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AN EVALUATION OF AN I-READY MATH PROGRAM FOR 5TH GRADERS IN ONE SCHOOL DISTRICT

Tashanda Brown-Cannon

Educational Leadership Doctoral Program

Submitted in partial fulfillment

of the requirements of

Doctor of Education

in the Foster G. McGaw Graduate School

National College of Education

National Louis University

April 2019

A DISSERTATION:

AN EVALUATION OF AN I-READY MATH PROGRAM FOR 5TH GRADERS IN ONE SCHOOL DISTRICT

Tashanda Brown-Cannon

Educational Leadership Doctoral Program

Approved:

Chair, Dissertation Committee

Member, Dissertation Committee

Dean's Representative

Dean, National College of Education

12-5-18

Date Approved

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This document was created for the dissertation requirement of the National Louis University (NLU) Educational Leadership (EDL) Doctoral Program. The National Louis Educational Leadership EdD is a professional practice degree program (Shulman et al., 2006).

For the dissertation requirement, doctoral candidates are required to plan, research, and implement a major project within their school or district that relates to professional practice. The three foci of the project are:

- Program Evaluation
- Change Leadership
- Policy Advocacy

For the **Program Evaluation** focus, candidates are required to identify and evaluate a program or practice within their school or district. The "program" can be a current initiative; a grant project; a common practice; or a movement. Focused on utilization, the evaluation can be formative, summative, or developmental (Patton, 2008). The candidate must demonstrate how the evaluation directly relates to student learning.

In the **Change Leadership** focus, candidates develop a plan that considers organizational possibilities for renewal. The plan for organizational change may be at the building or district level. It must be related to an area in need of improvement, and have a clear target in mind. The candidate must be able to identify noticeable and feasible differences that should exist as a result of the change plan (Wagner et al., 2006).

In the **Policy Advocacy** focus, candidates develop and advocate for a policy at the local, state or national level using reflective practice and research as a means for supporting and promoting reforms in education. Policy advocacy dissertations use critical theory to address moral and ethical issues of policy formation and administrative decision making (i.e., what ought to be). The purpose is to develop reflective, humane and social critics, moral leaders, and competent professionals, guided by a critical practical rational model (Browder, 1995).

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ABSTRACT

This study evaluated the impact of i-Ready Math instruction on 5th grade students identified as performing below grade level in mathematics. The participants in this study, administrators and teachers from three Title I schools, answered survey and interview questions to provide their perception on the program's effectiveness. Equally important, I analyzed student assessment data and online program usage data to ascertain the program's impact on student achievement. The results of this study revealed a lack of fidelity of implementation of the i-Ready Math program. Based on these findings, I proposed an extension to the teacher contract and a revision to the Professional Staff Orientation and Training policy to provide teachers with high-quality professional development opportunities.

PREFACE

The academic performance of students attending Title I schools has gained national attention within the last 20 years. This is because of an educational accountability system that holds school districts accountable for appropriately utilizing funding to provide students from poverty with resources aimed at increasing proficiency and narrowing the achievement gap. The basis of this project was to evaluate the effectiveness of i-Ready Math instruction when used as an intervention for students who were previously identified as performing below grade level on the Florida Standards Mathematics Assessment.

As a turnaround leader in a large urban district, I am charged with supporting and supervising school-based administrators of historically low-performing schools. My responsibilities include conducting instructional rounds with school-based leadership teams, analyzing formative and summative assessment data, and providing centralized coaching support to help school-based administrators develop and sustain systems and structures to improve student outcomes. In 100% of the schools I support, standardized assessment data indicated the majority of students are minimally one grade-level-below in reading and mathematics.

I researched the impact of the i-Ready Math intervention program by interviewing administrators and teachers to understand their perspective of the program. Equally important, I analyzed student usage time, lessons passed, student adaptive diagnostic assessment, and Florida Standards Assessment data to determine if students improved their math performance. This project is important to educators, parents, and students because it provided insight on the effectiveness of i-Ready Math instruction on Grade 5

students who were below-grade-level in mathematics. In addition, I was able to identify barriers to the fidelity of program implementation and recommended a revision of Policy GCH Professional Staff Orientation and Training. Simultaneously, if students receive quality Tier 1 instruction and prescriptive interventions, student outcomes will significantly improve and the achievement gap will be reduced at a faster pace.

On my journey throughout this project, I learned the importance of involving school-based leaders and teachers during the planning phase of a curriculum initiative. In addition, I learned the importance of providing administrators and teachers with sufficient professional development to ensure fidelity of program implementation. Teachers improve student achievement–not programs. Teachers and administrators need time to obtain the background, skills, and strategies necessary to implement an intervention program effectively.

As a result of this project, I have grown as an instructional leader. I have learned to listen more and ask better reflective questions that involve school-based leaders and faculty in the problem-solving and decision-making processes. Administrators and teachers have valuable information to share pertaining to their professional development needs, curriculum initiatives, and barriers to learning in the classroom. As I continue on my professional journey, I will continue to increase collaboration with school-based leaders and teachers to provide students with a quality education in a nurturing environment.

ACKNOWLEDGEMENTS

First, giving honor to my Lord and Savior Jesus Christ for without him this would not have been possible. I am thankful that "He who began a good work will carry it on to completion until the day of Christ Jesus" (Philippians 1:6 New International Version). I would like to express my sincere appreciation and gratitude to Dr. Burg, Dr. Schott, and Dr. Buckman for their continuous support on my doctoral journey. In addition, I would like to thank my cohort TA005 members for making learning memorable and exciting. I cherish the weekends we spent together and value our online dialogue. I have learned something from each of you and wish you the best in the future.

In memory of Dr. Elinor Vivian Wall Ellis and my professors from Florida Agricultural & Mechanical University, it is because of each you that I aspired to obtain a doctoral degree in education. You epitomize excellence with caring! You taught me to dream and achieve at a higher level.

Finally, I want to express my love and gratitude to my family: my husband, daughter, son, mother, father, sister, brother, grandparents, aunts, uncles, nieces, nephews, cousins, godmother, and friends. Thank you for your words of encouragement and support. I am who I am because of your love, prayers, and spiritual guidance.

DEDICATION

Dedicated to my family, my phenomenal supporting cast!

My Father, Pastor Larry C. Brown and Mother, Dr. Barbara L. Brown: A mighty man and woman of God who have always encouraged me to accomplish my dreams with Christ.

My Grandparents, Johnnie Mae Evans "Mamae" and Annie Mae Brown: For your love and words of wisdom.

My Aunt Deborah, my friend: Who bought me my first chalkboard and cultivated my love for teaching.

My Aunt Renee: Thank you for continuously lifting me up in prayer.

My Brother, Larry Jr. (Honeyman), my first student: It is because of you that I passionately strive to provide all students with a quality education.

My Sister, Kimberly (KK): Thank you for being my friend and cheerleader.

My nieces and nephews: I love each of you.

My Cousins, Amanda and Theodore Jr. (TJ): Who have always pushed and encouraged me, without their support this would not have been possible.

My Husband Sean, Daughter Kia, and Son Lil' Sean (Handsome): Sean, thank you for allowing me to be me. You are the best husband and friend ever. Kia and Lil' Sean, thank you for your love and patience. You are the best children ever!

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CHAPTER ONE: INTRODUCTION

The Every Student Succeeds Act was passed by the United States Congress on December 15, 2015 and requires states to administer standardized assessments to measure the progress students are making toward state standards (Executive Office of the President, 2015). The Florida Standards Assessment (FSA) in Math requires that students demonstrate a conceptual understanding of math, recall basic math facts, apply procedural skills, and solve word problems utilizing effective mathematical practices.

According to the 2015-2016 FSA Mathematics achievement data, 42% of students that attended Jaguar Elementary School (pseudonym) performed at a satisfactory level or greater, 35% of students that attended Soar Elementary School (pseudonym) performed at a satisfactory level or greater, and 36% of students that attended Ocean Elementary School (pseudonym) performed at a satisfactory level or greater. As a result of this alarming data, principals were challenged with providing prescriptive interventions for students who were performing below grade level in mathematics. In response to this expectation, principals of the aforementioned schools selected i-Ready Math instruction to diagnose students' math deficiencies and provide targeted computerized lessons to increase students' understanding of math standards. I selected to evaluate the effectiveness of i-Ready Math instruction to understand how individual schools elected to implement the program and its impact on students performing below grade level in mathematics.

Purpose of the Evaluation

Curriculum Associates, an education company that develops i-Ready products, described i-Ready program as a "valid and reliable adaptive K-12 diagnostic,

individualized K-8 student online instruction and teacher led instruction in a single product" (Curriculum Associates, 2015a, p. 2). Students are administered the adaptive diagnostic assessment three times per year to progress monitor their performance. i-Ready Adaptive Diagnostic instrument measures student performance in four essential strands: numbers and operations, Algebra and algebraic thinking, measurement and data, and Geometry. Results from the adaptive diagnostic assessments are used to develop differentiated online tutorial lessons for students. Students receive 12-18 weeks of individualized online instruction after the administration of Diagnostic 1 and Diagnostic 2.

According to Curriculum Associates, "Each instructional module in i-Ready Instruction is structured with a tutorial that provides modeled and guided instruction, a practice activity that supports and reinforces student learning, and a quiz for independent practice and assessment" (Curriculum Associates, 2015a, p. 6). Administrators and classroom teachers need to ensure that students are completing a minimum of 45 minutes of online tutorial instruction per week. In an effort to monitor and manage instruction, teachers are encouraged to analyze student profile reports a minimum of once a week. Student profile reports identify students' strengths and weaknesses based on the diagnostic assessment and provide recommended resources (Curriculum Associates, 2015b).

Students performing below grade level in mathematics require intensive intervention to improve their math skills. Curriculum Associates claimed "i-Ready had strong correlations ranging from 0.78 to 0.84 across Grades 3-8 for English Language Arts and mathematics between the Spring Diagnostic and the 2014 New York State

Common Core Assessment" (Curriculum Associates, 2015c, p. 4). These data indicated i-Ready Adaptive Diagnostic Assessments accurately predicted future performance on the New York Common Core Assessment. By evaluating i-Ready Math instruction, I hoped to determine the extent to which the program achieved the intended goal of increasing student achievement of the lowest performing Grade 5 students in math who attended the three targeted schools in the Excellence Public School District (EPSD) (pseudonym). Furthermore, I elected to evaluate i-Ready Math instruction to enhance my knowledge of its adaptive diagnostic assessments and differentiated online modules. Equally important, I intended to explore predictability of i-Ready instruction of success on the FSA in Mathematics.

I chose to evaluate Grade 5 students attending the targeted Title I schools because of their previous Grade 4 FSA Mathematics scores, which indicated that more than 50% of students were below level. The purpose of this evaluation was to determine the effectiveness of the i-Ready Math program when utilized as an intervention with Grade 5 students who have been identified as performing below grade level on the FSA in mathematics. In addition, I evaluated the schools' fidelity of implementation to include the duration and timeframe in which students received prescriptive interventions. Equally important, I intended to determine if adaptive diagnostic assessments accurately depicted students' deficiencies in mathematics and to what extent the individualized online modules increased students' core math skills. As a result of conducting this summative program evaluation, my intent was to be able to determine if the principals should continue to invest in the program. Also, I hoped to determine the "overall merit and worth of the program" (Patton, 2008, p. 305).

Rationale for Selection

Two of the three targeted schools in my study were in their second year of implementation of i-Ready Math instruction. The Usage Report in Spring 2016 indicated that 6% of students enrolled in i-Ready Math instruction at Soar Elementary School (SES) utilized the program for 45 minutes each week within the last four weeks. The Usage Report for Ocean Elementary School (OES) was unavailable. Jaguar Elementary School (JES) implemented the program for the first time under the administration of the new principal during the 2016-2017 school year. The Usage Report revealed that administrators needed to ensure that teachers were implementing the program with fidelity. Also, administrators needed assistance in determining the merit of i-Ready Math instruction. My objective was to discover if the fidelity of implementation of the program improved student achievement levels based on district and programmatic assessments. My rationale for evaluating i-Ready Math instruction was to assess the fidelity of implementation and assist principals in ascertaining the effectiveness of the program.

As an executive area director (EAD) in the Education Turnaround Office (ETO) for Excellence County Public Schools (ECPS), I had the primary responsibility of providing coaching support to principals emphasizing strategies to narrow the achievement gap of students in poverty. The aforementioned data depicted that students in the targeted schools were performing significantly below grade level on the FSA in math. Students have not secured the basic math skills to be successful in elementary school. I aimed to assist principals in determining if i-Ready Math instruction appropriately diagnosed students' math deficiencies and provided effective prescriptive

interventions to increase students' math achievement levels. Moreover, it was my hope that my evaluation findings would help district and school administrators determine if the time allotted for students to utilize this computer-based intervention program and cost of the program yielded positive learning gains for students.

Lubienski (2007) commented, "Mathematics achievement is particularly important to our efforts to promote equity because it serves as a gatekeeper to high status occupations and can provide a powerful ladder of mobility for low-SES students" (p.3). In an effort to break the cycle of generational poverty, students attending Title I Schools must receive effective math instruction and interventions. In *Reframing the Achievement Gap,* Evans (2005) echoed, "Closing the gap is widely seen as important not just to our educational system but ultimately to our economy, our social stability, and our moral health as a nation" (p.1).

When educators level the playing field by ensuring that all students receive a quality education, simultaneously, they ensure that all students have a fair chance of being personally successful in school and careers while making significant contributions to society. The mission of the ECPS is "to lead our students to success with the support and involvement of families and the community" (citation omitted to preserve anonymity). Students must graduate high school with the skills, ability, and knowledge to be successful in the 21st century. Educators are morally and ethically responsible for providing students with resources and layers of support to achieve success in school and life. The impact of external barriers can be eradicated when the playing field is leveled by providing the neediest students with the appropriate tools necessary to achieve in school and ultimately life.

My program evaluation was significant to the educational community at large, district leaders, administrators, and teachers. According to the 2015 National Assessment of Educational Progress (NAEP), 60% of Grade 4 students and 67% of Grade 8 students were identified as performing below grade level expectations (The Nations Report Card, 2015). These alarming data supported the importance of researchers identifying effective math interventions for the educational community at large. The district gained insight to the value of the program. Specifically, executive leadership was able to determine if i-Ready Math instruction produced increased student achievement for students struggling in math. Administrators and teachers received student adaptive diagnostic data and progress monitoring data to assists them in identifying students' strengths and weaknesses. Data from the aforementioned assessment tools enabled teachers and administrators to monitor student progress toward math proficiency. Also, teachers deepened their understanding of how to utilize data to develop math lessons for differentiated instruction.

Description and Goals of the Evaluation

My goals for this program evaluation were to:

- ascertain if adaptive diagnostic assessments accurately measure students' math deficiencies,
- determine if online prescriptive instruction improves student performance on the district's benchmark assessment, and
- assess the worth of the investment in relationship to student learning gains.

As a result of conducting this study, I was able to determine the strengths and weaknesses of i-Ready Math instruction as an intervention. Also, I was able to conclude if i-Ready achieved its stated program outcomes.

My intended goals of this program evaluation directly related to student achievement. Referencing i-Ready Math instruction, Curriculum Associates (2015) commented, "It lays the foundation for sound instructional decision-making by: providing data to monitor growth, delivering an individualized online instruction plan for every student, and recommending next steps for classroom instruction as well as priorities for instructional grouping" (p. 3). As a result of conducting this evaluation, I gained an understanding of the extent to which engaging students in relevant and thematic online lessons for 45 minutes per week impacted their conceptual understanding of core math skills. According to Curriculum Associates (2015), "An analysis of i-Ready student data from the 2013-14 school year shows that students-including key populations that face greater risk of falling behind-who engage in i-Ready online instruction outpace average student growth" (p. 8). The 2013-14 data were based on national results. In this study, I attempted to replicate the aforementioned study by evaluating if i-Ready Math instruction improves the math performance of Grade 5 students struggling in math as indicated by the 2013-14 data.

Exploratory Questions

In an effort to provide principals with the necessary information to determine the impact of i-Ready Math instruction on students previously identified as performing below grade level in math, the primary exploratory questions below guided the program

evaluation. I administered surveys and conducted interviews in an effort to collect evidence needed to support each question.

- What do stakeholders (administrators and teachers) who utilize i-Ready Math perceive as working well?
- What do stakeholders (administrators and teachers) who utilize i-Ready Math instruction perceive as not working well?
- What do stakeholders (administrators and teachers) report as the biggest challenges with i-Ready Math instruction?
- What do stakeholders (administrators and teachers) suggest as ways to improve i-Ready Math instruction?

The secondary questions related to my program evaluation are identified below. These targeted subquestions were instrumental in determining the accuracy of adaptive diagnostic assessments and the effectiveness of i-Ready Math instruction on students that have historically performed below grade level in mathematics. I utilized i-Ready student diagnostic adaptive assessment data, FSA in mathematics data, and profile reports, which identify students' strengths and weaknesses, to provide evidence to answer the targeted questions:

- If the student achievement results of students who utilized the i-Ready Math program with fidelity do not increase, what do the participants perceive to be the contributing factors?
- How feasible do teachers and administrators think it is to implement i-Ready Math instruction with fidelity of implementation?

- What are the perceptions of administrators and teachers regarding how well reports from the i-Ready Math program inform instructional practices for differentiated instruction?

Conclusion

For the 2016-2017 school year, ECPS purchased the i-Ready Math program for elementary schools. Students in kindergarten through Grade 5 were administered math diagnostic assessments two times per year and received online differentiated instruction for a minimum of 45 minutes per week. Curriculum Associates, developer of the i-Ready program, claimed that students who utilized the i-Ready Math program with fidelity, experience an increase in student achievement data.

By evaluating the impact of the i-Ready Math program with Grade 5 students who have been identified as performing below grade level, I was able to provide ECPS with measurable data to validate or invalidate Curriculum Associates' claims. The school district cannot afford to implement new programs with the most academically at-risk students without making sure to continuously assess its implementation and results. This evaluation played an integral role in determining what resources the school district would need and use to increase math proficiency scores and narrow the achievement gap of students in Title I schools.

CHAPTER TWO: REVIEW OF LITERATURE

Introduction

Early intervention for students struggling in mathematics is essential to prevent future difficulties with more challenging math concepts for students during their secondary years. As students advance throughout their elementary years, the math achievement gaps widen if appropriate interventions are not administered. According to VanDerHeyden (n.d.), "Math is highly proceduralized and continually builds on previous knowledge for successful learning. Hence, early deficits have enduring and devastating effects on later learning" (p.1). Providing interventions for students who have been identified as underperforming has been a challenge for administrators. While a plethora of reading interventions exist, math interventions are limited. Administrators are tasked with finding math interventions that have a proven track record of accelerating student achievement levels. The components of an effective math intervention program should align with all tiers of the response-to-intervention (RTI) framework. Also, interventions should appropriately diagnose students' deficiencies, provide targeted scripted lessons aligned to students' needs, and evaluate student improvement based on progress monitoring data.

Although there are few studies that focus on the effectiveness of i-Ready instruction as a supplemental intervention, there are research articles that focus on effective components of a supplemental intervention. A review of the literature clarified the functions of RTI, adaptive diagnostic assessments, computer assisted instruction, and data-driven instruction as they pertain to increasing student achievement. As a result of this literature review, I was able to examine the functions of the various components of i-

Ready Math instruction to assist me as I explored the relationship between implementation of the program and student learning gains.

Response to Intervention

The RTI framework is an integral component of research-based interventions. Hanover Research (2015) commented that RTI begins with a universal screening to identify students who need remediation and embeds continuous progress monitoring to ascertain if students are responding to interventions. Similarly, California Department of Education (CDE) (2016) described RTI as a problem-solving process that utilizes universal screening, diagnostic assessments, targeted interventions, and frequent progress monitoring to increase student achievement.

