literature review. The class professor, Andreas Schramm, proved indispensable in helping me narrow down my topic question and providing feedback on how to shape my methodology. I produced

a rough draft of the first three chapters during this time. Schramm was helpful and encouraging, offering good advice on how to expand and improve each chapter.

In the Fall of 2015, Laura Halldin came on board as my advisor. My capstone was a bit adrift at the time due to an advisor change, and she very much helped to right the ship. Halldin's "Capstone Workbook" guide was an invaluable resource that I turned to time and time again for guidance. Laura was helpful in guiding me through the Human Subject Committee (HSC) process and more than once talked me off the ledge when I felt I was taking two steps backwards for every step forward. Laura also encouraged me to make the capstone more personal, to inject my own voice and experiences wherever possible. At first, this seemed out of place for an academic paper, but reading over my capstone, I see how much value and authenticity it provides.

My secondary advisor, Amy Hewett-Olatunde, provided exceptional feedback on my chapters, allowing me to fill in gaps in my research. She also challenged me to more fully develop and clarify sections of the paper that I never would have considered on my own. Furthermore, Amy's eye for APA assisted me in producing a paper that was aligned with academic-writing standards.

My peer reviewer, Emily Canfield, has been my coworker and close friend for three years. We both moved to Qatar in the fall of 2012 and have worked on the same team since day one. Much of this capstone was born from our numerous discussions about Direct Instruction (DI), EL students, and experiences teaching these programs and unique students.

The Research Process

As I researched Direct Instruction for this capstone, I was pleasantly surprised that there was quite a bit of writing and research on the subject. I often felt overwhelmed by the sheer volume of information, but I believe I was able to adroitly sift through the numerous papers and books to form a cogent and thorough literature review. It was helpful that as I was reading all this research and opinion, I was in the thick of teaching Direct Instruction Reading and Writing classes. I was constantly comparing my experiences to what other authors and researchers were finding.

Overall, I found the whole research process extremely enjoyable. Locating articles and papers that directly addressed aspects of my topic reinforced my decision to write about DI. I felt part of a larger community that was interested in similar education related subjects. Despite being frustrated with the HSC process at times, it was fulfilling to produce and check off each requirement to gain the committee's approval. It was quite satisfying to know that I had put together a thorough proposal. I learned through this process how to properly dot every "I" and cross every "t". I believe this experience will help me down the road should I pursue more education. The best part of the research process however was being part of a team. This whole project always felt like a collaborative effort.

This whole capstone would be for naught if it weren't for the students I teach on a daily basis. Regardless of whether others or myself believe DI or the literacy assessments used for the study are the best approach, the students always put forth a stellar effort. I found that action-research could be incredibly rewarding because I was working right along with my participants every school day. Their efforts helped to inform my research,

and in turn, hopefully my findings can help influence curricula decisions that will affect their future academic experience in the classroom.

The Literature Review Revisited

Rereading my literature review, I see that much of the literature approaches Direct Instruction from two different tracks. The first approach is mostly a data analysis. The meta-analyses of Direct Instruction that found the programs to be highly effective (Adams & Engelmann, 1996; Borman, Hewes, Overman, & Brown, 2003; Hattie, 2009) stand in stark contrast to my own findings showing the DI reading curricula to be mostly ineffective in improving fluency and comprehension. Similarly, my data is at odds with studies showing the DI curriculum, *Reading Mastery*, to be particularly effective in improving reading achievement (Carlson & Francis, 2002; Kamps et al., 2003).

The most significant research pertaining to my own is the study by Shippen, Houchins, Steventon, and Sartor (2005). The authors specifically considered middle-school participants using the *Corrective Reading* DI curricula. Their research showed that DI helped students make significant gains in the areas of reading efficiency, reading rate, reading accuracy, and reading fluency. Their results are almost directly opposed to my own findings. Likewise, the research conducted by Gunn, Biglan, Smolowski, and Ary (2000) with EL students using *Reading Mastery* and *Corrective Reading* curricula found that DI was effective in significantly raising fluency and comprehension assessment scores. Again, my own research produced a much different finding.

My findings share similarities with the research of Summerell and Brannigan(1977) and Traweek and Berninger (1997) which demonstrated DI showed no advantage over control groups in improving reading fluency.