CDE included the fundamental role of diagnostic assessments while Hanover Research emphasized universal screenings. Within the RTI framework, students received Tier 1 core instruction aligned to grade-level standards. Students that have been identified as performing below grade level receive Tier 2 supplemental interventions as determined by diagnostic assessments. In math, this may include small-group, differentiated instruction or computer-assisted instruction. Students who do not respond to interventions positively receive Tier 3 individualized interventions, which may include one-on-one direct instruction provided by an interventionist.

VanDerHeyden, Witt, and Gilbertson (2007) conducted an evaluation pertaining to the implementation of the RTI framework. Based upon their findings, they concluded that RTI reduced the number of students being referred for psychological evaluation for exceptional educational services. However, a study released by the National Center for Education Evaluation and Regional Assistance indicated that first grade students who

received Tier 2 interventions performed 11% lower than their counterparts on an assessment utilized by the federal Early Childhood Longitudinal Study (Sparks, 2015). Wixson, professor of education, commented that she was not alarmed by the results. She questioned the accuracy of the universal screening and the ability of Tier 2 interventions to focus on foundational and comprehensive skills to increase student achievement (Sparks, 2015). Buffman, Mattos, and Weber (2010) echoed that the RTI framework is not yielding positive achievement results because of educators implementing the framework out of compliance and for the primary purpose to increase standardized test scores and staff students for exceptional educational services.

Additional qualitative research is needed to gain an understanding of the negative attitudes of educators in regards to RTI. The literature indicated that the disparity of results is contingent upon the individual school's interpretation and implementation of the RTI framework. The i-Ready Math program models the RTI framework in that students are administered three adaptive diagnostic assessments to identify strengths and weaknesses followed by Tier 2 instructions based on diagnostic and progress monitoring data. For students that need Tier 3 interventions, teachers have the capability to use the i-Ready toolkit to provide one-on-one remediation lessons to students that align with online lessons.

Adaptive Diagnostic Assessments

Technology integration in K-12 education has led to the increase of adaptive diagnostic assessments. Although the National Association of Elementary School Principals (NAESP) (2011) recommended that students are administered a diagnostic assessment twice a year, i- Ready administers an adaptive diagnostic assessment three

times per year. According to Curriculum Associates (2015d), adaptive diagnostic assessments present students with a bank of questions to answers reliant on their responses to preceding questions. This method is more accurate than traditional baseline assessments. Also, Curriculum Associates (2015d) claimed that adaptive assessments reinforce differentiated instruction by providing valid and reliable data across grade levels. Specifically, questions are analyzed to identify students' strengths and weaknesses. According to Curriculum Associates (2015d), "Once a student fails an item, additional items assessing the relevant sub-skills are drawn to get to the root cause of getting the first question wrong" (p. 5).

As a result of his evaluation on computerized adaptive tests, Tony Thompson (2008) echoed that the accuracy of information presented by diagnostic data depends on the question bank, test setting, and length of the assessment. Thompson and Curriculum Associates similarly describe attributes of adaptive diagnostic assessments; however, they have differing beliefs on the manner in which adaptive diagnostic assessments identify student academic deficiencies and positively impact learning outcomes. Additional qualitative studies are needed to solicit the participation of students to determine if they feel that adaptive diagnostic assessments are identifying students' math ability appropriately.

Curriculum Associates partnered with Educational Research Institute of America (ERIA) to conduct a study to examine the validity of i-Ready diagnostic as an assessment tool to measure students' progress toward mastering the Florida Standards in English Language Arts (ELA) and Mathematics (Educational Research Institute of America, 2016). The findings of the study indicated that i-Ready diagnostic scores correlated with

FSA Mathematic scores and accurately predict student performance on the FSA in ELA and mathematics (Educational Research Institute of America, 2016). Similarly, I researched the accuracy of i-Ready adaptive diagnostic assessments and the impact of online tutorial lessons on students who need to improve their math achievement levels.

Computer-Assisted Instruction

Jeffs, Evmenova, Warren, and Rider (2006) conducted action research on the use of computer assisted instruction (CAI) with Grade 1 students in the content area of reading. They referred to CAI as computerized tutorials, supplemental or simulation activities, designed to enhance explicit direct instruction. The purpose of the study was to determine if the reading ability levels of students would increase as a result of WordMaker, a computerized software program. The 10-week study revealed that CAI is effective for primary students and students performing below grade level. Also, the study indicated that students and teachers viewed immediate feedback received from the software program as beneficial.

Similarly, Cotton (1991) conducted an investigation on the impact of computers on student achievement levels and attitudes. His study revealed that supplemental software programs increased student achievement more significantly than traditional interventions alone. In addition, he found that CAI is more successful with younger students and students that have been identified as having a learning disability. An equally important finding by Cotton was that CAI results in positive student attitudes.

A study conducted by Brilz, Fridley, Just, and Stein (2014) examined the effects of i-Ready Mathematics intervention on student achievement for students in kindergarten and Grade 1. Based on a four-week implementation of i-Ready Mathematics, the study

concluded that i-Ready Mathematics intervention increased the achievement levels of primary students performing below and above grade levels. The three studies I have reviewed share common themes pertaining to the effectiveness of CAI on student achievement gains. CAI is relevant to my study because it is the primary method of providing students with targeted math lessons for the purpose of increasing student achievement.

Data-Driven Instruction

An increased emphasis on school and district grades has resulted in the expectation that educators utilize data to inform instructional decisions. School improvement efforts require principals and teachers to demonstrate a clear understanding of students' strengths and weaknesses and requires teachers to demonstrate the ability to utilize data to plan differentiated lessons to increase student achievement. Jacobson (2010) commented on the importance of grade-level professional learning communities analyzing formative assessment outcomes to improve curriculum, instruction, and assessments. Similarly, Mandinach (2010) recommended that teachers utilize multiple sources of data and modify instruction. However, Siedlecki (2012) remarked that the majority of educators lack training on how to analyze data and respond to students' individualized needs based on the data.

Similarly, the U.S. Department of Education (2011) echoed that teachers need to know how to create flexible groups, reteach lessons with alternate teaching strategies, and provide differentiated instruction. Without these key components, ineffective usage of data analysis will not yield increased student achievement results. Teachers and administrators demonstrating the ability to analyze diagnostic data to identify students'

area of improvement is essential to the implementation of i-Ready Math instruction. Teachers need to correctly interpret i-Ready data, adjust their instructional delivery in small groups based on the data, and monitor student progress toward math proficiency.

Definition of Terms

In an effort to ensure a common understanding of the educational concepts I am presenting, I have defined key terms below associated with the study. A shared understanding of these defined terms will prevent misconceptions associated with my study.

Response-to-Intervention. A problem-solving process that utilizes universal screening, diagnostic assessments, targeted interventions, and frequent progress monitoring to increase student achievement (CDE, 2016).

Adaptive Diagnostic Assessments. "…leverage advanced technology to provide a deep, customized evaluation of every student and to track student growth consistently and continuously over a student's entire K-12 career" (Curriculum Associates, 2016b, p. 1).

Computer Assisted Instruction. "…a narrower term and most often refers to drill and practice, tutorial, or simulation activities offered either by themselves or as supplements to traditional, teacher directed instruction" (Cotton, 1991, p. 2).

Conclusion

As a result of this literature review, I deepened my knowledge of the various components of i-Ready Math instruction. I am now better equipped to examine more effectively how RTI, adaptive diagnostic assessments, and CAI function cohesively within i-Ready Math instruction to impact student achievement. Key takeaways from the literature review included consideration for the age level of students that will be utilizing

i-Ready Math instruction, the reliability and validity of the adaptive diagnostic assessment, and the direct impact of CAI on student learning gains.

As I began conducting my program evaluation, I explored the various online assignments to determine if the assignments truly align to the diagnostic assessment data. Moreover, I was interested in exploring how teachers were utilizing student reports to differentiate instruction for students. Equally important, the literature review stimulated me to explore the attitudes of teachers regarding RTI and the effectiveness of Tier 2 supplemental interventions.

CHAPTER THREE: METHODOLOGY

Research Design Overview

In an effort to determine the effectiveness of i-Ready Math instruction, I collected and analyzed qualitative and quantitative data. Participants in the study consisted of principals, assistant principals, senior administrators, and Grade 5 math teachers serving in Title I schools. I analyzed i-Ready adaptive diagnostic data and formative assessment data for 165 students that scored below proficiency on Grade 4 FSA Mathematics to determine if i-Ready Math instruction improved their student achievement levels. Administrators and teachers completed a 15-minute survey and participated in one 30-minute interview.

The survey and interview questions focused on answering primary and secondary questions that revealed the participants' overall opinions regarding the program. Specifically, I utilized the results from the surveys and interviews to obtain information pertaining to the fidelity of implementation of the intervention program and to discuss the teachers' and administrators' perspectives of the effectiveness of progress monitoring data to evaluate students' progress toward proficiency. I asked teachers and administrators to describe the structures utilized at their schools to ensure fidelity of implementation.

Teachers were able to comment on if-those structures were beneficial to the implementation of the program. In addition, I provided teachers with the opportunity to discuss strategies they utilized to differentiate instruction based on progress monitoring data and i-Ready Math student individualized reports. Based on student formative assessment data, I asked all participants open-end questions to describe the value of i-

Ready Math instruction for students who scored below grade level on the 2016 FSA Mathematics.

Participants

I requested permission from the school district to conduct the study and seek volunteers to participate in the study who worked in Title I schools and served students identified as performing below grade level in Grade 5 mathematics. I provided participants with a written informed consent form via e-mail that explained the purpose of the study and requested their willing participation. I did not coerce participants to participate in the study.

I included three principals that were serving in their second year as principals at elementary Title I schools, two assistant principals, one senior administrator, three math coaches, one instructional dean, and nine teachers that were teaching Grade 5 mathematics to a heterogeneous class of students in the targeted schools. The total number of adult participants for this study was 19. Participants represented a diverse population raging from various years of experience in education. I selected persons to participate in this study based on being in schools with historically low math proficiency scores on state standardized assessments coupled with them being assigned to the ETO.

Data Gathering Techniques

Prior to conducting an evaluation, I requested approval from National Louis University IRRB. After receiving approval, I presented my evaluation proposal to the district's Research, Accountability, and Grants Department. After securing approval, I sought permission from the three targeted principals to evaluate the effectiveness of i-Ready Math instruction intervention program at their individual schools on Grade 5

students who-were previously identified as performing below grade level. I identified 62 students at SES, 42 students at JES, and 61 students at OES as performing below grade level based upon 2015-2016 FSA Math data. Following the approval of the principals, I solicited participation for interviews from individual teachers and administrators of students who were enrolled in the program. I facilitated one individual interview with participants during the duration of the program evaluation. The interview focused on the fidelity of implementation of i-Ready Math program, a review of the adaptive diagnostic assessment data, and student i-Ready assessment.

Also, I requested permission to retrieve the Fall 2016 Adaptive Diagnostic Assessment data, total number of online lessons completed, total number of online lessons passed, usage minutes for the school year, and 2017 FSA Mathematics data. I involved 165 students in the study. Based upon a mutual agreement with the district, I maintained access to the i-Ready database for the three targeted schools throughout the duration of this program evaluation. At the conclusion of the school year, I analyzed i-Ready Diagnostic 1 and 2 Mathematics data and the 2018 FSA Mathematics data for Grade 5 students to determine a correlation between the two assessment tools.

Surveys

During my initial meeting with participants, I requested they spend a maximum of 15 minutes to complete the survey. Participants chose to complete the survey at the meeting. At the conclusion of each meeting, I administered a survey to six administrators (Appendix B: Administrator Survey) and 13 instructional personnel (Appendix C: Teacher Survey) for the purpose of providing participants the opportunity to provide their perspectives on the effectiveness of the i-Ready Math program as an intervention for

students performing below grade level in math. Specifically, the survey focused on the participant's interpretation of the implementation of i-Ready, the alignment between Florida Standards and i-Ready online lessons, and student achievement results. As a result of administering the surveys, I gained a deeper understanding of the participants' implementation and experiences with the i-Ready Math program.

I administered the same survey to administrators and teachers for the purpose of comparing their experiences and perspectives of the i-Ready Math program. I designed Questions 1-3 to ascertain the participants' background information to include title, years of experience, and years of experience in their current role. I formulated Question 4 to determine the participants' views of the professional development they received. Survey Questions 5-11 afforded me the opportunity to gain insight to the participants' perceptions on various components of the program ranging from the reliability of the diagnostic assessments to the effectiveness of the online tutorial program. By comparing the administrative and teacher responses, I was able to identify aspects of the program where administrators and teachers shared the same views and where they differed in their opinions of the program. As a result, I was able to provide school-based administrators with strategies and recommendations to improve the implementation of the i-Ready Math program based on survey responses.

Individual Interviews

I interviewed six administrators and 13 teachers. I interviewed participants that agreed to be interviewed for the purpose of collecting qualitative data. Specifically, I conducted one face-to-face interview with each participant for up-to 10 minutes utilizing the attached questions for administrators (Appendix C: Administrator Interview Protocol)

and teachers (Appendix D: Teacher Interview Protocol). Prior to conducting any interviews, I explained to participants that I would be recording and transcribing their interview. Equally important, I discussed with participants the possibility of exchanging up-to five e-mails for the purpose of clarifying any data that I gathered during the interview. During the interview, I inquired about the participants' opinions and experiences pertaining to student achievement out comes and fidelity of implementation.

I designed the teacher and administrator interview protocol questions to correspond with one another. I chose to utilize this interview technique to measure teachers' perception of the quality of support they received relating to program in correlation with the level of support administrators perceived they provided to teachers. Administrator protocol Questions 4-6 focused on the various supports that administrators provided to teachers to ensure fidelity of implementation. Questions 4-5 of the teacher interview protocol focused on strategies that teachers utilized to successfully implement the program. I asked both groups to respond to questions that focused on the positive components of the program as well as areas needing improvement. Participants' responses directly aligned to my primary and secondary questions. I utilized the data to determine participant's areas of satisfaction, dissatisfaction, challenges, and suggestions for the purpose of developing revisions for program implementation.

Student Data

I requested permission from the school district's Accountability, Research, and Evaluation Department to retrieve Fall 2016 and Winter 2017 i-Ready Adaptive Diagnostic Assessment student data, Fall 2016 i-Ready school usage reports, and yearly student math lessons completed and passed. In addition, I requested 2015 FSA Math

scores for students to verify they scored below grade level in math during their Grade 4 school year. Data from 165 Grade 5 students from SES, JES, and OES were involved in the study. Based upon a mutual agreement, I maintained access to the i-Ready database for the three targeted schools throughout the duration of this program evaluation. At the conclusion of the school year, I analyzed i-Ready Diagnostic 1 and 2 Mathematics data to determine student growth points between the two assessments. Moreover, I compared students' FSA Math results from Spring 2016 and Spring 2017 to determine if students made learning gains in accordance with the FLDOE grading system.

Data Analysis Techniques

Surveys

I utilized cross tabulation, mean, and mode to report statistical data. After I received paper surveys, I separated them into two categories labeled administrative and instructional personnel. Next, I created an administrative survey and an instructional personnel survey in Survey Monkey for the purpose of calculating and analyzing quantitative data. I replicated the data into a frequency chart that identified the mode by calculating the frequency of responses and the percentage of respondents that responded with a strongly agree, agree, disagree, or strongly disagree. Also, I cross tabulated the survey responses of the administrators and the teachers to determine alignment of their experiences and attitudes toward the i-Ready program. I wrote a written narrative for each question summarizing my interpretation of the data accompanied by my takeaways and suggested next steps.

Interviews

I conducted up-to 10-minute face-to-face individual interviews with administrative and instructional personnel. In addition, I utilized an electronic devise to record the interviews. I hired a professional transcriber to listen to each interview and transcribe respondents' responses. I categorized the responses as administrative or instructional personnel. Next, I analyzed participants' responses and organized them by overarching themes. I provided a written summary and my takeaways for each theme. I compared and contrasted the perceptions of the two participant groups and identified trends. Equally important, I compared participants' survey responses with their interview responses and observed inconsistencies in their responses to similar questions.

Student Data

I created a spreadsheet and recorded students' initial and midpoint adaptive assessment scores. I recorded the number of lessons completed and lessons passed with students' overall time on-task. I calculated the percentage of students that improved their scores between Adaptive Diagnostic 1 and 2. I tabulated the data to determine if there was a relationship between lessons completed, lessons passed, and time on-task. At the conclusion of the study, I calculated the percentage of students that made learning gains on their FSA Math at each of the targeted schools.

Ethical Considerations

Prior to conducting the program evaluation, the participants received a written form of consent and the purpose of the evaluation. I e-mailed an informed consent to conduct research at the school sites of the three targeted principals (Appendix G) to evaluate the effectiveness of the i-Ready Math program on students who were previously

identified as performing below grade level. Then, I sent an e-mail to administrators and teachers requesting to meet with them during noninstructional hours to explain the purpose of my program evaluation and seek their informed consent (Appendix E) to participate in the study.

Specifically, I asked participants to complete the adult participant survey (Appendix E) and participate in an adult interview (Appendix F) for up-to 30 minutes. I explained to participants that their participation was solely voluntary, and they may withdraw from the study at any given time. At the participant's discretion, he or she had the option to sign and return a single copy of each of the documents that I provided in a sealed, stamped addressed envelope.

I explained to participants there was no potential harm expected in their participation in this study beyond everyday living. The potential benefits were that teachers and administrators received student adaptive diagnostic data and progress monitoring data that assisted in identifying students' strengths and weaknesses. Data from the aforementioned assessment tools enabled teachers and administrators to monitor student progress toward math proficiency. Also, participants deepened their understanding of how to utilize data to develop math lessons for differentiated instruction. The district gained research-based recommendations regarding the components of an effective math intervention program.

I made participants aware of unforeseen consequences that may affect how others perceive them as individuals or an organization. In an effort to prevent any unforeseen consequences, I utilized pseudonyms to represent administrators, teachers, and the district. Although I analyzed student data, minors were not involved in the study. In

addition, participants' responses were confidential and student data remained anonymous. I was the only person to view survey and interview responses. I maintained access to the survey data, which I kept in a locked cabinet at my home and or on a hard drive that is password protected for up-to five years after the completion of this study; at which time, I will shred all data.

I informed participants of their rights to request study findings and their personal records. Specifically, I communicated to participants that they may request information pertaining to the study during any phase. If participants requested to view their personal records, they were permitted to view their data in a secure location. Participants were not permitted to remove any data or documentation. At the conclusion of the study, I drafted a summary and posted it on a website for participants to view the study findings. I provided participants the option to contact me to obtain a copy of the final report.

Conclusion

The goal of my program evaluation was to determine the effectiveness of i-Ready Math instruction on Grade 5 students performing below grade level in math. The accurate and thorough analysis of qualitative and quantitative data played an integral role in my ability to draw accurate conclusions pertaining to the effectiveness and value of the program. The findings of the study were valuable to educators that serve academically at-risk students.

CHAPTER FOUR: RESULTS

Findings

In an effort to ensure that high school graduates are college-and-career-ready, the Florida State Board of Education adopted the Mathematics Florida Standards (MAFS) on February 18, 2014 (FLDOE, 2017a). In alignment with the new standards, the Florida Department of Education (FLDOE) developed the Florida Standards Assessment (FSA) to measure students' proficiency levels on standards. The FLDOE commented, "Assessment supports instruction and student learning, and test results help Florida's educational leadership and stakeholders determine whether the goals of the educational system are being met" (2017a, p. 1). Student achievement increases as a result of students receiving instruction aligned to the rigor of the Florida Standards consistently.

Since fully implementing the Florida Standards and administering the FSA during the 2014-2015 school year, math proficiency percentage points have declined. In 2014, 40% of students at JES performed on grade level as measured by FCAT 2.0. Forty-Seven percent of students at SES performed on grade level, and 39% of students at OES performed on grade as measured by FCAT 2.0.

However, according to the 2015 FSA Math results, 33% of students at JES performed at satisfactory level, 36% of students at SES performed at satisfactory level, and 26% of students at OES performed at satisfactory level. Comparably in 2016, JES students declined on FSA Mathematics by nine percentage points, SES declined by one percentage point, and OES increased by 10 percentage points. The data revealed teachers lack an in-depth understanding of the Florida Standards and the essential instructional shifts to deliver rigorous standards-based instruction. Also, the data indicated students

were not receiving prescriptive interventions to eliminate their deficiencies in mathematics consistently.

The timeline between when the standards were adopted, February 2014, and when teachers were required to fully implement the standards, August 2014, did not afford administrators a sufficient amount of time to provide professional development opportunities to teachers. Teachers were either required to participate in the train-the-trainer model during the spring or receive professional development during preplanning. Similarly, teachers received an overview of the i-Ready Mathematics program during preplanning, which resulted in a limited understanding of the program and a lack of fidelity of implementation.

The organizational change that I am proposing based on my program evaluation is to change the teacher contract to provide additional time by offering teachers extensive professional development on how to implement the i-Ready Mathematics program effectively and expand their knowledge on the Florida Mathematics Standards. Currently, 10-month instructional employees receive five days of preplanning and an average daily planning time of 60 minutes. I envision extending the instructional employee contract from 10 months to 11 months. By increasing preplanning from five days to 15 days and providing teachers with one day each month for professional development beyond the school day, teachers will begin to implement the i-Ready Mathematics program with fidelity and deepen their understanding of the critical components of the program. Equally important, teachers will expand their knowledge of the Florida Mathematics Standards, increase their understanding of how to analyze data to inform their instructional decisions, and enhance their ability to facilitate differentiated

small-group instruction. As a result of extending preplanning, teachers will become confident in their ability to educate students from poverty as opposed to thinking that students are low and incapable of achieving at high-academic levels.

The purpose of this Change Leadership Plan (CLP) is to equip teachers with knowledge, skills, and strategies to narrow the mathematics achievement gap between minority students and their counterparts in the 21st century. Based on 2016 FSA Mathematics data, teachers lacked the skills to deliver standards-based instruction and provide students with prescriptive interventions to narrow the achievement gap. The recent data of the targeted three schools revealed that more than 50% of students performed below grade level. According to Wagner et al. (2006), "Alvarado and Fink emphasized that the culture of the district had to connect adults' learning explicitly to the improvement of instruction and to students' learning" (p. 114). Marzano (2010) echoed that there is a direct correlation between teacher effectiveness and student achievement scores. Student achievement data is indicative of teachers' understanding of the Florida Standards and effective pedagogical practices.

I foresee extending the instructional contract of teachers for the purpose of providing intensive professional development on Mathematics Florida Standards. Also, teachers will be trained on effective pedagogical strategies to meet the needs of students. According to Knapp (as cited by Generational Ready, 2013), "Ongoing intensive professional development that focuses on supporting teachers' planning and instruction has a greater chance of influencing teaching practice and in turn, raising student achievement" (p. 3).

As a result of participating in the aforementioned professional development opportunities, teachers will deepen their understanding of the standards. Also, they will enhance their instructional delivery by increasing their knowledge of the instructional shifts and best practices in teaching and learning. An in-depth knowledge of the Florida Standards and research-based teaching strategies will yield positive results in student proficiency scores.

The purpose of my program evaluation was to determine the impact of the i-Ready Math intervention program on Grade 5 students who are identified as performing below grade level in math. I created an eight question Likert survey to gain insight of the teachers and administrators that were responsible for ensuring that Grade 5 grade students received prescriptive math interventions. In addition, I developed an administrative and instructional interview protocol to provide teachers and administrators the opportunity to share their experiences with the implementation of the i-Ready Math program by answering open-ended questions. I gathered survey data from six administrators and 13 instructional personnel. Also, I conducted six interviews with administrators and 11 interviews with instructional personnel. Through this process, participants provided me with their personal accounts of the implementation of i-Ready Math program.

I utilized my findings to provide EPSD with recommendations for future usage of the i-Ready Math program. Specifically, the focus of my findings addressed the program implementation and worth. According to Patton (2008), the implementation focus evaluation questions are:

- "To what extent was the program implemented as designed?

- What issues surfaced during the implementation that need attention in the future" (p.303)?

Moreover, the findings assisted the district in ascertaining if the program produced a positive return of investment. This informational was vital because of this being ECPS' first year of district-wide implementation of the i-Ready Math program in elementary schools.

Surveys

I administered 19 paper Likert scale surveys (Appendix B) to 19 Grade 5 instructional personnel and administrators to gain insight on their perceptions of the effectiveness of the i-Ready Math program on students performing below grade level in mathematics. I submitted the survey to a total of six administrators and 13 instructional personnel. I asked participants to respond to eight statements indicating if they strongly agreed, agreed, disagreed, or strongly disagreed to statements pertaining to the i-Ready Math program. The survey was completed by six-out-of-six administrators for a response rate of 100%.

In response to administrative survey Question 1, which asked participants to identify their title, responses were comprised of the following positions: three principals, two assistant principals, and one senior administrator. In response to survey Question 2, which asked administrators their years of experience in education, responses ranged from 12 years-20 years. In response to survey Question 3, which asked administrators their years of experience in their current role, responses ranged from six months-to-three years. In response to instructional survey Question 1, which asked participants to identify their title, positions consisted of seven classroom teachers, three math coaches, one

administrative dean, and two district math coaches. In response to survey Question 2, which asked instructional personnel their years of experience in education, responses ranged from one year-to-20 years. In response to Question 3, which asked instructional personnel their years of experience in their current role, responses ranged from seven months-to-15 years. One-Hundred percent of administrators and instructional personnel completed and submitted the survey. This information provided me an opportunity to obtain a deeper understanding of their attitudes toward the impact of i-Ready Math on students who performed below grade level in math.

In response to survey Statement 4, which stated, i-Ready Math professional development effectively provides strategies to ensure fidelity of implementation of the program, 67% of administrative respondents, four of six, agreed, and 34% of administrative respondents, two of six, disagreed. Sixty-Two percent of teacher respondents agreed, eight of 13, and 38%, five of 13, disagreed that i-Ready Math professional development provided strategies to successfully implement the program with fidelity.

Although the majority of participants expressed satisfaction with i-Ready Math professional development, survey data from both administrators and teachers support a need for teachers to be provided with additional strategies to ensure the program is implemented with fidelity. The survey responses indicate that some teachers felt they were unable to implement the program with fidelity because of insufficient training provided by the program facilitator. My take-away from these data is that prior to concluding the training, the professional development facilitator needs to monitor

participants' understanding to ensure they have ample strategies to implement i-Ready Math with fidelity.

Table 1

Survey Statement 4: Administrator Responses

Answer Choices	Responses	Respondents
Strongly Agree	0.00%	0
Agree	66.67%	4
Disagree	33.33%	2
Strongly Disagree	0.00%	0
Total	100%	6

Note. i-Ready Math professional development effectively provides strategies to ensure fidelity of implementation of the program.

Table 2

Survey Statement 4: Teacher Responses

Answer Choices	Responses	Respondents
Strongly Agree	0.00%	0
Agree	61.54%	8
Disagree	38.46%	5
Strongly Disagree	0.00%	0
Total	100%	13

Note. i-Ready Math professional development effectively provides strategies to ensure fidelity of implementation of the program.

In response to survey Statement 5, which stated, i-Ready Math is effective in diagnosing student deficiencies in math, 67% of administrative respondents, four of six, agreed, and 33% of administrative respondents, two of six, disagreed. Eight percent of teacher respondents, one of 13, strongly agreed, 85% agreed, 11 of 13, and 8% disagreed, one of 13, that the program is useful in determining areas of math deficiencies for students. Based upon this data, I ascertained the importance of administering i-Ready Math diagnostic assessments to Grade 5 students who are struggling in mathematics. The diagnostic assessments are instrumental in identifying specific areas of student

weaknesses for the purpose of creating prescriptive intervention plans for individualized students.

Table 3

Survey Statement 5: Administrator Responses

Answer Choices	Responses	Respondents
Strongly Agree	0.00%	0
Agree	66.67%	4
Disagree	33.33%	2
Strongly Disagree	0.00%	0
Total	100%	6

Note. i-Ready Math is effective in diagnosing student deficiencies in math.

Table 4

Survey Statement 5: Teacher Responses

Answer Choices	Responses	Respondents
Strongly Agree	7.69%	1
Agree	84.62%	11
Disagree	7.69%	1
Strongly Disagree	0.00%	0
Total	100%	13

Note. i-Ready Math is effective in diagnosing student deficiencies in math.

In response to survey Statement 6, which stated, i-Ready student reports are useful in planning for differentiated instruction, 100% of administrative respondents, six of six, agreed. Fifteen percent of teacher respondents, two of 13, strongly agreed, 69%, nine of 13, agreed, and 15%, two of 13, disagreed that student reports were beneficial for planning differentiated lessons. While most respondents viewed the reports as instrumental in creating small groups lessons to increase students' math skills, a minority of teacher respondents did not find value in the student reports. Based upon this data, I questioned if the minority of teacher respondents were properly trained to utilize the student reports to create differentiated math lessons.

Table 5

Survey Statement 6: Administrator Responses

Answer Choices	Responses	Respondents
Strongly Agree	0.00%	0
Agree	100.00%	6
Disagree	0.00%	0
Strongly Disagree	0.00%	0
Total	100%	6

Note. i-Ready student reports are useful in planning for differentiated instruction.

Table 6

Survey Statement 6: Teacher Responses

Answer Choices	Responses	Respondents
Strongly Agree	15.38%	2
Agree	69.23%	9
Disagree	15.38%	2
Strongly Disagree	0.00%	0
Total	99.99%	13

Note. i-Ready student reports are useful in planning for differentiated instruction.

In response to survey Statement 7, which stated, i-Ready Math reports accurately reflect student achievement gains, 33% of administrative respondents, two of six, agreed, and 67%, four of six, disagreed. Sixty-Two percent of teacher respondents, eight of 13, agreed, and 38%, five of 13, disagreed that i-Ready Math reports correctly depict student math learning gains. These data suggest that administrators and instructional personnel did not share a common definition of student achievement gains. Although they both analyzed the same data, they had differing interpretations of what constituted a learning gain. Administrators and teachers need to have a common understanding of how they will measure improvement of student outcomes. Also, multiple sources of data need to be utilized to determine student achievement gains. i-Ready data needs to be combined with teacher created formative assessments and daily exit slips to decipher if students are positively responding to math interventions.

Table 7

Survey Statement 7: Administrator Responses

Answer Choices	Responses	Respondents
Strongly Agree	0.00%	0
Agree	33.33%	2
Disagree	66.67%	4
Strongly Disagree	0.00%	0
Total	100%	6

Note. i-Ready Math reports accurately reflect student achievement gains.

Table 8

Survey Statement 7: Teacher Responses

Answer Choices	Responses	Respondents
Strongly Agree	0.00%	0
Agree	61.54%	8
Disagree	38.46%	5
Strongly Disagree	0.00%	0
Total	100%	13

Note. i-Ready Math reports accurately reflect student achievement gains.

In response to survey Statement 8, which stated, i-Ready Math reports assessments accurately measure students' understanding of the Florida Standards, 83% of administrative respondents, five of six, disagreed, and 17%, one of six, strongly disagreed. Twenty-Three percent of teacher respondents, three of 13, agreed, 62%, eight of 13, disagreed, and 15%, two of 13, strongly disagreed that i-Ready Math assessments correctly represent students' mastery of the Florida Standards. A vast majority of respondents viewed i-Ready Math assessments as an unreliable tool for determining students' level of understanding of the Florida Standards. I interpreted these data to mean that inconsistencies exist between how i-Ready measures student performance and how teachers utilize formative and summative assessments to measure student performance.

Table 9

Survey Statement 8: Administrator Responses

Answer Choices	Responses	Respondents
Strongly Agree	0.00%	0
Agree	0.00%	0
Disagree	83.33%	5
Strongly Disagree	16.67%	1
Total	100%	6

Note. i-Ready Math assessments accurately measure students' understanding of the Florida Standards.

Table 10

Survey Statement 8: Teacher Responses

Answer Choices	Responses	Respondents
Strongly Agree	0.00%	0
Agree	23.08%	3
Disagree	61.54%	8
Strongly Disagree	15.38%	2
Total	100%	13

Note. i-Ready Math assessments accurately measure students' understanding of the Florida Standards.

In response to survey Statement 9, which stated, i-Ready Math increases students' ability to solve math problems, 83% of administrative respondents, five of six, agreed, and 17%, one of six, disagreed. Thirty-Eight percent of teacher respondents, five of 13, agreed, and 62%, eight of 13, disagreed that i-Ready Math increase students' problem-solving skills. These data suggest that teachers did not have candid conversations with their administrators regarding their perspective of the program's capability to improve students' problem-solving skills. Based upon this data, I inferred the i-Ready Math program needs to increase focus on embedding additional strategies to help students solve math problems.

Table 11

Survey Statement 9: Administrator Responses

Answer Choices	Responses	Respondents
Strongly Agree	0.00%	0
Agree	83.33%	5
Disagree	16.67%	1
Strongly Disagree	0.00%	0
Total	100%	6

Note. i-Ready increases students' ability to solve math problems.

Table 12

Survey Statement 9: Teacher Responses

Answer Choices	Responses	Respondents
Strongly Agree	0.00%	0
Agree	38.46%	5
Disagree	61.54%	8
Strongly Disagree	0.00%	0
Total	100%	13

Note. i-Ready increases students' ability to solve math problems.

In response to survey Statement 10, which stated, i-Ready Math tutorial lessons are aligned to the Florida Standards, 17% of administrative respondents, one of six, strongly agreed, 50%, three of six, agreed, and 33%, two of six, disagreed. Sixty-Two percent of teacher respondents, eight of 13, agreed, and 38%, five of 13, disagreed that i-Ready Math online tutorial lessons directly correlated to the Florida Standards. Based upon the data, I interpreted that the tutorial lessons were in alignment with the rigor and task demands of the Florida Standards.

Table 13

Survey Statement 10: Administrator Responses

Answer Choices	Responses	Respondents
Strongly Agree	16.67%	1
Agree	50.00%	3
Disagree	33.33%	2
Strongly Disagree	0.00%	0
Total	100%	6

Note. i-Ready Math tutorial lessons are aligned to the Florida Standards.

Table 14

Survey Statement 10: Teacher Responses

Answer Choices	Responses	Respondents
Strongly Agree	0.00%	0
Agree	61.54%	8
Disagree	38.46%	5
Strongly Disagree	0.00%	0
Total	100%	13

Note. i-Ready Math tutorial lessons are aligned to the Florida Standards.

In response to survey Statement 11, which stated, i-Ready Math program increases the overall math achievement levels of students performing below grade level in mathematics, 83% of administrative respondents, five of six, agreed, and 17%, one of six, disagreed. Thirty-Eight percent of teacher respondents, five of 13, agreed, and 62% eight of 13, disagreed that i-Ready Math program increases achievement levels of Grade 5 students who were identified as performing below grade level in math.

Teachers may have responded to this statement based on the performance of their individual classrooms while administrators may have responded according to overall performance of classrooms involved in the study. Administrators need to initiate open dialogue with teachers throughout the school year to discuss the strengths of the program and areas that need to be improved. By doing so, administrators can make immediate adjustments to the implementation based on teacher feedback. These data reflected the majority of respondents perceived that the i-Ready program had a limited impact on student achievement in math.

Table 15

Survey Statement 11: Administrator Responses

Answer Choices	Responses	Respondents
Strongly Agree	0.00%	0
Agree	83.33%	5
Disagree	16.67%	1
Strongly Disagree	0.00%	0
Total	100%	6

Note. i-Ready Math program increases the overall math achievement levels of students performing below grade level mathematics.

Table 16

Survey Statement 11: Teacher Responses

Answer Choices	Responses	Respondents
Strongly Agree	0.00%	0
Agree	38.46%	5
Disagree	61.54%	8
Strongly Disagree	0.00%	0
Total	100%	13

Note. i-Ready Math program increases the overall math achievement levels of students performing below grade level mathematics.

Administrator Interviews

I conducted a total of six face-to-face interviews with administrators serving in schools participating in my study. The length of administrative interviews ranged from five-to-nine minutes. The average length of time for all interviews was seven minutes. In response to administrative interview Question 1, which asked participants to identify their title, positions consisted of three principals, two assistant principals, and one senior administrator. In response to administrator interview Question 2, which asked participants their years of experience in education, responses ranged from 13 years-to-19 years. In response to administrative interview Question 3, which asked participants their years of experience in their current role, responses ranged from one year-to-three years. In response to administrator interview Question 4, which asked, “What type of

professional development opportunities did you provide for teachers implementing the i-Ready Math program?," two main themes emerged from the participant responses. Three of six administrators, 50%, reported they provided professional development focusing on an overview of the program. Equally important, three of six administrators, 50%, commented on the frequency of professional development opportunities that were provided to faculty. The frequency ranged from several professional development opportunities to one.

There were other themes reported by less than half of the interviewees. For example, two of six administrators (34%) afforded teachers the opportunity to participate in professional development focusing on pulling reports to monitor and collect data. Two of six administrators (34%) indicated they provided professional development centered around data-driven decisions. Two of six administrators (34%) provided professional development pertaining to resources and assignments for students. One of six administrators (17%) provided professional development on collecting and monitoring data. One of six administrators (17%) provided professional development on adjusting student levels and needs. One of six administrators (17%) provided targeted coaching support to teachers as professional development throughout the year. One of six administrators (17%) indicated the professional development provided to teachers was not detailed enough. One of six administrators (17%) commented there is a need to provide additional professional development on the growth monitoring tool. I inferred from these responses that administrators offered a wide variety of professional development opportunities during the initial year of district-wide implementation of the i-Ready program. However, school-based administrators lacked a common focus on

training teachers how to utilize the program during the initial implementation phase. The data revealed that this is an area for future program improvement.

Table 17

Administrator Interview Questions 4

Professional Development Opportunities	Reponses	Participant Code
Overview of the program	50%	A,B,C
Frequency of the program	50%	A,D,E
Pulling reports to monitor and collect data	34%	A,D
Data driven decisions	34%	A,E
Resources and student assignments	34%	C,D
Collecting and monitoring data	17%	B
Adjusting students levels and needs	17%	C
Targeting coaching support	17%	F
Insufficient focus on various components of the program	17%	A
Needs to focus on growth monitoring	17%	B

Note. What type of professional development opportunities did you provide for teachers implementing the i-Ready Math program?

In response to administrator interview Questions 5, which asked, "What strategies did you implement to encourage teachers to utilize i-Ready Math with fidelity?," three main themes emerged from the participant responses. Four of six administrators (67%) responded that members of their leadership team monitored student usage data by utilizing i-Ready reports. In addition, four of six administrators (67%) indicated they created a schedule with designated times for students to access i-Ready Math during center rotations, class instruction, or morning labs. Three of six administrators (50%) acknowledged they followed up with teachers who were not providing an opportunity for students to access i-Ready Math for a minimum of 45 minutes per week.

Less than half of the interviewees reported additional themes. For example, two of six administrators (34%) indicated they provided students with incentives for utilizing i-Ready Math for a minimum of 45 minutes per week. Two of six administrators (34%)

ensured that instructional coaches were readily available to answer teachers' questions pertaining to the program. One of six administrators (17%) provided teachers with incentives. Also, one of six administrators (17%) encouraged teachers to place kids on i-Ready Math during down-time. Data indicate administrators utilized a broad spectrum of strategies to ensure teachers implemented the program with fidelity. However, in subsequent interview questions, respondents commented teachers experienced difficulty ensuring students met the required 45-minute weekly program access. The data revealed a growth opportunity for administrators to implement strategies that encourage teachers to utilize the program with fidelity.