The other track by which researchers evaluate the efficacy of DI is by its accessibility to ELs. Villegas, (1991) argued that students who cannot identify with the societal or cultural norms presented in the materials might struggle to be successful. Likewise, Ryder, Burton, and Silberg (2006) noticed that teachers “augmented the DI materials through the use of stories that were culturally relevant to the students to allow students to engage their knowledge of story structures and provide a more enjoyable reading selection” (pg. 190). These sentiments align with my own findings and experiences. During the participant interviews, one student specifically stated that American units of measurement confused him. Also, myself and other teachers consistently scaffold lessons and explain aspects of American culture and western societal norms in order to make the stories accessible for some Qatari students. These extra explanatory efforts are not part of the DI curriculum and thus throw off pacing and schedule expectations. As I expounded upon in Chapter 3, teachers can be confused or hesitant regarding “going off script” given that fidelity to the lesson scripts are encouraged and monitored by reading coaches and administrators.

In sum, my data focused research does not comply with much of the research found in the literature review. My data shows far less effectiveness for DI in helping students achieve fluency and comprehension gains. My research and personal experience teaching DI is aligned however with research showing that EL students struggle to access the lessons given the cultural and societal assumptions inherent to the Direct Instruction curricula.

Implications, Limitations, and Future Study

What then are the implications of my research for both the participants and the student body? Based on the mostly below-average assessment scores, DI is not an effective tool for the students. I would encourage administration to consider a different approach to reading instruction. The assumption that “DI works” must be reconsidered and reevaluated based on student performance. Many students at my school have been taking these same DI Reading classes for several years. If DI is the best practice as some claim, an increased number of grade-level proficiencies would be expected. At the very least, a class using an alternative Reading program could be formed and student achievement in this class could be compared to that of the DI classes.

There are limitations to my research. First, my participant pool was only comprised of fourteen students. This small group could be expanded to include all students at my school engaged in DI Reading. Second, my participant results were not compared to a control group. The reading achievements of a control group comprised of Qatari, native-Arabic speaking middle-school students would be helpful in determining whether an alternative approach to DI could be successful. Third, I was not able to ensure that all teachers who taught the participants involved in my study were employing the highest possible fidelity standards when teaching *Reading Mastery* or *Corrective Reading*. I’m fairly confident that fidelity was enforced given routine checks by Reading coaches, however I cannot know for sure.

I recommend that further literacy studies be conducted involving EL, Arabic speakers in Qatar. Given the rapid expansion of education services in this country, more comprehensive research into what types of Reading instruction work best for these

unique students should take place. Likewise, Reading curriculum, DI or otherwise, should be developed with the proper cultural and societal sensitivities necessary for students of the region. If Qatar is going to become a world-leader in education, it must begin to develop English and Reading curriculum specifically designed for its own population.

I plan to communicate the results of my findings to my Literacy committee team members and make this capstone available to both school administrators and teachers should they request a copy. I've also informed research participants on how they can access my capstone online via the Bush Library webpage.

Conclusion

For nearly a year and a half, one question has driven my research: "*What effect does Direct Instruction reading curriculum have on improving the reading fluency of Arabic speaking, English language learner middle school students?*" Based on my findings, DI has not proven to be an effective approach for achieving grade-level Reading standards for Qatari, ELs. My findings, however, do not comply with much of the data-based research showing DI to be an effective model. Some research regarding EL accessibility of DI curricula is congruent with my own findings and experiences. I recommend that further research take place in Qatar and surrounding Middle-East region to determine what Reading programs and methods are best suited for EL, native-Arabic speaking students.

APPENDIX A

Parental Consent Letter

March, 7, 2015

Dear Parent or Guardian:

My name is Jared Lorence and I teach 6th grade at [REDACTED]. I'm currently a graduate student completing my Master's of Education at Hamline University, a university in the United States. As part of my graduate work, I plan to analyze student Reading assessment scores of [REDACTED] middle-school students obtained from September 7, 2014 – April 30, 2015. The purpose of this letter is to ask your permission for your child to take part in my research. This research is public scholarship and the abstract and final product will be catalogued in the Hamline University's **Bush Library Digital Commons**. This is a searchable, electronic repository and my research may be published or used in other ways.

As you're aware, we use a number of Direct Instruction Reading programs at our school. My research seeks to determine how effective these programs are for strengthening the reading fluency and reading comprehension of our middle school population. I'll be using the scores from the progress-monitoring AIMSweb assessments that our students take on a weekly basis to determine if these programs are helping students improve their reading. Student participation will not require them to engage in any instruction or assessments outside of their typical school day. They also may be selected to offer feedback or opinions during a brief interview regarding the Direct Instruction programs.