Table 18

Administrator Interview Questions 5

Strategies to Implement Program with Fidelity	Responses	Participant Code
Leadership team monitored student usage data	67%	B,C,F,E
Created a schedule for students to have access to program	67%	B,C,D,E
Followed up with teachers who were not implementing the program to fidelity	50%	A,C,E
Provided students with incentives	34%	B,F
Ensured instructional coaches were available to answer teachers' questions	34%	C,E
Provided teachers with incentives	17%	B
Encouraged teachers to place students on i-Ready Math during down time	17%	D

Note. *What strategies did you implement to encourage teachers to utilize i-Ready Math with fidelity?*

In response to administrator interview Question 6, which asked, "How did you support teachers that were utilizing i-Ready reports to provide differentiated instruction?," two main themes emerged from participant responses. Five of six administrators (83%) indicated they met with teachers during professional learning

communities to discuss and analyze student data profile reports. In addition, four of six administrators (67%) commented they used profile reports to create small groups focused on student deficits in math.

An additional theme was reported by less than 50% of respondents. Two of six administrators (34%) reported they encouraged teachers to adjust the online program based on individualized student needs. These data suggested the majority of administrators perceived the reports provided teachers accurate data to support small-group instruction; therefore, teachers were encouraged to provide reteaching opportunities based on diagnostic assessments and online tutorial lesson data.

Table 19

Administrator Interview Questions 6

Support for Differentiation	Responses	Participant Code
Met with teachers during professional learning communities	83%	A,B,C,D,E
Utilized profile reports to create small groups	67%	A,B,E,F
Encouraged teachers to adjust the online program to meet the individualized needs of students	34%	B,D

Note. How did you support teachers that were utilizing i-Ready reports to provide differentiated instruction?

In response to administrator interview Statement 7, which stated, "Describe aspects of the i-Ready Math program that you perceived as working well," one main theme emerged from participant responses. Three of six administrators (50%) highlighted the programs ability to provide automated, online differentiated instruction for students. In addition, two of six administrators (34%) commented positively on available resources within the i-Ready toolkit that provides teachers with additional activities to help students. Two of six administrators (34%) reflected on the importance of profiling reports that identified student performance levels. One of six administrators

(17%) stated the program provided challenging opportunities for students. One of six administrators (17%) indicated the program appropriately diagnosed students' math competency levels. One of six administrators (17%) spoke favorably regarding the program incentives. Data reflected administrator satisfaction with the methods in which the program identified student deficits and provided instructional opportunities to eliminate student deficits. Each administrator found at least one aspect of the program that benefited struggling students in mathematics on his or her campus. As administrators become more familiar with the program, I believe additional aspects of the program will be perceived as working well.

Table 20

Administrator Interview Statement 7

Positive Program Aspects	Responses	Participant Code
Automated online differentiated instruction for students	50%	B,D,E
Resources within the i-Ready Toolkit	34%	A,C
Profiling reports	34%	A,B
Provides challenging opportunities for students	17%	C
Approximately diagnoses students' math competency levels	17%	F
Adjusting students levels and needs	17%	C
Provides incentives	17%	F
Needs to focus on growth monitoring	17%	B

Note. Describe aspects of the i-Ready Math program that you perceive as working well.

In response to administrator interview Statement 8, which stated, "Describe aspects of the program that you perceive as needing to improve," less than 50% of respondents identified the subsequent themes. Two of six administrators (34%) commented the program assignments and tasks did not directly align to the Florida Standards, which aligned to administrator survey response data. These data corresponded with administrative survey data. One of six administrators (17%) reported

inconsistencies among the various i-Ready student assessment reports. For example, reports differed in how they measured if students were on grade level. Equally important, one of six administrators (17%) indicated teachers needed additional professional development. One of six administrators (17%) stated the online program could have remediated standards faster. If a student missed a component of a standard, the online tutorial provided the student with remediation on the standard in totality. One of six administrators (17%) commented the data monitoring and collecting needed improvement. Data indicated administrators need additional professional development to clarify misconceptions of the program. Many of the participant responses revealed a lack of understanding of how to analyze reports and the function of the online tutorial.

Table 21

Administrator Interview Statement 8

Program Aspects Requiring Improvement	Responses	Participant Code
Lack of alignment between the program's activities and the Florida Standards	34%	C,F
Inconsistencies between various reports within the program	17%	A
Teachers needed additional professional development	17%	E
Deficient standards could have been remediated faster	17%	D
Data monitoring and collecting between diagnostic assessments	17%	B

Note. Describe aspects of the program that you perceive as needing to improve.

In response to administrator interview Question 9, which asked, "What are some challenges you have observed with the implementation of the i-Ready Math program?," one primary theme emerged from participant responses. Three of six administrators (50%) acknowledged they experienced difficulty with providing students access to the program for a minimum of 45 minutes per week. Fewer than 50% of respondents reported subsequent themes. For example, two of six administrators (34%) commented

the i-Ready professional development provided a basic overview of the program. However, two of six administrators (34%) indicated teachers did not understand various components of the program. One of six administrators (17%) commented teachers were frustrated and did not buy into the program because of a lack of understanding. One of six administrators (17%) described the district's implementation of i-Ready as abrupt. One of six administrators (17%) responded there was not enough computers to provide students with minimal access to the program. One of six administrators (17%) stated the program took extensive time for students to login. One of six administrators (17%) expressed concern with the fact that the time students spent taking assessments did not count toward the required weekly minutes for students to access the program. One of six administrators (17%) indicated gaps existed between the tasks of the online program and the Florida Standards.

I inferred that the participants required continuous professional development on strategies to ensure successful implementation of i-Ready Math and the various components of the program. The administrative and teacher interview responses overwhelming indicated that teachers struggled with implementing the program with fidelity. This is important to note because the students needed to utilize the online program for a minimum of 45 minutes per week to experience optimal learning gains.

Table 22

Administrator Interview Questions 9

Implementation Challenges	Responses	Participant Code
Experienced difficulty with getting students on the program for a minimum of 45 minutes per week	50%	C,D,E
Professional development consisted of a basic overview of the program	34%	A,B

Implementation Challenges	Responses	Participant Code
Teachers lacked an understanding of various components of the program	17%	A,B
Frustrated teachers who didn't buy into the program	17%	B
Abrupt implementation	17%	A
Lack of computers to provided minimum required access	17%	D
Too long for students to login	17%	D
Assessment minutes were not included in the required weekly tutorial minutes	17%	E
Gap between the Florida Standards and program requirements	17%	F

Notes. What are some challenges you have observed with the implementation of the i-Ready Math program?

In response to administrator interview Question 10, which asked, "What suggestions do you offer to improve i-Ready Math program as an administrator?," two main themes emerged form participant responses. Three of six administrators (50%) commented on the need for continuous professional development. In addition, three of six administrators (50%) responded the program needs to align with the standards, student text, and the teacher's instructional delivery.

Fewer than 50% of respondents reported additional themes. One of six administrators (17%) responded participants should have received professional development six months prior to district-wide implementation. Similarly, one of six administrators (17%) suggested the district implement a pilot program prior to district-wide implementation. One of six administrators (17%) implored the district to identify times in the master schedule for schools to implement the program with fidelity. One of six administrators (17%) suggested the program provided an avenue for students to experience success with components of standards they have not mastered. One of six administrators (17%) proposed teachers observe students utilizing the program to gain a deeper understanding of student math deficits. Data reflected respondents' dissatisfaction

with the quality of professional development they received prior to district-wide implementation.

Table 23

Administrator Interview Questions 10

Suggested Program Improvements	Responses	Participant Code
Continuous professional development	50%	A,B,E
Program needs to align with the standards, student text, and teacher's instructional delivery	50%	C,D,F
Participants should have received professional development six months prior to program implementation	17%	A
Implement a pilot program prior to district-wide implementation	17%	A
District needs to include times for student access in the master schedule	17%	B
Program needs to provide students the opportunity to experience success with standards they have not mastered	17%	D
Teachers need to observe students on the program to better understand their math deficits	17%	E

Note. What suggestions do you offer to improve i-Ready Math program as an administrator?

In response to Question 11, which asked, "What feedback have you received from your teachers pertaining to the i-Ready Math program?," one primary theme emerged from participant responses. Four of six administrators (67%) commented teachers experienced frustration trying to provide students with the required 45-minute access to the online math program. Two of six administrators (34%) indicated teachers liked the i-Ready program. Specifically, two of six administrators (34%) responded their teachers liked the resources located in the i-Ready toolbox. Two of six administrators (34%) stated teachers expressed concerns about the alignment of the Florida Standards and program tasks. Two of six administrators responded that teachers conveyed students were bored and did not enjoy the i-Ready Math program. One of six administrators

(17%) stated teachers were concerned with the fact that extended lessons or assessments did not contribute to the mandatory 45 minutes per week. One of six administrators (17%) commented the program could be more user friendly by adding a section for frequently asked questions focusing on type of reports to use to guide instructional decisions. One of six administrators (17%) responded that the teachers believed students enjoyed the program. One of six administrators (17%) expressed a desire for more incentives. One of six administrators (17%) responded teachers were concerned about their ability to monitor student progress throughout the year. One of six administrators (17%) commented teachers were concerned about having to reopen the program for students who were locked out because of various reasons.

The data revealed differing perspectives of the i-Ready Math program such as challenges with program implementation, satisfaction levels with the overall program, and concerns regarding various components of the program. Equally important, the majority of participants acknowledged they experienced significant difficulty implementing the program with fidelity, which possibly hindered program effectiveness. This information was important because respondents candidly provided feedback identifying multiple areas of growth for future program implementation.

Table 24

Administrator Interview Questions 11

Teacher Feedback	Responses	Participant Code
Experienced difficulty with getting students on the program for a minimum of 45 minutes per week	67%	A,B,D,E
Liked the program	34%	B,C
Liked the resources within the tool-box	34%	B,F
Concern regarding the alignment of the Florida Standards and the program's tasks	34%	F,D
Students were bored and didn't like the program	34%	C,D

Teacher Feedback	Responses	Participant Code
Extended lessons or assessments did not contribute to the mandatory 45 minute weekly online student lessons	17%	A
Program needs to include a Frequently Asked Questions section pertaining to reports	17%	A
Students enjoyed the program	17%	F
Program needs more incentives	17%	D
Concern regarding progress monitoring throughout the year	17%	B
Concern regarding students being locked out of the program and teachers being required to reopen	17%	C

Note. What feedback have you received from your teachers pertaining to the i-Ready Math program?

In response to administrator interview Question 12, which asked, "Is there anything else you would like to discuss pertaining to the i-Ready Math program?," less than half of interviewees reported varying themes. Two of six administrators (34%) described the program as great. Two of six administrators (34%) responded students liked the program. One of six administrators (17%) commented the district should have started rolling-out the program a year earlier. One of six administrators (17%) indicated that Curriculum Associates should respond to feedback pertaining to data mining faster. One of six administrators (17%) responded there are too many clicks to retrieve data. One of six administrators (17%) stated the online tasks need to align to the Florida Standards, so materials may be used in correlation with each other. One of six administrators (17%) displayed concern because of student inability to access the program from home because of not having a computer in the home. One of six administrators (17%) expressed she experienced difficulty trying to provide students with the same amount of access to i-Ready Math as students received in reading. One of six administrators (17%) commented the program provided a plethora of resources. One of

six administrators (17%) described the program as engaging. One of six administrators (17%) had no comment.

The data reflected multiple perspectives of the i-Ready program. This data demonstrated a need for teachers to have frequent opportunities to share their perspectives of the program during the school year. Additional support and adjustments could have been made based on teacher feedback. Also, this process would have afforded administrators the opportunity to clarify expectations and investigate teacher concerns regarding program content.

Table 25

Administrator Interview Questions 12

Additional Comments	Responses	Participant Code
Described the program as great	34%	A,C
Students liked the program	34%	C,F
District should have rolled out the program a year earlier	17%	A
Curriculum Associates should respond to feedback faster as it relates to data mining	17%	B
Too many clicks to retrieve data	17%	B
Online tasks need to align to the standards	17%	D
Concern with students' inability to access the program at home	17%	C
Concern with not being able to provide students with the same amount of i-Ready Math time as i-Ready Reading	17%	C
Program provided a plethora of resource's	17%	F
Described the program as engaging	17%	F
No comment	17%	E

Note. Is there anything else you would like to discuss pertaining to the i-Ready Math program?

Teacher Interview Data

I conducted a total of 11 face-to-face interviews with instructional personnel serving in schools participating in my study. The length of teacher interviews ranged from three-to-10 minutes. The average length of time for interviews was six minutes. In

response to teacher interview Question 1, which asked participants to identify their title, positions consisted of seven teachers, two coaches, one district math-science coach, and one dean. In response to teacher interview Question 2, which asked participants their years of experience in education, responses ranged from two-years-to-20 years. In response to teacher interview Question 3, which asked participants their years of experience in their current role, responses ranged from less than one-year-to-13 years.

In response to teacher interview Questions 4, which asked, "How did you utilize progress monitoring data and student reports to develop lesson plans for small group remediation?," one main theme emerged from the participant responses. Five of 11 teachers (45%) commented they utilized data and reports to identify student math deficiencies and formulate small groups. Less than 40% of participants reported additional themes. For example, three of 11 teachers (27%) reported they utilized data and reports to place students in small groups. Two of 11 teachers (18%) created remediation centers based on data and student reports. Two of 11 teachers (18%) indicated they were not responsible for developing math lessons. One of 11 teachers (9%) honed in on student strengths to build on weaker ones. One of 11 teachers (9%) used data and reports to determine which math questions they need to scaffold for students. One of 11 teachers (9%) used higher students to support lower students in groups. One of 11 teachers (9%) assigned skill-set questions based on data. One of 11 teachers (9%) indicated utilizing reports to determine the number of lessons students completed. One of 11 teachers (9%) determined student growth between assessments based on data and student reports. One of 11 teachers (9%) utilized data and reports to identify instructional holes in previously taught lessons. One of 11 teachers (9%) created

a remediation plan that aligned to data and student reports. One of 11 teachers (9%) utilized reports and data to identify areas of improvement for high, low, and bubble students. One of 11 teachers (9%) use data to select supplemental resources for students. One of 11 teachers (9%) use data to provide students with individualized instruction. One of 11 teachers (9%) utilized data to review various algorithms.

I can infer that teachers deemed the progress monitoring data and reports to be valid and reliable. Although teachers differed in their instructional techniques, the majority utilized the reports and data to guide their instructional decisions by intentionally targeting student deficiencies for the purpose of narrowing the achievement gap.

Table 26

Teacher Interview Questions 4

Data and Reports to Develop Lessons	Responses	Participant Code
Identified student deficits and formulated small groups	45%	A,B,C,D,H
Placed students in small group	27%	I, J, K
Created remediation centers	18%	F, H
Not responsible for creating lesson plans	18%	G,I
Honed in on strengths to address weaknesses	9%	B
Scaffolded math questions	9%	B
Higher students taught lower students	9%	C
Assigned skill set questions	9%	D
Determined number of lessons students completed	9%	E
Determined growth between assessments	9%	E
Identified instructional holes in previously taught lessons	9%	F
Created a remediation plan	9%	G
Identified areas of improvement for high, low, and bubble students	9%	G
Selected resources	9%	H
Provided individualized instruction	9%	I
Reviewed various algorithms	9%	K

Note. How did you utilize progress monitoring data and student reports to develop lesson plans for small group remediation?

In response to teacher interview Statement 5, which stated, “Explain how you ensured that students identified as performing below grade level in math utilized i-Ready Math for a minimum of 45 minutes per week,” two main themes emerged from the participant responses. Five of 11 teachers (45%) responded students routinely completed i-Ready Math lessons during math center rotations. Also, four of 11 teachers (36%) indicated students rotated to the computer lab based on a schedule to create i-Ready Math lessons.

Additional themes were reported by participants. For example, three of 11 teachers (27%) acknowledged they experienced difficulty providing students the opportunity to access i-Ready Math daily. Two of 11 teachers (18%) indicated students utilized i-Ready Math during afterschool tutoring. One of 11 teachers (9%) stated students had the option of working on the program at home. One of 11 teachers (9%) indicated students completed tutorial lessons during math interventions. One of 11 teachers (9%) permitted students the opportunity to utilize the online math program three-times a week. One of 11 teachers (9%) indicated students were provided 30 minutes per week to access the i-Ready Math program. One of 11 teachers (9%) allowed students who were below grade level the opportunity to access the program more times than other students. One of 11 teachers (9%) responded that students gained access to the program in the lab before school. One of 11 teachers (9%) allowed students to enter the classroom before school to complete the online math program. One of 11 teachers (9%) discussed with teachers the importance of building time in the schedule to ensure students are on the program for 45 minutes per week.

Data revealed the majority of teachers struggled with providing students the opportunity to utilize the program for 45 minutes during the traditional school day. Teachers need assistance in creating a schedule that prioritizes students completing the required instructional minutes for i-Ready Math.

Table 27

Teacher Interview Statement 5

Strategies to Implement Program with Fidelity	Responses	Participant Code
Math center rotation	45%	A,B,C,E,G
Computer lab schedule within the school day	36%	F,H,J,K
Experienced difficulty providing students daily access	27%	B,C,D
During tutoring	18%	A,H
At home	9%	A
Math interventions	9%	B
Three times a week	9%	B
Students received access 30 minutes per week	9%	D
Below level students received more time	9%	E
Before school in lab	9%	F
Before school in the classroom	9%	G
Discussion with teachers	9%	I

Note. Explain how you ensured that students identified as performing below grade level in math utilized i-Ready Math for a minimum of 45 minutes per week.

In response to teacher interview Statement 6, which stated, "Describe aspects of the i-Ready Math program that you perceive as working well," one main theme emerged from participant responses. Four of 11 teachers (36%) described the reports that provide student progress monitoring data as beneficial. Additional themes were reported by fewer than 30% of participants. Three of 11 teachers (27%) indicated the online program was instrumental in improving deficient skills. Three of 11 teachers (27%) commented positively to the additional resources, teacher toolbox and MAFS workbook, which accompany the online program. Also, two of 11 teachers (18%) stated that the program provided students with access to concepts that they did not have time to teach in class.

One of 11 teachers (9%) highlighted the brain breaks the online program provides for students. One of 11 teachers (9%) appreciated the teacher alerts, which allowed for electronic monitoring to see the performance of an individual student and the whole class. One of 11 teachers (9%) utilized data to create lesson plans based on standards for the purpose of providing students the opportunity to help each other in small groups. One of 11 teachers (9%) emphasized the benefit of the tutorial lessons instead of the standards-based lesson. One of 11 teachers (9%) described the tutorial and videos as engaging for students. One of 11 teachers (9%) responded the standards mastery test required students to think at higher levels and identified questions based on their level (i.e., depth of knowledge). One of 11 teachers (9%) highlighted program usage of visuals and manipulatives.

Table 28

Teacher Interview Statement 6

Program Aspects that are Working Well	Responses	Participant Code
Reports and student progress monitoring data	36%	B,C,G,H
Improving deficient skills	27%	A,E,I
Additional resources	27%	F,H,I
Taught concepts the teacher did not have time to teach in class	18%	A,J
Brain breaks	9%	A
Teacher alerts	9%	B
Ability to create lesson plans based on data	9%	C
Tutorial lessons	9%	D
Engaging tutorials and videos	9%	F
Standards Mastery assessments provided higher order thinking questions	9%	H
Program's usage of visuals and manipulatives	9%	K

Note. Describe aspects of the i-Ready Math program that you perceive as working well.

In response to teacher interview Statement 7, which stated, "Describe aspects of the i-Ready Math program that you perceive as needing to be improved," participants

provided varied responses. Three of 11 teachers (27%) commented program assessments do not align with classroom instruction. Two of 11 teachers (18%) indicated reports lack specificity. They do not identify specific skills that students do not understand. Also, two of 11 teachers (18%) described the online lessons prescribed to lower performing students as elongated. Specifically, the program scaffold the instruction too low. One of 11 teachers (9%) reported the program does not target student academic needs appropriately. One of 11 teachers commented the questions on the assessments have too many components. If students miss one component of a question, the entire problem is scored incorrectly. One of 11 teaches (9%) suggested that i-Ready imbed an ELL section of the program to include on grade level questions that utilizes smaller numbers. One of 11 teachers (9%) commented students are unable to comprehend tutorial lessons assigned at their targeted grade level. One of 11 teachers (9%) insisted that struggling students need a teacher to explain math concepts to prevent them from clicking and answering because they do not understand the online tutorial. One of 11 teachers (9%) responded the program needs to address basic math facts. One of 11 teachers (9%) could not think of any areas of improvement.

Data reflected the program provided teachers with baseline information pertaining to student deficiencies. Teachers need to utilize this information in conjunction with consistently monitoring student performance and facilitating small-group instruction to ensure students are receiving prescribed targeted interventions.

Table 29

Teacher Interview Statement 7

Program Aspects Requiring Improvements	Responses	Participant Code
Assessment do not align with classroom instruction	27%	G,I,J

Program Aspects Requiring Improvements	Responses	Participant Code
Reports lacked specificity	18%	E,F
Lessons for struggling students are elongated	18%	A,K
Inappropriately targets the academic needs of students	9%	A
Assessments have too many components per question	9%	B
Program needs to embed an ELL section with smaller numbers	9%	C
Students are unable to complete grade level lessons	9%	D
Struggling students clicked answers and did not attend to the online tutorial	9%	F
Program needs to address basic math facts	9%	K
No area of improvement	9%	H

Note. Describe aspects of the i-Ready Math program that you perceive as needing to be improved.

In response to teacher interview Question 8, which asked, "What are some challenges you have observed with the implementation of the program?," one theme emerged. Five of 11 teachers (45%) expressed difficulty providing students access to the program within the school day. Three of 11 teachers (27%) commented students were unable to access the program beyond school hours. Two of 11 teachers (18%) reported that teachers required additional professional development on the utilization of program resources and strategies to use data to inform instructional decisions. Equally important, two of 11 teachers (18%) indicated assessments required too much time to complete. One of 11 teachers (9%) observed students answering the questions without paying attention to the online tutorial. One of 11 teachers (9%) expressed difficulty selecting the appropriate assessment tool to assess students. One of 11 teachers (9%) described the expectations for program implementation as unclear. One of 11 teachers (9%) indicated a lack of alignment between the instructional delivery and program assessments. Comparably, one of 11 teachers responded that program questions did not align to the

content limits located within the FLDOE item specifications. One of 11 teachers (9%) did not experience any challenges with the implementation of the program.

Data revealed teachers needed additional support to implement i-Ready Math with fidelity. Teachers experienced difficulty ensuring students accessed the program for the recommended minutes and needed assistance with understanding how to utilize the various components of the program.

Table 30

Teacher Interview Question 8

Implementation Challenges	Responses	Participant Code
Difficulty providing students with access to i-Ready Math program	45%	B,C,F,H,J
Students unable to access program beyond school hours	27%	A,B,F
Teachers needed additional professional development on how to utilize resources and data to drive instruction	18%	G,I
Length of time to complete assessments	18%	H,K
Students clicking answers without viewing tutorial	9%	D
Teachers expressed difficulty selecting appropriate assessment tool	9%	H
Unclear expectations	9%	I
Lack of alignment between the instructional delivery and program assessments	9%	I
Program's questions did not align to the content limits located in FLDOE Item Specifications	9%	I
Did not experience any challenges	9%	E

Note. What are some challenges you have observed with the implementation of the program?

In response to teacher interview Question 9, which asked, "If student achievement doesn't improve, what do you believe will be the contributing factors?," one main theme emerged from participant responses. Four of 11 teachers (36%) indicated a lack of improved student achievement would be a result of teacher instructional delivery. In addition, three of 11 teachers (27%) commented students were bored with the program

and displayed a lack of effort. Two of 11 teachers (18%) attributed a lack of time on the program as a possible reason for unimproved student data.

Additional themes were reported by single participants. One of 11 teachers (9%) indicated the program was too stimulating for students. Students focused on playing games instead of the content of the online tutorial. One of 11 teachers (9%) responded data may not improve because of a lack of teacher monitoring to determine where students needed additional assistance. One of 11 teachers commented a lack of student understanding of the content may attribute to data not improving. One of 11 teachers (9%) believed students needed more time to understand the steps of the math problems. One of 11 teachers (9%) indicated students rushing through math problems may negatively impact student data. One of 11 teachers commented students were too low to begin with. One of 11 teachers (9%) stated teachers need to learn more about their students and how they learn. One of 11 teachers (9%) responded that the expedited implementation of the program may attribute to a lack of student improvement data. One of 11 teachers (9%) indicated teachers did not think about how to teach the math standards. One of 11 teachers (9%) commented teachers viewed the program as their curriculum and not the standards. One of 11 teachers (9%) replied a lack of student time on-task could possibly contribute to unimproved student achievement data.

I inferred from my results that the teachers attributed internal and external barriers as possible contributing factors of student math data not improving. Administrators need to facilitate problem-solving and decision-making discussions with their faculty to create strategies that would eradicate internal barriers.

Table 31

Teacher Interview Questions 9

Contributing Factors to Unimproved Student Achievement Data	Responses	Participant Codes
Teacher instructional delivery	36%	B,G,H,J
Students were bored with the program and displayed a lack of effort	27%	A,C,D
Lack of time on the program	18%	D,K
Students playing games instead of focusing on tutorial	9%	A
Lack of teacher monitoring to determine where students needed additional assistance	9%	C
Students didn't understand the content	9%	D
Students required more time to understand steps of the math problems	9%	E
Students rushing through problems	9%	E
Students were too low to begin with	9%	E
Teachers need to learn more about their students and how they learn	9%	G
Expedited implementation	9%	I
Lack of focus on standards-based instruction	9%	I
Teachers focused on the i-Ready program instead of standards	9%	I
Lack of student time on task	9%	K

Note. If student achievement doesn't improve, what do you believe will be the contributing factors?

In response to teacher interview Question 10, which asked, "Is there anything else you would like to discuss about the i-Ready Math program?," one main theme emerged from participant responses. Five of 11 teachers (45%) commented the program was beneficial. Two of 11 teachers (18%) responded they were anticipating FSA Math data to determine the impact of the program.

The remaining themes were responses provided by individual participants. For example, one of 11 teachers appreciated the tools that support small-group instruction. One of 11 teachers indicated tutorials were instrumental during small-group instruction. One of 11 teachers suggested that the MAFS workbook be aligned with the online tutorial program, so students may record their responses while viewing the tutorial. One of 11

teachers (9%) focused on the fact that the grade-level, standards-based tutorial lessons provided students with larger numbers to manipulate as opposed to providing smaller manageable numbers for students. One of 11 teachers (9%) provided students with incentives for completion of required usage minutes. One of 11 teachers (9%) encouraged teachers to actively observe students while they were working on the i-Ready program. One of 11 teachers (9%) responded that i-Ready presented material differently from classroom instruction resulting in student inability to make connections. One of 11 teachers was pleased that the district is making the program mandatory. One of 11 teachers (9%) stated the program is aligned to FSA cut scores. One of 11 teachers (9%) responded she was eagerly anticipating FSA math scores. One of 11teachers (9%) indicated i-Ready is not going to be the only resource utilized. One of 11 teachers recommended basic fact drills be interjected into the program with the ability to be turned on and off.

I deduced that the i-Ready Math program provided teachers with a range of instructional satisfaction. As teachers become more familiar with the programs resources and assessments, they will experience greater instructional benefits.

Table 32

Administrator Interview Questions 10

Additional Comments	Responses	Participant Code
Described the program as beneficial	45%	C,E,H,I,J
Anticipating results of FSA to determine the program's impact on student achievement	18%	G,I
Appreciates the tools to support small group instruction	9%	A
Tutorials were instrumental during whole group instruction	9%	A
Align the student workbook and online tutorial so students may record their responses	9%	B
Customized standards-based lessons provide larger numbers as opposed to smaller manageable numbers	9%	C

Additional Comments	Responses	Participant Code
Teacher provided students with incentives for completing required usage minutes	9%	E
Encouraged teachers to observe students while they were working on the program	9%	F
i-Ready's different presentation of material resulted in students' inability to make mathematical connections	9%	F
Pleased the district is making the program mandatory	9%	G
Program is aligned to FSA cut scores	9%	H
Anticipating math scores	9%	H
i-Ready will not be the only resource she utilizes	9%	I
Suggested basic fact drills be interjected into the program with the ability to be turned on/off	9%	K

Note. Is there anything else you would like to discuss about the i-Ready Math program?

Student Data

I collected student data to determine if the intervention program improved student achievement for Grade 5 students that were identified as performing below grade level in mathematics. Specifically, I tabulated the time on-task for each student, percentage of i-Ready lessons completed, average tutorial pass rates per school, and the percentage of students that made a learning gain in mathematics on the FSA and the i-Ready Diagnostic assessment.

Data for JES identified 42 Grade 5 students as performing below grade level in mathematics. Average student time on-task for identified students from September 2016-May 2017 was 866 minutes. On average, these students completed 34 lessons with an average of a 51% pass rate. Fifty percent of the targeted students at JES achieved a learning gain as determined by the 2017 FSA Mathematics, and 64% of students achieved a learning gain from the i-Ready beginning-of-the-year (BOY) diagnostic assessment to the middle-of-the-year (MOY) diagnostic assessment.

Data for SES identified 62 Grade 5 students as performing below grade level in mathematics. Average student time on-task for identified students from September 2016-May 2017 was 586 minutes. On average, these students completed 29 lessons with an average of a 59% pass rate. Thirty-Five percent of the targeted students at SES achieved a learning gain as determined by the 2017 FSA Mathematics, and 67% of students achieved a learning gain from the i-Ready BOY diagnostic assessment to the MOY diagnostic assessment.

Data for OES identified 61 Grade 5 students as performing below grade level in mathematics. Average student time on-task for identified students from September 2016-May 2017 was 696 minutes. On average, these students completed 32 lessons with an average of a 49% pass rate. Sixty-Four percent of the targeted students at OES achieved a learning gain as determined by the 2017 FSA Mathematics, and 69% of students achieved a learning gain from the i-Ready BOY diagnostic assessment to the MOY diagnostic assessment.

In my conversation with the i-Ready representative that supported the targeted schools, she shared that students should have completed a minimum of one math lesson a week. In addition, if students accessed the online program for a minimum of 45 minutes for 30 weeks, the average time on-task for students should have been 1,350 minutes. These data suggested each of the targeted schools within the study did not implement the program with fidelity. Students did not receive adequate access to the online tutorial and therefore did not receive sufficient targeted interventions to increase their math skills.

Also, I noticed a discrepancy between the percentage of students that made gains on the 2017 FSA and the diagnostic assessments. Learning gains between the two

diagnostic assessments were higher than the learning gains students actually made on the FSA. By Curriculum Associates standards, students who increase their diagnostic score by 20 points from Diagnostic 1 to Diagnostic 2 successfully achieved a learning gain (see e-mail attachment: Curriculum Associates unpublished worksheet). Based on this information, I equated a learning gain to be a 10-point increase from Diagnostic 1 to Diagnostic 2. The inconsistencies of the percentage of students achieving a learning gain on the FSA and the diagnostic test could be because of an inaccurate number of points to achieve a learning gain from the BOY diagnostic assessment to the MOY diagnostic assessment. In addition, the discrepancy could be because of a lack of fidelity of implementation.

Table 33

i-Ready/FSA Mathematics Student Comparison Data

School Name	Percent of students who made FSA learning gains	Percent of Students who made midpoint i-Ready learning gains	Average number of i-Ready lessons passed	Average number of i-Ready lessons failed	Average number of i-Ready lessons completed	Average i-Ready Lessons Pass Rate	Time on task
Jaguar Elementary	50%	64%	18	16	34	51%	866
Ocean Elementary	64%	73%	16	16	32	49%	696
Soar Elementary	35%	72%	18	11	29	59%	586

I decided to address the issue of extending the teacher contract as the focus of my CLP to provide an avenue for teachers to receive continuous extensive professional development on mathematics instruction. Building teacher capacity is essential to increasing student achievement and creates a gateway to college-and-career opportunities

for at-risk students. According to Langham (2009), "Half of all jobs today require education beyond high school. Another third, require a college degree" (p. 21). Students who perform below grade level are more likely to drop out of high school and become relegated to minimum wage jobs–perpetuating the cycle of generational poverty. I desire to contribute to the field of education by creating a plan that provides historically low-performing schools with qualified teachers who demonstrate the ability to consistently provide rigorous standards-based instruction and prescriptive interventions to increase student math proficiency achievement levels.

As a former EAD of Title I schools, I was charged with providing on-the-ground coaching support to administrative teams for the purpose of increasing the percentage of students that are proficient on the FSA Mathematics. As I facilitated instructional rounds with the administrative teams, it was evident that teachers did not have an understanding of the Mathematics Florida Standards or know how to properly scaffold math instruction to build a solid foundation in mathematics for students.

For example, during an instructional round, I observed a teacher attempting to teach a lesson on multi-step word problems. The teacher thought the students were getting the questions incorrect because they did not understand which operations to select. However, students were answering the questions incorrectly because of their inability to subtract double-digit numbers. The teacher did not know how to diagnose the root cause of incorrect answers in her classroom. I believe if teachers were provided the opportunity to gain a deeper understanding of the standard prior to instruction, determine perquisite skills students need to master the standard, and discuss possible misconceptions, the misuse of instructional time could have been prevented.

Across the nation, administrators in Title I schools have experienced difficulty hiring and retaining qualified teachers to meet the diverse needs of their students. According to the National Education Association (n.d.), "Poor and minority students are often served by teachers who do not have adequate subject-matter preparation for the courses they teach" (p.1). Quality professional development on the standards will narrow the skill gap between teachers serving in Title I schools and teachers employed in suburban schools.

In my current role as a transformational leader, I am charged with demonstrating the ability to work effectively with school leaders to develop teacher capacity. According to Wagner et al. (2006), educational reform is contingent upon skillful, competent adults. If the goal of the FLDOE is to ensure that graduates are college-and-career ready, educational leaders must provide teachers with the necessary skills and strategies to accomplish this adaptive challenge. Critical to the educational community at large, educators must be properly equipped to surplus the work force with employees that demonstrate critical thinking, decision-making, and analytical prowess.

Organizational Changes

Implementing systemic change is a challenging task for 21st century leaders. Typically, stakeholders resist change because they are uncertain as to how the desired change will personally impact their daily routines. To ease anxiety, leaders need to communicate to stakeholders the root cause and contributing factors of the problem. According to Wagner, et al. (2006), educational leaders should utilize the 4Cs, competency, condition, culture, and context, as a framework to understand how each individual component of an organization contributes to the problem as a whole. The 4Cs

can assist leaders in viewing their organizations from a holistic perspective to gain insight to areas of strengths and weaknesses for the purpose of guiding organizational change.

My As-Is Chart (Appendix H) provides a comprehensive description of my CLP. The context of my CLP includes three principals with less than two years of experience being tasked with the responsibility of transforming historically low-performing Title I schools. Based on 2016 FSA Mathematics data, teachers lacked the skills to deliver rigorous standards-based instruction, and the majority of students were not receiving targeted interventions in math. The current condition of work imposed on teachers includes the instructional delivery of rigorous standards, implementation of i-Ready Math program, limited planning time during preplanning, an overview of i-Ready training during preplanning, and an average daily planning time of 60 minutes. Identified competencies in need of improvement are teacher capacity and a lack of understanding of the critical components of the i-Ready Math program.

Equally important, teachers lack a comprehensive understanding of math standards, and they are in need of additional professional development to enhance their instructional practices. In addition, teachers do not have an in-depth understanding of how to utilize i-Ready Math to increase student learning of mathematics. The culture of the schools include low expectations of students in poverty, and administrators' lack of trust in the capacity of teachers to teach the program effectively. They believed their teachers were not adequately prepared to meet the challenges of the state's new accountability system.

Context

According to Wagner et al. (2006), "Context is the skill demands all students must meet to succeed as providers, learners, and citizens and the particular aspirations, needs, and concerns of the families and community that the school or district serves" (p.104). JES, SES, and OES are historically low-performing Title I schools in EPSD.

During the 2014-2015 school year, JES earned a grade of F; SES earned a grade of D; OES earned a grade of F as measured by the Florida accountability system. In 2015-2016, FSA Mathematics data indicated 42% of students that attended JES scored at the satisfactory level or higher; 35% of students that attended SES scored at the satisfactory level or higher; 36% of students that attended OES scored at the satisfactory level or higher.

After implementing the i-Ready Math program during the 2016-2017 school year, 57% of students at JES performed at the satisfactory level or higher; 48% of students at SES performed at the satisfactory level or higher; 47% of students at OES performed at the satisfactory level or higher. Comparably, Grade 5 students who previously earned a Level 1 or Level 2 on the Grade 4 FSA Mathematics made a year's worth growth in learning gains on the Grade 5 FSA Mathematics as defined by the FLDOE. Fifty percent of Grade 5 Level 1 and Level 2 math students at JES achieved a learning gain; 35% of Grade 5 Level 1 and Level 2 math students at SES achieved a learning gain; 64% of Grade 5 Level 1 and Level 2 math students at OES achieved a learning gain.

Because of the schools' student achievement data, they received intensive support from the district's ETO. The school district provided each school with one senior administrator and two additional coaches to facilitate common planning and the coaching

for teachers in need of improvement. In addition, each school received weekly coaching support from an EAD responsible for facilitating instructional observations along with the school-based administrators.

The students that attend the schools participating in my study have been identified as economically disadvantaged. The principals received additional funding to provide intervention services to students in an effort to narrow the achievement gap. For example, students were extended the opportunity to participate in afterschool tutoring and Saturday tutoring. During tutoring, teachers were expected to utilize achievement data to create lessons for extended learning opportunities based on their learning needs.

The principals of the participating schools were appointed in July 2015. Each first-year principal was tasked with providing differentiated support for teachers. This was challenging because the principals were not initially familiar with the teachers' strengths or areas in need of growth. Nor were they knowledgeable of the skills of the teacher leaders on campus. Although the principals provided professional development opportunities, they needed to monitor teacher implementation of newly acquired strategies and provide coaching feedback to improve instructional delivery.

Culture

Wagner et al. (2006) refer to culture as "the invisible but powerful meanings and mindsets held individually and collectively throughout the system" (p.102). The culture of the schools participating in my study included low-learning expectations for students in poverty. Teachers demonstrated low-expectancy of students by tolerating inappropriate disruptive behaviors that they would not tolerate in other academic settings. In addition, they do not encourage students to complete homework assignments because

they lack confidence that students will receive parental support. Inconsistently, teachers provided students with challenging assignments. As a result, students are presented with limited opportunities to utilize critical thinking and problem-solving skills.

Moreover, the principals lacked trust in the teachers' capacity to teach effectively in ways to meet the Florida Standards. The principals are dedicated to increasing the capacity of their teachers. They acknowledged that teachers did not receive previously adequate professional development to successfully provide rigorous-standards-based instruction. The principals provided coaching support to their veteran and beginning teachers in a similar manner. Because of the new mathematics instructional shifts, they consider their teachers as novices.

Conditions

Time is the primary condition that negatively impacts teachers' understanding of the Florida Standards an how to address them effectively. According to Wagner et al. (2006), conditions are "the external architecture surrounding student learning, the tangible arrangements of time, space, and resources" (p.101). Conditions of work that are imposed on teachers at JES, SES, and OES are minimal preplanning and post-planning days, limited time for daily common planning, and an insufficient amount of time for teachers to receive professional development prior to implementing practices focused on the new Florida Standards.

Teachers at the aforementioned schools receive 60 minutes of common planning daily. Often, teachers complain that they do not have enough time to prepare adequate lesson plans for five individual subject areas. In addition to developing standards-based lesson plans, teachers are required to provide students with feedback on assignments,

analyze data to formulate small groups, and consistently update parents on the academic progress of their students. One teacher commented in the local newspaper, "Teachers are overworked and expected to work many hours after the 37.5 hours they get paid each week for 39 weeks a year" (citation omitted to maintain anonymity). More than a salary increase, teachers need to be provided more planning time to provide students with a quality educational experience.