There are no risks involved for your student and hopefully [REDACTED] [REDACTED] Reading instruction will benefit with this examination of the effectiveness of our Reading programs. All results will be confidential and anonymous. Participants will not be named in the paper, nor will I report identifying information or characteristics in the final product. Participation is voluntary and you may decide at any time and without

negative consequence that information about your child will not be included in the research.

I have received approval from the School of Education at Hamline University and from the Head of Curriculum of [REDACTED]. This research is public scholarship and the abstract and final product will be catalogued in the Hamline University's **Bush Library Digital Commons**. This is a searchable, electronic repository. My results might also be included in an article for publication in a professional journal or in a report at a professional conference. In all cases, your child's identity and participation in this study will be confidential.

If you agree that your child may participate, keep this page. Fill out the duplicate agreement to participate on page four and return to me no later than April 22, 2015. Please feel free to contact me with any questions or concerns regarding the research at [REDACTED] or [REDACTED].

Thank you,



Jared Lorence
[REDACTED]

APPENDIX B

AIMSweb Reading-Curriculum Based Measurement (R-CBM)

Albert was a goldfish in a bowl. He ate a breakfast of green and brown flakes each morning. Then he watched the children go off to school.

Albert hated being stuck in his bowl because he could only swim around in circles. He'd rather go to school. Poor Albert couldn't even read a book. The pages would get soaked!

Albert was quite a smart fish. He could do flips under water. He could spell his name in the pebbles on the bottom of his bowl. No matter how brilliant Albert was though, he still had a problem. Only the cat spoke to him. And the cat was not particularly nice to him.

"I'll eat you up one day," the cat would tell Albert when they were all alone in the house. "I'll gobble you right up. You will be surprised to discover that no one will miss you."

It seemed to Albert that everyone loved the cat. No one seemed to notice the cat was mean. No one seemed to care that the cat hated books and wasn't smart. The cat couldn't even spell his own name, but the children played with him every day.

One day the cat dipped his paw in Albert's fishbowl. To save himself, Albert swam to the very bottom of his fishbowl. He hid behind some rocks. When the children came home from school that day, they saw the cat was wet. They didn't see Albert hiding behind the rocks in the bottom of his fishbowl, and that scared them.

"You are a very naughty cat!" they shouted.

Finally one of the children found Albert hiding in the bottom of the bowl. "I found him! I found our wonderful fish!" Albert felt happy that his family loved him after all.

Now the cat gets locked in the basement every day, and the children read books to Albert every night.

APPENDIX C

AIMSweb Progress Monitoring (MAZE)

Cam was a clam. He lived in the shallow waters **(one, for, of)** the sea with his parents. Cam **(all, had, was)** many friends. He had fresh, clear **(bottom, next, water)**. He had a nice hard shell. **(Thing, Take, Still)**, he was not happy. Cam was **(sad, what, cry)** because he did not like **(him, out, his)** shell.

"All clams have shells like **(lived, yours, shiny)**," Cam's mother told him. "All clams **(happy, know, love)** their shells. If you didn't have **(an, a, of)** shell on your shoulders, what would **(his, was, you)** have? Now, please eat your supper."

(Cam, Soda, Now) ate his supper, even though he **(know, wasn't, were)** hungry. He kept thinking about where **(top, him, he)** would live if he didn't have **(his, when, he)** shell. He might be able to **(went, home, live)** in a shoe or maybe a **(front, happy, pretty)** glass bottle.

One day Cam was **(shrank, maybe, lying)** on the bottom of the bay **(when, for, she)** something shiny and silver sank to **(what, the, an)** bottom next to him. It was **(saw, an, the)** most beautiful thing Cam had ever **(shoe, seen, now)**. Cam didn't know it was only **(an, a, at)** soda can someone had dropped into **(the, back, an)** water. Cam slipped out of his **(supper, glass, boring)** gray shell and into the soda **(who, can, kept)**.

Now Cam was content. When he **(your, gone, went)** home for dinner, his mother didn't **(thinking, swimming, recognize)** him. When she realized the clam **(dropped, peeking, silver)** out of the top of the **(soda, shell, cute)** can was her son, she laughed. **(Only, Cam, Him)** shrank back into his new shell.

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