Prior to the beginning of each school year, teachers are provided with five days of preplanning and two days of post-planning at the end of the year. During preplanning, teachers were allotted time to become acquainted with each other, decorate their classrooms, and prepare for meet the teacher. In addition, teachers participated in professional development focused on the Marzano Instructional Framework and expectations for deliberate practice. However, they were not afforded the opportunity to participate in professional development related to addressing the Florida Standards. Preplanning days do not provide teachers with adequate planning time to develop rigorous lessons nor attend professional development focused on the Florida Standards.

Adopted in February 2014, school districts were required to implement the Mathematics Florida Standards in classrooms during the 2014-2015 school year. The FLDOE (n.d.) provided opportunities for teachers to participate in the Florida Standards Professional Development Action Projects and the Florida Standards Tools and Resources Professional Development Training Series. Moreover, the FLDOE (n.d.) provided online resources such as PowerPoints, assessments, videos, and tutorials for teachers to gain a better understanding of the standards. Although these opportunities

were available during the summer of 2014, few teachers attended the trainings or accessed the digital resources.

During the 2016-2017 school year, elementary schools in the EPSD were required to implement the i-Ready Math program with fidelity. Teachers were responsible for ensuring that each student completed an adaptive diagnostic assessment twice a year and accessed the online tutorial for a minimum of 45 minutes per week. Teachers were encouraged to analyze diagnostic and formative assessment data to provide students with targeted small-group instruction.

Competencies

The focus of my CLP is to increase teacher competencies by extending the teacher contract to provide teachers with intensive professional development on strategies to effectively implement the i-Ready program and deepen their understanding of the Florida Mathematics Standards. During preplanning, teachers participated in a three-hour training session that provided them with a brief overview of the i-Ready training. Survey and interview responses indicated that teachers perceived this training as insufficient and they felt unprepared to implement the program with fidelity. Wagner et al. (2006) defines competencies as "the repertoire of skills and knowledge that influences student learning" (p. 99). Student achievement will increase when teachers increase their competency levels in instructional approaches focused on teaching toward mastery of the Florida Mathematics Standards.

During the beginning of the school year, teachers experienced difficulty delivering instruction aligned to the rigor of the standards as measured by the instructional classroom assessment rounds I facilitated with school-based administrators.

Based on my observations, I found teachers need to develop the capacity to deliver standards-based instruction and enhance their pedagogical practices to narrow the achievement gap. According to Mader and O'Connor (2014), "Schools aren't just dealing with new standards. There's a new curriculum, new teaching techniques, and new tougher online tests" (p.1). Currently, teachers demonstrate a surface level of understanding of the standards and continue to utilize antiquated instructional techniques that are not aligned to current mathematics instructional shifts.

In an effort to narrow the achievement gap, teachers need to become proficient at analyzing data to provide teacher led differentiated math instruction to students. In addition, teachers need to gain an understanding of how to analyze diagnostic data to determine students' mathematics deficiencies. Currently, teachers are ineffectively grouping students during small-group math instruction and are not utilizing appropriate scaffolding techniques to simplify instruction for students who are performing below grade level.

In my attempt to evaluate the effectiveness of i-Ready Math for teaching struggling Grade 5 students, I discovered participants experienced difficulty implementing the program with fidelity. After analyzing my survey and interview responses, I began to formulate additional questions related to the implementation of the i-Ready Math program at the three targeted schools.

My questions related to the challenges participants encountered trying to implement the program with fidelity, teacher familiarity with the components of the program prior to implementation, and the lack of evidence to support ongoing conversations between administrators and teachers during the initial year of

implementation. Specifically, I would like to know how frequently teachers and administrators met to discuss their perception of the i-Ready Math program. Also, I wanted to learn if administrators provided teachers with a formalized process to discuss their concerns. If so, how did administrators respond based on the feedback they received? Also, I would like to know how the district's roll-out of i-Ready impacted implementation at the three targeted schools. Equally important, I would like to know how frequently teachers planned and developed differentiated lessons based on the i-Ready reports.

My next steps involve self-reflection and initiating critical conversation with essential stakeholders. Based upon my findings, I need to evaluate what I might have done or should have done to help teachers and administrators not be adequately prepared to implement the program with fidelity. As a former EAD, I wanted to determine how I could have been more proactive in my actions to eliminate barriers to effective implementation. In addition, I need to facilitate open dialogue with essential stakeholders to solicit their ideas for improving the implementation of i-Ready Math.

The successful implementation of this plan requires that I collaborate with school board members, CTA representatives, administrators, teachers, and parents. Collaboration is critical to any change effort. According to Allison and Schumacher (2011), "Change requires multiple sources of leadership: associate superintendents, parents, principals, students, and teachers, all willing to model their commitment to instructional reform" (p.14).

My communication plan consists of administering surveys to parents to measure their satisfaction with their children's education. Also, I will survey teachers and

administrators to measure their understanding of the Florida Standards and determine their professional development needs. Subsequently, I will analyze data to determine trends and share my findings with school board members to gain their support of my CLP. After receiving school board approval, I will create a guiding coalition consisting of teachers, parents, and union representation to provide input to the process for the CLP.

Interpretation

The purpose of my evaluation was to determine the effectiveness of the i-Ready Math program when utilized as an intervention with Grade 5 students who have been identified as performing below grade level on the FSA Mathematics. The responses to my survey and interview questions indicated teachers did not implement the program with fidelity. This means, in part, that students did not experience maximum benefit of the program because of limited access.

Teachers and administrators were not adequately prepared to implement the program. The professional development provided was insufficient. The initial overview training did not provide adequate time for administrators and teachers to buy-in to the program and understand the various components needed for its successful implementation. The relationship between professional development and fidelity of implementation impeded student achievement outcomes. The survey and interview responses deepened my understanding of the importance of providing administrators and teachers with appropriate professional development prior to rolling out a new program.

Equally important, my data indicated a lack of communication between administrators and teachers. Teachers and administrators varied in their perceptions of essential components of the programs. Administrators should have conducted ongoing

instructional rounds to provide teachers with meaningful feedback. Teachers should have been engaged in open dialogue during the year as opposed to the end of the year to make necessary adjustments to increase the program's impact on student achievement.

The significance of my findings are related to the school district being a good steward of taxpayers' dollars. The district invested financial resources into the purchase of the i-Ready Math program. School-Based administrators and teachers were responsible for implementing the program with fidelity to ensure a positive return on investment. Akers, Resch, and Berk (2014) commented, "At every level of our education system, leaders need to know which programs and policies are effective to allocate scare resources well" (p. 6). The district leadership is responsible for ensuring resources are maximized for the purpose of increasing student achievement.

Equally important, the findings suggested that school administrators required additional support from district leadership. They needed support in developing infrastructures to ensure fidelity of program implementation. Administrators should have been encouraged to make adjustments to their implementation structures based on i-Ready reports. In addition, administrators needed assistance in ascertaining if teachers acquired the needed skills and knowledge to implement successfully the i-Ready Math program.

I think the results turned out the way they did because of an expeditious implementation of a new program. The principals serving in the targeted schools in the study had limited knowledge of the i-Ready Math program prior to implementation. They attended a one-day overview training prior to introducing the program to their faculty. As a result, they were unprepared to provide their teachers with the required

support needed to ensure fidelity of program implementation. In addition, they were informed of the mandated 45 minute online tutorial after the completion of the master schedule. Therefore, they were unclear as to how to provide students access to the online mathematics program.

Based upon my instructional rounds, teachers struggled with transitioning from whole group mathematics instruction through teacher-led small groups. On the days that teachers did not allow students to work in teacher-led math groups or math centers, students did not have an opportunity to rotate to the computer to complete the i-Ready mathematics tutorial. Also, teachers lacked the knowledge and skills to analyze reports and create differentiated math group instruction based on the data. Teachers required increased time for professional development and coaching support to deliver effective small-group instruction based on the data.

Judgments

As a result of analyzing my survey and response data, I was able to infer answers to my primary and secondary questions. Data indicated administrators and teachers perceived various components of the i-Ready Math program as working well. For example, responses indicated participants perceived the student reports as beneficial. They were useful in helping teachers to plan differentiated lessons. In addition, participants' responses were favorable toward the resources that were available in the i-Ready toolkit. In contrast, stakeholders perceived the i-Ready Math assessments as not working well. They felt the assessments did not accurately measure students' understanding of the standards because the questions did not align to the standards nor were they within the FSA content limits. The biggest challenge with i-Ready Math

program reported by participants was the difficulty implementing the program with fidelity. Specifically, teachers struggled providing students with 45-minute access to the program weekly.

The secondary questions related to participants' perception of contributing factors that may have impacted the program's effectiveness, the feasibility of program implementation, and how well the reports informed planning for differentiated instruction. Respondents in the study described various variables that may have impacted the program's effectiveness. For example, participants identified teacher instructional delivery and student lack of interest as factors that may have negatively contributed to the program's effectiveness. Teachers and administrators indicated difficulty implementing the program to fidelity. Scheduling issues and a lack of computer access were identified barriers to fidelity of implementation. Administrators commented positively on the usage of i-Ready reports to plan for differentiated instruction. Teachers responded they utilized reports to formulate small groups and provide students with differentiated instruction based on data.

The results of my study are limited because of a lack of fidelity of implementation. The 2016-2017 i-Ready student data indicated students at JES spent an average of 866 minutes on the math program; students at SES spent an average of 586 minutes on the math program; OES spent an average of 696 minutes on the math program. If students utilized the program with fidelity, they would have accessed the math program for a minimum of 1,360 minutes. Because of the intervention not being implemented as designed by Curriculum Associates, I was unable to determine the program's impact on student achievement data based on its designed usage. According to

Breitenstein, et al. (2012), "Lack of implementation fidelity can weaken outcomes, leading to faulty conclusions about intervention effectiveness" (p. 1).

Although I was unable to draw a conclusion regarding the program's ability to achieve the intended goal of increasing student achievement of low performing math students, I was able to identify barriers to effective program implementation based on survey and interview responses from participants. This information is beneficial in the district's future implementation of i-Ready Math. Also, it should prove useful to other schools and districts considering its future use for like purposes.

Recommendations

The purpose of my study was to determine the effectiveness of i-Ready Math on Grade 5 students performing below grade level. My results were inconclusive because of a lack of fidelity of implementation. An analysis of my survey and interview data revealed varying responses and views between respondent's perceptions and student data. For example, the majority of participants indicated i-Ready Math professional development provided strategies to ensure fidelity of implementation. However, student data reflected teachers did not implement the program with fidelity.

Based on this evidence, I recommend administrators and teachers receive extensive professional development on effective strategies to implement the program with fidelity. Mizell (2010) commented, "For teachers and school and district leaders to be as effective as possible, they continually expand their knowledge and skills to implement the best educational practices" (p. 3). In addition, data revealed administrators and teachers had differing perceptions regarding the program's ability to improve student achievement gains.

Based upon this information, I suggest administrators conduct monthly round tables with teachers to review student achievement data and discuss aspects of the program that are working well and aspects of the programs that need to be improved. According to MRA (2018), professional roundtables assist in the problem-solving and decision-making processes and expand the perception of participants. Specifically, monthly round tables will afford administrators an avenue to monitor strategically the implementation of the program and provide teachers with feedback to improve their instructional practices. Administrators and teachers suggested i-Ready Math did not accurately measure students understanding of the Florida Standards. During instructional rounds at the targeted schools, participants frequently commented the standards mastery assessments asked questions beyond the content limits of the Florida Standards.

I recommend administrators and teachers review standards mastery assessments prior to administering them to students for the purpose of identifying questions that are not within the content limits of the Florida Standards. Teachers should exclude these questions when determining if students have mastered a targeted standard. In addition, administrators should communicate this concern to Curriculum Associates and request an additional method to measure accurately students' understanding of the Florida Standards.

The organizational change that I would like to make evolves around extending the teachers' contract to provide an extension of professional development on the Florida Math Standards and strategies to successfully implement i-Ready Math. Topics of the professional development would include an in-depth analysis of the Florida Math Standards, strategies to ensure fidelity of implementation and best practices on how to

utilize data to make instructional decisions. According to Curriculum Associates (2017), students who utilized i-Ready Math with fidelity experienced a 38% gain in mathematics according to the i-Ready diagnostic adaptive assessment. Additional professional development opportunities for teachers will increase their knowledge of the math standards and provide them with additional strategies for successful implementation of the i-Ready Math program.

I selected to extend the teacher contract to provide teachers with professional development because teacher effectiveness has a direct relationship to student achievement. According to Mizell (2010), "Educators who do not experience effective professional development do not improve their skills, and student learning suffers" (p. 6). Additional professional development offerings will equip teachers with the skills and strategies they need to narrow the achievement gap of students who have historically performed below grade level in mathematics.

Conclusion

By collecting and analyzing survey and interview data, I was able to increase my understanding of participants' perception of the level of effectiveness of i-Ready Math on Grade 5 students performing below grade level. In addition, I was able to determine the degree of implementation by gathering the amount of minutes students accessed the program. Equally important, I was able to identify the percentage of students at each of the targeted schools that made a learning gain as determined by the 2017 FSA Mathematics and the i-Ready adaptive diagnostic assessments.

Based upon my findings, I was able to utilize the 4Cs AS-IS and TO-BE diagnostic tools to evaluate contributing factors that hindered effective implementation of

the intervention program and restricted student achievement growth. The utilization of this tool readily assisted me in more accurately defining the district's need for a more comprehensive perspective as it relates to a program problem in need of change. Problems can be identified and eradicated with the effective usage of the 4Cs framework.

CHAPTER FIVE: TO-BE FRAMEWORK

Introduction

Improving teacher effectiveness is an essential component to raising student achievement. Fong-Yee and Normore (n.d.) remarked, "While it is no secret that better teachers produce better learning, educational reform must work toward restructuring and reinventing teacher preparation and professional development by connecting clinical work in schools with knowledge about what works for teaching and subject-matter" (pp. 15-16). Similiarly, Rotherham and Willingham (2009) commented, teachers require more robust professional development in comparison to current trainings. Teachers need extended learning opportunities to increase their repertoire of instructional practices. The intended purpose of my CLP is to provide teachers with four weeks of professional development prior to the beginning of the school year to enhance their instructional practices.

Review of Literature Related to Change

Although I could not find research specifically addressing the strategy of extending the teacher contract for a month to provide professional development opportunities, I did find literature that correlated to components of my CLP. Previous studies have examined the relationship between teacher quality and student achievement, professional development and teacher practices, teacher collaboration and student achievement, and characteristics of adult learners. This review of literature will focus on the aforementioned topics as they relate to improving teachers' professional practices and increasing student achievement.

Organizational Change

High-Stakes accountability systems, rigorous standards, diverse needs of at-risk students, and the increasing achievement gap between Caucasians and minority students require school districts to implement organizational change at a rapid rate. Recent studies have attempted to provide leaders with successful strategies to implement organizational change. Kotter (1995) suggested that effective organizational change consists of a series of eight interdependent steps. Within these eight steps, he emphasized the importance of leaders formulating a guiding coalition of individuals that possess influential power to lead a change initiative. In addition, he highlighted the importance of consistently communicating how the change initiative aligns with the organization's visions. Similarly, Shen (2008) commented that leaders should seek every opportunity to engage stakeholders by delegating tasks to increase their participation in the change process.

Wagner et al. (2006) encouraged leaders to implement strategies for change on the basis of what their organization would look like if they achieved their vision or goals. According to the literature, soliciting buy-in and empowering informal organizational leaders are essential to implementing successfully organizational change. Equally important, leaders must clearly articulate the benefits of the change in relationship to the organizations vision. In doing so, the organization's vision is the focal point of the change and not individual political agendas.

Teacher Quality and Student Achievement

In 1990, the Tennessee Department of Education began a comprehensive study on the relationship between teacher quality and student achievement. The Tennessee Value Added Assessment System (TVAAS) identified the correlation between individual

teacher performance and student annual learning gains as measured by the Tennessee Comprehensive Assessment Program. According to Policy Studies Associates (as cited by Center for Public Education, 2005), the findings of the study indicated that teacher effectiveness has a greater relationship to improved student learning than social economic status, race, and class size. Equally important, the effect was greater for minority and low-income students than their White counterparts.

Similarly, Sanders and Rivers (1996) conducted a study to determine the cumulative and residual effects of teachers on student academic success. He concluded that students who had an effective teacher for three consecutive years out performed their peers who have an ineffective teacher for the same time period by a 52 percentile point difference on the Tennessee Mathematics state assessment. Moreover, Aaronson, Barrow, and Sanders (2003) examined the relationship between high school teacher evaluation scores and student achievement levels on a Grade 8 and Grade 9 mathematics standardized assessment. The findings reported students who were taught by teachers who scored two standard deviations higher than their peers as indicated by the teacher evaluation system increased their achievement levels by an average of 25%-45%.

Consistently, the literature identified the teacher as the primary variable in determining student success. Interestingly, I could not find a researcher that was able to identify adequately the characteristics of a highly-effective teacher. This information is critical for improving the instructional practices of teachers serving in historically underperforming schools. Additional studies are needed to determine attributes of highly-qualified teachers.

Professional Development and Teacher Practices

Studies are limited regarding the relationship between professional development and student achievement. However, numerous studies examined the correlation between professional development and teachers improving their instructional practices. The National Science Foundation funded a study to examine the effect of professional development on approximately 200 teachers that teach math and science in secondary schools (Huffman, Thomas, & Lawrenz, 2003). In this study, teachers participated in a variety of professional development opportunities to improve their instructional practices. The professional development sessions varied in length and topics. Topics included, "immersion, examining practice, curriculum implementation, curriculum development, and collaborative work" (Huffman et al., 2003, p. 378). Some trainings were between three-to-five days while others were summer-long secessions.

Teachers were surveyed to determine the amount of time they participated in professional development, trainings they attended, and frequency of use of newly acquired practices. The researchers reported examining practice and curriculum development increased the implementation of rigorous standards-based instruction (Huffman et al., 2003). Conversely, Darling-Hammond, Wei, Andree, Richardson, & Orphanos (2009) administered a survey to approximately 130,000 teachers who indicated dissatisfaction with their current professional development opportunities. Teachers commented that content-related professional development was valuable; however, less than 50% found limited value in the remaining professional development offerings.

French (1997) found that professional development alters teacher behavior when it relates to content, links to their roles and responsibility, and entails follow-up.

Professional development offerings will not automatically result in improved instructional practices. The effectiveness of professional development is contingent upon the audience, relevance of the content, and opportunities to practice the implementation of newly acquired skills or strategies.

Teacher Collaboration and Student Achievement

An effective instructional leader cultivates a collaborative culture and climate by affording teachers scheduled opportunities to analyze student data, discuss pedagogical practices, and develop engaging lessons aligned to the rigor of the standards. Research suggested a positive correlation between teacher collaboration and student achievement. Strahan (2003) conducted a study involving three Title I elementary schools who improved their student achievement on standardized tests from fewer than 50% of their students achieving proficiency to more than 75% of their students achieving proficiency or higher. Participants within the study credited data-directed dialogues for improved student outcomes.

Correspondingly, Vescio, Ross, and Adams (2008) conducted a review of research on the impact of professional learning communities in 10 studies in America and one study in England by analyzing qualitative and quantitative research data. They found that eight of the eleven schools associated an increase of student achievement data with high-functioning professional learning communities. In addition, Leana (2011) reported that Grade 4 and Grade 5 students from New York City increased their mathematics student achievement levels as a result of teachers engaging in ongoing conversations related to mathematical practices.

Based on the review of literature, teachers can no longer afford to teach in isolation. Those who continue to do so are doing their students a disservice. It is imperative that instructional leaders encourage and monitor teacher collaboration to ensure that student learning is the nucleus of their conversations.

Characteristics of Adult Learners

Professional development facilitators need to consider the characteristics of adult learners prior to creating professional development modules. By developing professional development modules with the needs of the adult learner in mind, the professional development facilitator will ensure participants are actively engaged and are motivated to learn (Learning Coach, n.d.). According to RIT On-Line Learning (n.d.), general characteristics of adult learners include problem-centered, self-directed, results-oriented, and relevant. Similarly, Swift and Kelly (2010) suggested that adult learners are more receptive to professional development opportunities that are differentiated, self-directed, and unique to their learning styles. Equally important, adult learners prefer to participate in professional learning opportunities that create an avenue for them to take ownership of their own learning. Teachers prefer experiences that encourage collaborative dialogue and relate to school-wide initiatives. Professional development facilitators who include the latter strategies motivate participants to participate in professional development offerings that are relevant to their professional needs and provide practical instructional strategies that can be replicated to produce increased student outcomes.

Definition of Terms

To ensure a shared understanding of the educational concepts I am presenting, I have defined key terms below associated with the study.

Professional Development. "Both the formal and informal learning experiences and processes that lead to deepened understanding and improvement of practice" (Broad & Evans, 2006 p. 3)

Effective Teachers. "Have high expectations for all students and help students learn, as measured by value added or other test-based growth measures, or by alternative measures" (Goe & Croft, 2009, p. 2).

Teacher Collaboration. "A generalized process where teachers regularly meet to share, refine, and assess the impact of the strategies and approaches they are currently using in their classrooms" (Mattatall & Power, 2018, p. 1).

Data-Driven Dialogue. "Purposeful conversations guided by formal assessments and informal observation that connected the way adults and students cared for each other and that provided energy to sustain their efforts" (Strahan, 2003, p. 1).

Envisioning the Success TO-BE

The initial step toward achieving the vison of CLP is to develop a 4Cs TO-BE organizational chart (Appendix I) that outlines effective strategies to yield positive change within my school district. The 4Cs TO-BE chart serves as a valuable diagnostic tool that assist leaders in creating a blueprint to achieve their vision by analyzing the context, culture, condition, and competencies of their organization. My TO-BE chart (Appendix I) provides a comprehensive description of the future success of the three targeted schools if my CLP is implemented with fidelity.

The context of my CLP includes having three experienced principals with a proven track record of improving student achievement on standardized tests in fragile Title I schools. The future conditions of work imposed on teachers include teachers

continuing to receive an average of 60 minutes of planning daily and an extension of the teacher contract from 10 months to 11 months to provide professional development on the math standards and the i-Ready program. Additional future conditions include instructional delivery aligned to the Florida Math Standards revised during the 2014-2015 school year and fidelity of implementation of the i-Ready Math program. Competencies include teachers demonstrating an in-depth understanding of the Florida Math Standards, teachers effectively implementing the i-Ready Math program, and teachers improving their instructional practices to meet the needs of learners. The future culture of the schools encompasses teachers demonstrating high-learning expectations of students in poverty and administrators establishing trust in the capacity of teachers to teach the program effectively.

Contexts

The ideal future context of my change leadership plan consists of three Title I schools transformed from low-performing to high-performing as indicated by the Florida School Grading System. This transformation is a result of each of the targeted schools being led by experienced principals who have a proven track record of increasing student achievement in fragile schools. I am not suggesting a change in leadership at the aforementioned schools.

As the principals have become more experienced in their role of an instructional leader, they understand the needs of their students and demonstrate the ability to identify accurately the professional development needs of their faculty. The plan is for the current principals of the schools to increase their leadership capacity and to cultivate each of their teachers into becoming high-performing teachers. According to RAND

Corporation (n.d.), "When it comes to student performance on reading and math tests, a teacher is estimated to have two to three times the impact of any other school factor, including services, facilities, and even leadership" (p. 1). Improved leadership and teaching practices will result in increased student performance on standardized assessments.

Because of the targeted schools' increased performance in student achievement, they will no longer need to receive support from the ETO. This will encompass the removal of a senior administrator, district instructional coaches, and decreased observational visits from district administrators. Consequently, it is imperative the each of the schools develop a sustainable plan to ensure they continue with the systems and structures that were implemented in collaboration with the ETO. Principals will need to continue to participate in common planning and conduct instructional rounds to provide instructional personnel with timely, actionable feedback to enhance their professional practices.

The majority of students attending the targeted schools have been identified as economically disadvantaged. As a result, the principals will continue to receive additional funding to support the academic and social needs of the students. The utilization of these funds will be repurposed to provide enrichment and extracurricular activities rather than remediation opportunities.

Culture

The ideal culture of the schools participating in my study includes teachers demonstrating high-learning expectations of students in poverty. Teachers will ensure these students have access to rigorous coursework, develop lessons that are engaging and

relevant to students, and assign challenging assignments that require students to utilize their problem-solving and critical thinking skills. In addition, teachers will create a classroom culture where students understand and adhere to behavioral expectations, respect themselves and their peers, and take responsibility for their actions.

In addition to a culture of high-performance expectations of students, administrators' trust in the capacity of teachers to implement the i-Ready Math program effectively will increase. Modonno (2017) commented, "I have come to believe that trust is the most important factor in building a collaborative and positive school culture" (p. 1). Principals will communicate their trust for teachers to implement the program effectively by providing them an opportunity to implement newly acquired strategies in a safe and nonthreatening environment. In addition, principals will conduct monthly round table discussions with teachers regarding program implementation. Principals will validate teachers' concerns and take appropriate action.

Conditions

As previously indicated in my AS-IS chart (Appendix H), time is the primary condition of work imposed on teachers at the targeted schools in my study. Elementary teachers will continue to receive an average daily planning time of 60 minutes. In addition, teachers will be responsible for delivering the Math Florida Standards that were fully implemented during the 2014-2015 school year. Equally important, teachers will continue to utilize the i-Ready Math program as an intervention for students identifies as performing below grade level. The aforementioned conditions remain constant from the AS-IS chart (Appendix H).

The ideal future conditions of the targeted schools include extending the teacher contract from 10 months to 11 months to provide teachers with 25 days of preplanning and two days of post planning. In addition, teachers will receive extensive professional development on i-Ready and the new Florida Math Standards. The extension of preplanning days is in response to survey and interview questions that identified a need for teachers to receive additional professional development on the i-Ready Math program and deepen their understanding of the new Florida Math Standards. In response to what can be done to implement reform efforts differently, Payne (2008) commented, "time for professional development, time for key relationships to develop, time to change teacher belief, [and] time for midcourse adjustment" (p. 172). This extensive professional development will assist teachers in developing lessons aligned to the rigor of the standards, identify student academic disparities, and more effectively utilize i-Ready Math resources to increase student achievement.

Moreover, teachers will increase their understanding of how to interpret the i-Ready reports, group students appropriately for small-group instruction, and monitor student progression toward the learning targets. Equally important, teachers will expand their classroom management strategies to motivate students to work at optimal levels when they are accessing the program. The additional professional development opportunities will serve as a remedy to minimize impediments to program implementation.

Competencies

The ideal future competencies include teachers demonstrating an in-depth understanding of the Florida Standards. During common planning, teachers will

appropriately deconstruct the standards, and discuss prerequisite skills students need to master the standards. In addition, teachers will create open-ended questions and design student activities aligned to the rigor of the standards. Equally important, teachers will work collaboratively to develop common assessments aligned to the standards ensuring a direct relationship between the standards, instructional delivery, and assessments. During instructional rounds, administrators will observe teachers delivering standards-based instruction in accordance with Webb's Depth of Knowledge, consistently.

Also, teachers will implement the i-Ready Math program with fidelity. Teachers will ensure that each student has access to the i-Ready Math program for a minimum of 45 minutes per week. Teachers will ensure that each student has a usage goal and monitors student usage minutes, lessons completed, and pass rates for the online tutorial. In addition, teachers will analyze student performance on the adaptive diagnostic and standards mastery assessments and utilize data to inform instruction during teacher-led, whole-group, and guided lessons.

Equally important, teachers will improve their instructional practices to meet the needs of learners. Teachers will develop differentiated lessons for students based on i-Ready progress monitoring data and utilize scaffolding techniques to chunk difficult concepts for students. In addition, teachers will employ varied instructional techniques to meet the unique learning styles of students. For example, teachers will utilize manipulatives to model concrete representation for students and teach students strategies to solve multi-step word problems. Also, teachers will utilize the remediation resources in the i-Ready toolbox to provide students with remedial lessons to improve their math skills.

Conclusion

The TO-BE 4Cs organizational chart is instrumental in creating a visual of future success within an organization (Wagner et al., 2006). The utilization of this tool readily assists leaders in communicating the desired change in an effort to achieve the organization's vision. Specifically, the framework serves as an avenue for the three targeted schools within my study to identify required shifts to increase student performance in mathematics. Previously, I identified the AS-IS needs and have identified the TO-BE desired outcomes of the development of thoughtful policy and strategies that are supported by the results of my program evaluation.

Building teacher capacity is a prerequisite to students experiencing success in schools. Teachers need to participate in job embedded professional development opportunities that are developed with the characteristics of the adult learner in mind and that emphasize strategies to delivery rigorous standards-based instruction. Administrators must work collaboratively with central office executive leaders to revamp professional development offerings to meet the diverse needs of 21st century teachers as well as learners.

In addition, school-based administrators should participate in collaborative professional development sessions with their faculty to monitor their effectiveness and provide teachers with coaching feedback to strengthen their professional learning communities. As a result of examining the literature, I am convinced that district leaders and teachers need to identify characteristics of a highly-effective teacher and provide professional development based on needs and in accordance with related professional development standards to ensure school districts receive a positive return on investment.

CHAPTER SIX: STRATEGIES AND ACTIONS

Introduction

The AS-IS organizational chart provides a visual representations of the current systems and structures that support a need for change based on mathematics student achievement data in the three targeted schools. The TO-BE organizational chart represents the desired future success of the three targeted schools within my school district. In an effort to bridge the gap between the TO-BE and AS-IS, I have identified main areas based on the 4Cs that need to be addressed to successfully implement my CLP.

In reference to the context, the primary area that needs to be addressed is principal leadership capacity. Sun (2011) stated, "Given the impact school leadership can have on student outcomes, providing every school with an effective principal should clearly be among the top priorities" (p. 4). For an organization to transform historically low-performing schools, it must invest in developing principals to improve the quality of teaching and learning in targeted schools.

As it relates to culture, principals need to establish a school-wide environment of high-expectations for students. According to Taylor (2010), "Improving student achievement as measured by standardized assessments is realized when the district and school leadership create an organizational culture committed to all students learning at a high level" (p. 1). Consistently, school-based administrators must communicate to faculty the importance of providing students access to rigorous course work while simultaneously providing them with scaffolding supports to achieve success.

Conditions evolve around administrators providing teachers with additional collaborative planning time and professional development opportunities to equip them with strategies and resources to meet the demands of their responsibilities. In the article, *Give Teachers Time to Collaborate,* Davis (2015) identified increased teacher collaboration as a method to increase student achievement. She commented, "One of those conditions is surely for teachers to have more time to work together to strengthen the instructional practices that result in successful schools" (Davis, 2015, p. 27). Administrators must create conditions where teachers can improve their teaching techniques for the purpose of improving student outcomes.

In the area of competencies, teachers need to improve upon their execution of effective professional practices. Teachers require extensive professional development on the Florida Standards and effective practices to meet the individualized needs of learners. Darling-Hammond, Hyler, and Gardner (2017) commented, "High-quality professional development creates space for teachers to share ideas and collaborate in their learning, often in job-embedded contexts that relate new instructional strategies to teachers' students and classrooms" (p. 2). Teachers will transfer newly acquired skills to their classrooms and increase student achievement as a result of attending quality professional development.

Strategies and Actions

The strategies that I recommend to produce organizational change were derived from the issues associated with the 4Cs: content, culture, conditions, and competencies. These research-based strategies have been attributed to transforming historically

underperforming schools to schools of excellence. I have identified the following nine strategies to transform the three targeted schools within my study.

Context

Strategy 1: Build the leadership capacity of school-based administrators. The principals of the schools within my study have less than three years of experience in their current roles. Improving their leadership capacity is essential to the improvement of teacher practices and student achievement outcomes. According to Colon (2016), "Principals need support in how to coach teachers, support learning communities, and sustain the implementation of effective instructional and assessment practices" (p. 1). Principals need to be taught how to monitor teacher practices consistently, provide coaching feedback, and analyze data to make school-wide instructional decisions.

According to survey and interview responses, principals need additional support developing strategies to ensure fidelity of implementation. Capacity building of principals would eliminate ineffective implementation of the i-Ready Math intervention program and provide principals with the skill-set necessary to monitor and adjust program implementation based on progress monitoring data. Principal supervisors and district administrators must view the capacity building of school-based administrators as a priority.

Strategy 2: Develop sustainable systems and structures to improve teaching practices and accelerate student performance. Currently, the targeted schools are supervised by the ETO. This is because of administrators requiring additional support to develop systems and structures to enhance teaching practices and improve student performance. In the future, my goal is for the targeted schools to return to their original

learning communities. In order for this transition to occur, principals would be required to show evidence that they can sustain systems and structures to improve teaching practices and accelerate student performance. Childress, Elmore, and Grossman (2006) commented, "District leaders must come to view their organizations as integrated systems whose interdependent parts are directly linked to the work of teachers and students in classrooms" (p. 13). Building leaders must be able to create a system that evolves around teaching and learning. Specifically, they need to understand the relationship between student achievement data, resources, curriculum, and teacher professional development needs. Principals must be able to communicate how each of these components work collectively and not in isolation to transform underperforming schools. More importantly, principals must take ownership for strategically monitoring their systems to make course adjustments.

Culture

Strategy 3: Create a school-wide culture of high-expectations for all students. Teacher expectations have the ability to impact positively or negatively student achievement. Rosenthal and Babad commented (1985), "When we expect certain behaviors of others, we are likely to act in ways that make the expected behavior more likely to occur" (p. 1). Principals are responsible for creating a school-wide culture of high-expectations for students. Academic and social expectations should be clearly defined for students. More importantly, faculty and staff should be held accountable for monitoring and evaluating students' progress toward achieving these expectations.

Strategy 4: Develop a culture of trust and respect. The principals expressed a lack of trust in teachers' ability to provide consistent standards-based instruction and

implement the i-Ready Math program with fidelity because of having a large percentage of new teachers and an expeditious implementation of the intervention program. Bryk and Schneider (2002) conducted a study and found that "trust fosters a set of organizational conditions, some structural and others social-psychological, that make it more conducive for individuals to initiate and sustain the kinds of activities necessary to affect productivity improvements" (p.116). When principals develop a culture of trust and respect with their faculty, teacher are likely to practice innovative teaching strategies, communicate concerns with administration, and actively participate in the problem-solving process to improve student achievement.

Conditions

Strategy 5: Increase teacher planning days to provide targeted professional development for teachers. Administrators and teachers overwhelming identified insufficient professional development as a barrier to program implementation. Increasing teacher planning days to provide targeted professional development results in improved student achievement outcomes (Vescio, Ross, & Adams, 2008). Merritt stated (2016), "But a productive day of teaching requires substantial planning time to choose effective strategies, design lessons, prepare materials and collaborate with others" (p. 1). Increasing opportunities for teachers to plan individually and collectively is paramount to improve the quality of instruction provided to students in Title I schools.

Competencies

Strategy 6: Extend teachers' understanding of the Florida Math Standards and effective instructional practices. Standardized assessment data indicated teachers need extensive professional development to ensure they are delivering rigorous standards-

based instruction consistently. In addition, instructional rounds support the notion that teachers have a surface understanding of the standards and need support in creating lessons aligned to the Marzano framework. Teacher interview responses indicated they did not feel the i-Ready Math program aligned to the Florida Standards. Based upon my review of the program, I found that the majority of the questions were aligned to the standards. However, the online program did ask scaffolding questions for students that required remediation and provided higher-level questions outside the content limits of the standards for students needing to be challenged.

I am uncertain if teachers really have an understanding of the standards. FSA data during the inaugural implementation year of i-Ready Math reflected a need for teachers to enhance their understanding of the standards and expand their instructional practices to narrow the achievement gap. According to the Action Brief from Achieve, College Summit, National Associate of Secondary School Principals, and National Associate of Elementary School Principals (2013), "Standards alone will not improve schools and raise student achievement, nor will they narrow the achievement gap. It will take implementation of the standards with fidelity by school leaders and teachers to significantly raise student achievement" (p. 3). It is imperative for principals to provide an avenue for teachers to develop a thorough understanding of the standards and sharpen their pedagogical practices.

Strategy 7: Fidelity of implementation of the i-ready Math program. My findings overwhelming indicated teachers experienced challenges effectively implementing the i-Ready Math program. Administrators contributed this challenge to insufficient professional development and a lack of understanding of how to utilize the

various components of the program effectively. Teachers and administrators need to revise strategies to ensure students are provided with a minimum 45-minute access to the program weekly. In addition, principals need to work in collaboration with their teachers to develop a system to monitor student usage, percentage of lessons passed, and progress toward individualized growth targets.

Fidelity of program implementation is critical to narrowing the achievement gap of students who have been identified as performing below grade level in math. Carrol, et al. (2007) commented, "It has been demonstrated that the fidelity with which an intervention is implemented affects how well it succeeds" (p. 1). For students to receive maximize benefit from the intervention program, teachers must effectively implement the program with fidelity.

The first action that aligns to Strategy 1 is for school-based administrators to participate in monthly professional development opportunities. Stronge, Richards, and Catano (2008) commented, "Learning needs to occur throughout an organization, and principals need to become participants in the learning process in order to shape and encourage the implementation of effective learning models in their schools" (p. 1). Effective principals willfully engage in professional development opportunities to acquire leadership strategies to improve teaching and learning on their campuses.

Professional development modules for the targeted principals in my study will focus on the following core competencies: time management, strategies to improve the quality of teaching and learning, distributive leadership, and data-driven instruction. For example, principals will enhance their understanding of the standards and effective instructional practices. In addition, principals will learn how to evaluate teacher

performance, accurately, and provide actionable coaching feedback to improve student outcomes. As it relates to Tier 2 math instruction, principals will acquire additional information pertaining to i-Ready Math, which will enable them to support teachers in effective implementation of the intervention program.

The second action that aligns to Strategy 1 consists of district administrators facilitating instructional reviews monthly with the targeted school-based administrators. The purpose of instructional reviews is for the principals and me to observe classroom instruction to identify trends and develop an action plan to meet the targeted school improvement goals. In addition, instructional reviews create an avenue for me to shape the instructional lens of the administrators by providing side-by-side coaching. As a result of participating in monthly instructional reviews, principals should increase their ability to monitor and support standards-based instruction.

The third action that aligns to Strategy 1 is the plan to provide each of the targeted principals with a mentor. Mentorship programs have been credited for assisting novice principals in effectively performing their duties as they relate to instructional leadership and managing the daily operations of the school (Prothero, 2015). Principals in my study will meet with their mentors monthly to discuss their leadership areas of strengths as well as their opportunities for improvement. Mentors will ask questions of their mentees, which will require them to reflect on their current practices and offer coaching feedback. Mentorship opportunities will provide principals with leadership strategies to improve instruction and student proficiency scores.

The first action that corresponds to Strategy 2 is for principals to align resources systematically based on instructional trends and student data. Specifically, principals will

support teachers by providing them with professional development based on data and identified instructional problems of practice. In addition, principals will ensure school-based coaches are qualified to facilitate the coaching cycle (i.e., preconferencing, modeling, coteaching, and debriefing) with teachers who have been identified as underperforming.

The second action that aligns to Strategy 2 is for principals to establish a teacher leadership academy to ensure school-based coaches develop the skills necessary to support classroom teachers. Participants will reflect on their teaching practices, increase their skills to coach their colleagues, and enhance their leadership capability (University of South Florida, 2018). School-Based coaches participating in the teacher leadership academy in the targeted schools will assist in the retention of beginning teachers, increase teaching capacity, and aid in positive student outcomes.

The first action that aligns to Strategy 3 is a faculty book study on *Engaging Students with Poverty in Mind* written by Eric Jensen. Teacher leaders will be asked to facilitate this book study with their grade level teams. Each team member will be responsible for implementing newly acquired strategies to ensure to communicate high-expectations to students. Administrators will monitor classroom instruction and provide teachers with weekly feedback on strategies to communicate high-expectations to students.

The second action that aligns to Strategy 3 is goal setting for students. Students will establish individual academic and social goals. Teachers will meet with students monthly to monitor their progress toward targeted goals. According to Professional Learning Board Blog (n.d.), “Goal setting is a powerful yet challenging process that

encourages students to aim higher" (p. 1). By providing students the opportunity to create individual goals, teachers communicate high-expectations to students and a belief that they have the potential to accomplish their identified goals.

The first action that corresponds to Strategy 4 is continuous open dialogue between the principals and teachers at the three targeted schools. During these monthly sessions, teachers will be provided the opportunity to share input on the implementation of the i-Ready Math intervention program. Teachers will share what they perceive to be going well with the program, areas of concerns, and innovative ideas to enhance program implementation. As a result of these sessions, teachers will feel empowered to make decisions that positively impact student achievement. According to Vanderbilt (2017), "Empowering teachers in your school can increase satisfaction, improved school culture, and impact student learning" (p. 1). Gardner-Webb University (n.d.) echoed, "As the administration relinquishes control to the teacher and shows trust, teachers become more creative and willing to take risks" (p. 1). Empowering teachers is vital to developing a culture of trust and mutual respect between administrators and teachers.

The second action that aligns to Strategy 4 is for principals to create a recognition system to acknowledge the accomplishments of teachers. Vanderbilt (2017) commented, "By sharing the success and creativity of your teachers, it empowers them to continue looking for ways to be innovative in their classroom and to continue fostering an environment centered on their students" (p. 2). A school culture of trust encourages teachers to try innovative strategies in a risk-free environment.

The first action that aligns to Strategy 5 is for the district to extend the teacher contract from 10 months to 11 months. Merritt (2016) commented, "District leaders need

to build in these professional development days and balance meetings and professional development days with other days where teachers have autonomy to collaborate and work independently as needed" (p. 1). District leaders will meet with teachers to receive feedback pertaining to their proposed plan to extend the teacher contract for the purpose of providing teachers with extensive time to plan lessons aligned to the standards, collaborate with their peers, and attend face-to-face professional development to enhance their professional practices. Based upon teacher feedback, the district will collaborate with union leaders to devise a plan to provide teachers with quality professional development opportunities by extending the teacher contract.

The first action that corresponds to Strategy 6 is the process of surveying teachers to determine their professional development needs. Teachers will be asked to complete a Survey Monkey to identify their professional development interests. Professional development modules will be created by instructional resource teachers based on participant responses and school-wide observational trends.

The second action that aligns to Strategy 6 is continuous professional development for teachers during preplanning and the school year. Instructional resource teachers will facilitate professional development for teachers serving in the targeted schools. Teachers will have the opportunity to ask questions pertaining to effective pedagogical practices, design standards-based lessons, and utilize students' previous year i-Ready Math data to create differentiated small-group lessons for students. In addition, teachers will participate in quarterly i-Ready Math professional development during the school year. As a result of attending the aforementioned professional development

sessions, teachers will expand their understanding of the standards and student achievement will significantly increase.

The action that corresponds to Strategy 7 is effective monitoring of teachers' implementation of the i-Ready Math program. Principals will monitor fidelity of implementation of the i-Ready Math program to ensure teachers are appropriately applying the newly acquired strategies they learned during the professional development sessions. In addition, continuously, principals will analyze student data and instructional trends with teachers to identify a problem of practice. Administrators will provide teachers with feedback that focuses on how they are utilizing data to formulate small group instruction and their usage of engagement strategies to ensure students are working to their maximize potential when they are on the i-Ready Math program.

The action that aligns to Strategy 8 is the facilitation of the coaching cycle with teachers who have been identified as in need of improvement based on instructional observations and student achievement data. During the preconference, the principal, teacher in need of improvement, and the instructional coach will meet to identify targeted instructional practices that the teacher needs to improve upon. Based upon this meeting, the instructional coach will work with the teacher by modeling instruction, coteaching with the teacher, and providing specific actionable feedback on the teacher's progress related to the improvement goals. At the end of the two week coaching cycle, the principal will observe the targeted teacher to identify instructional practices that provide evidence to show the teacher has deepened understanding of the standards and enhanced pedagogical practices.

The first action that aligns to Strategy 9 is monthly meetings with teachers where school-based administrators review students' usage minutes, number of lessons completed, and percentage of lessons passed. If it is determined that students are not meeting their required weekly minutes or passing 75% of their assigned lessons, immediately, the principal and the teacher will collectively create an action plan to improve the teacher's implementation of the action plan and monitor student reports to ensure students are receiving maximal benefits of the program.

The second action that aligns to Strategy 9 is for me to meet with principals during preplanning to discuss their framework for implementation of the i-Ready Math program. During this meeting, I will ask principals reflective questions to ensure they have a well-defined planned to monitor program implementation continuously. In addition, I will incorporate the analyzation of i-Ready data into my biweekly data meetings with principals. During these meetings, principals will be asked to share what is working well with the program as well as areas of concerns. Based upon these responses, I will collaborate with school principals to develop an action plan to ensure fidelity of implementation of the intervention program.

The Strategies and Action Chart (Appendix J) summarizes research-based strategies and actions that will bridge the gap between the AS-IS and the TO-BE associated with the 4Cs in my study. In addition, the aforementioned strategies and actions address the primary issues identified by participants. Consistent implementation of the strategies and actions outlined in Appendix J will result in improved teacher practices and a significant increase in student achievement data for students.

Conclusion

Actions and strategies to initiate effective change must be aligned to the identified needs of an organization. The current and future context, culture, conditions, and competencies must be accurately identified to successfully develop actions and strategies to yield positive outcomes. Habakkuk 2:2 King James Version records, "Write the vision and make it plain upon the tables, that he may run that readeth it."

The Actions and Strategies chart (Appendix J) provides a detailed blue print that focuses on increased professional development, collaboration between administrators and teachers, and intensive monitoring of instruction and coaching feedback. In addition, the identified strategies and actions highlight the importance of principals demonstrating the ability to monitor their learning environment and make adjustments to improve teacher practices and student achievement. Successful implementation of the research-based strategies and actions will transform the targeted schools within my study from historically underperforming to high-performing schools.

CHAPTER SEVEN: IMPLICATIONS AND POLICY RECOMMENDATIONS

Introduction

ECPS' Policy GCH: Professional Staff Orientation and Training requires that administrators and instructional personnel be provided with opportunities to participate in in-service training programs (Excellence County Public Schools, 2016). According to the current district's policy, in-service training programs should focus on increasing student achievement outcomes by enhancing teachers' instructional practices. Darling-Hammond, Hyler, and Gardner (2017) commented, "Educators and policymakers are increasingly looking to teacher professional learning as an important strategy for supporting the complex skills students need to be prepared for further education and work in the 21st century" (p. 1). Effective professional development opportunities for teachers are paramount to ensuring students possess multifaceted skills to guarantee they are prepared for college and careers.

The policy issue related to my findings relates to the level of effectiveness and frequency of professional development participants received prior to and during the targeted schools' inaugural year of implementation of the i-Ready Math program. Survey and interview responses indicated administrators and teachers experienced challenges implementing the program to fidelity because of insufficient professional development during preplanning and the course of the school year. Participants described the professional development they received as a basic overview lacking the intricate details they needed to implement the program with fidelity and understand the functionality of the online tutorial program.

In accordance with the district's current policy on providing program in-service for administrators and teachers, participants attended one session on i-Ready. During this session, administrators and instructional personnel were informed to utilize the program as an intervention for students. The allotted professional development provided participants with the expectations of administering the diagnostic assessments and providing students with 45-minute weekly access to the program, but did not provide teachers with a thorough explanation as to the reasoning behind the expectations.

Equally important, a vast majority of participants did not receive any follow-up training on the i-Ready Math program. As a result, my program evaluation findings indicated participants struggled to implement i-Ready Math with fidelity and students did not experience the full benefits of the intervention program. The Mathematics FSA data for Grade 5 students in my study reflected that 50% of students that attended JES made learning gains, 64% of students that attended OES made learning gains, and 35% of students that attended SES made learning gains. The learning gains of students performing below grade level at the aforementioned schools could have been significantly higher if teachers received the quality of professional development needed to implement i-Ready with fidelity.

Based upon my program evaluation findings, the focus of my organizational CLP was to extend the teacher contract to provide teachers with extensive professional development opportunities to increase their understanding of the i-Ready program and expand their knowledge of the Florida Math Standards. According to DeMonte (2013) "A review of research on the effect of professional development on increased student learning found that programs had to include more than 14 hours of professional

development for student learning to be affected" (p. 1). Participants in the study indicated they received minimal professional development, significantly less than 14 hours, and were ill-equipped to implement the program with fidelity.

Policy Statement

My issue with ECPS district's policy as it relates to in-service training of administrative and instructional staff is that it does not specify the frequency of professional development opportunities nor does it require extensive follow-up for teachers and administrators. Policy GCH: Professional Staff Orientation and Training is outlined below.

Current Policy

> An in-service training program shall be available for administrative and instructional staff. Various types of in-service training programs shall be provided to increase student achievement, enhance classroom instructional strategies that promote rigor and relevance throughout the curriculum, and prepare students for continuing education in the workforce. The Superintendent shall direct the development and implementation of a Master Plan for In-service Education, which shall be duly approved by Excellence County Public Schools. (Excellence County Public Schools, 2016)

I am recommending a policy change to include specific verbiage that requires administrative and instructional personnel to receive professional development during preplanning and quarterly follow-up trainings aligned to districtwide implementation of the core curriculum and intervention programs. The Center for Public Education (2013) commented, "In order to truly change practices, professional development should occur

over time and preferably be ongoing" (p. 1). The one-day professional development model does not provide teachers with sufficient time to process new information to ensure a transfer of knowledge to the classroom.

Administrators and teachers need ongoing support when they are attempting to implement a new program, learn new strategies, and expand their knowledge of complex standards. The Center for Public Education (2013) noted that teachers transfer 10% of information they retain in a one-day session of professional development; however, when they are provided follow-up coaching from professional development, they successfully transfer 95% of newly acquired skills. For this reason, I am suggesting to revise the current policy to include the italicized verbiage below.

Revision to Policy

> An in-service training program shall be available for administrative and instructional staff. Various types of in-service training programs shall be provided to increase student achievement, enhance classroom instructional strategies that promote rigor and relevance throughout the curriculum, and prepare students for continuing education in the workforce. [*Administrative and instructional staff shall receive preplanning and quarterly professional development aligned to districtwide implementation of the core curriculum and intervention programs.*] The Superintendent shall direct the development and implementation of a Master Plan for In-service Education, which shall be duly approved by Excellence County Public Schools. (Excellence County Public Schools, 2016)

I envision this policy eradicating the issue of participants experiencing challenges implementing the program with fidelity by specifying the need for administrators and instructional personnel to receive effective professional development and extensive follow-up support during the initial year of program implementation. As a result of the school district eliminating the one-day workshop model of professional development, educators will be afforded the opportunity to implement the strategies they received in the initial training, self-evaluate their progress, and return to the follow-up sessions to present questions to the facilitator for the purpose of improving implementation. Ferlazzo (2015) echoed this notion when he commented, "But the key is to not leave the professional development up to a single session with no follow-up. The opportunity to continuously improve and adjust, once teachers have had an opportunity to implement, is vitally necessary to sustain change" (p. 1). The improvement of teachers' instructional practices through effective job embedded professional development has a direct relationship on student achievement.

Analysis of Needs

Educational Analysis

Professional development is essential to improving teacher performance and increasing student achievement. DeMonte (2013) commented, "In many ways professional development is the link between the design and implementation of education reforms and the ultimate success of reform efforts in schools" (p. 1). In order for professional development to positively impact reform efforts, educators must be offered ongoing learning opportunities to master the implementation of newly acquired skills and strategies. According to DeMonte (2013), "Researchers and practitioners note that when

the traditional programs of professional development—usually single-event, so-called "drive-by" interventions—are replaced by longer-term designs, there is a greater chance that teachers will improve instruction" (p. 2). When districts extend the opportunities for administrators and teachers to engage in continuous professional development prior to and during the initial phase of an instructional practice, teacher capacity and student achievement are significantly improved.

The implication of the policy problem related to the educational issue is the lack of specific language that speaks to the frequency of professional development offerings for administrators and teachers aligned to district-wide implementation of core curriculum and intervention programs. Administrators in my study indicated they provided teachers with varying opportunities to attend professional development sessions focused on the implementation of i-Ready Math. For example, most administrators commented they only provided teachers with an overview of the i-Ready Math program during preplanning while the minority of administrators indicated they provided teachers with follow-up training throughout the school year. As a result, the majority of participants indicated they experienced significant challenges implementing i-Ready with fidelity. The amendment of the current GCH: Professional Staff Orientation and Training policy will provide administrators with specific expectations for providing teachers with continuous, high-quality professional development in accordance with research and best practices.

Economic Analysis

The implication of the policy problem related to the economic issue is the financial impact on the budge to provide teachers with increased professional

development opportunities. Nationally, 20 billion dollars a year is invested to provide educators with professional development (Demonte, 2013). Across the country, school districts spend an average of 1%-3% on professional development (Mizell, 2010). Equally important to note, the federal government mandates that Title I schools utilize 10% of federal dollars toward professional development offerings. However, teachers have commented they experienced difficulty transferring newly acquired knowledge into their daily instructional practices and standardized achievement results remain stagnant nationwide.

District leaders need to invest more funding to improve the professional practices of their administrators and teachers. Mizell (2010) suggested that district allocate 10% of their budgets for professional development and educators spend 25% of their work time engaging in learning and collaboration with their peers. According to ECPS' 2018-2019 budget summary, the district allocated 10% of the budget to instructional staff training. Instructional staff in the targeted schools participated in professional learning communities on average of three times a week for 30 minutes. I am suggesting that ECPS increase the allocation of professional development dollars in targeted Title I schools to compensate teachers for attending high-quality professional development during preplanning and continuous professional development beyond the school day each nine weeks.

Those who oppose the notion of increasing allocation for professional development in Title I schools may do so because they question the return on investment based on existing student achievement outcomes. In addition, some individuals argue that educators should be responsible for their professional growth. These individuals

need to understand the benefits of ongoing, high-quality professional development and its impact on student achievement. Mizell (2010) commented, "If administrators become better leaders and teachers become more effective and apply what they learn so that students achieve at higher levels, professional development is worth the cost" (p. 19). The relationship between teacher capacity and student achievement outcomes fully support an increase for professional development funding as an economical viable alternative to increase student achievement results.

Social Analysis

The implication of the policy problem related to the social issue is professional isolation for teachers. Teachers deliver instruction to students for an average of seven hours a day behind closed doors and experience limited interactions with their colleagues. According to Mirel and Goldin (2012), "The majority of American teachers plan, teach, and examine their practice alone" (p. 1). They feel alone as they struggle to meet the demands of the rigorous accountability system. As a result of professional isolation, teachers become discontented at work and lose their enthusiasm for the profession. Equally important, isolation for teachers unsettles the culture and climate of the classroom environment and impedes student learning (Ostovar-Nameghi & Sheikhahmadi, 2016).

District leaders need to assist principals in developing structures to increase collaboration through ongoing professional development by revising the language of Professional Staff Orientation and Training policy. Teachers should be provided with a risk-free environment to discuss concerns related to their professional progress. Specifically, teachers should be encouraged to participate in peer observations, lesson

study, and professional learning communities to reduce the feelings of professional isolation. Professional development opportunities must transition from one-day events to collaborative learning cycles of continuous improvement.

Critics of teacher collaboration argue that teachers should not be forced to collaborate. They feel that teachers should have the autonomy to work in isolation. According to Ostovar-Nameghi & Sheikhahmadi (2016), "Teacher collaboration is conducive to professional development and growth if it is democratic rather than dictated" (p. 3). Student data provided evidence to support that the benefits of teacher collaboration supersedes a reduction in teacher autonomy. It is imperative for administrators to utilize influential leadership to develop a school-wide culture and climate conducive to collaboration and collegiality.

Political Analysis

The implication of the policy problem related to the political issue is the imbalance of educational authority between the state government and local school boards. The U.S. Constitution does not address educational policies; therefore, the states have delegated authority on educational policies based on the 10th Amendment. Prior to the Regan administration, state governments transferred educational powers to local school boards. In the late 1980s, state governments began to assert their authority over public education because of the perception of failing public schools (Fowler 2000). Fowler (2000) commented, "State governments asserted their authority over public schools by issuing a bewildering array of policies and policy proposals" (p. 8). School boards and superintendents have vocally expressed concerns over noneducators implementing an inequitable accountability system and policies that negatively impact public schools.

House Bill 7069 is an example of a controversial policy in the State of Florida that has been given much attention during the past year. In accordance with the bill, the Schools of Hope Program allocates public dollars to fund charter schools that operate within five miles of schools that have earned a F school grade or three consecutive Ds. Instead of increasing funding for fragile public schools, funding is transferred to charter schools. Proponents of this bill believe that public schools have demonstrated an inability to educate children successfully from low-socioeconomic backgrounds. Politicians passed this bill on the premise they are trying to provide a quality education to at-risk students–something they believe public schools have been unable to accomplish.

Critics of the bill feel it violates the Florida Constitution because it removes local control of the school board. Bill Sublette (2017) commented,

> Article IX, Section 4 of the Florida Constitution provides for local control of public schools through locally elected school boards, stating, "The school board shall operate, control and supervise all free public schools within the school district." Yet HB 7069 eliminates the power of local school boards to review and approve charter schools applications or to demand minimum standards of quality, competence or taxpayer accountability from certain charter school applicants favored by the Legislature. (p. 1)

Opponents of this bill have identified an attempt by politicians to demoralize public schools as the primary hidden agenda for supporting this bill. Ravitch (2014) commented, "The charter movement has become the vehicle for privatization of large swaths of public education, ending democratic control of public schools and transferring them to private management" (p. 178). Legislators have capitalized on the needs of at-

risk students to provide corporations with the ammunition they need to take over public schools.

Underperforming schools are detrimental to the long term existence of public schools. School districts potentially lose authority and funding as a result of declining student outcomes. For this purpose, it is imperative that educators be provided with the necessary support to improve the student outcomes of most fragile students.

Legal Analysis

The implication of the policy problem related to the legal issue is the removal of ineffective teachers working in underperforming schools. Florida Statue 1012.34 forbids the hiring of certified teachers who have received an evaluation rating of less than effective in schools that have received a school grade of F or three consecutive Ds (Florida Legislature, n.d.). As a result, school districts are required to transfer ineffective teachers from fragile schools to other schools within their districts weeks before the new school year begins. This often leaves historically underperforming schools with vacancies in the beginning of the school year.

Advocates of this statue strongly believe that a disparity exists between the teaching talent in high-performing schools and underperforming schools (Florida Legislature, n.d.). To remedy this situation, the legislature mandated the removal of teachers identified as less than effective. This action is detrimental to underperforming schools because it further exacerbates the issue of recruiting and retaining teachers in the most fragile schools.

In a workforce that is plagued by teacher shortage, it is vital that teachers serving in fragile schools receive the necessary supports to improve their instructional practices.

Sutcher, Darling-Hammond, and Carver-Thomas (2016) suggested the following for teacher retention, "Create productive school environments, including supportive working conditions, administrative supports, and time for teachers' collaborative planning and professional development-all of which help attract and keep teachers in school" (p. 2). Teachers need to be *coached-up* by providing them with professional development to ensure they have an in-depth understanding of the standards and effective pedagogical practices to ensure their students achieve at high-levels. Students deserve to be taught by effective teachers who possess a passion to make a positive impact on the future generation.

Moral and Ethical Analysis

The implication of the policy problem related to the moral and ethical issues is the notion of equitable access and resources for students. According to Learning Policy Institute (n.d.), a commitment to equitable access and resources includes the following:

- "ensuring all students are taught by educators who are fully prepared and supported throughout their career,
- funding schools in a way that is equitable, stable, and adequate to provide all students with a 21st century education, [and]
- providing all students access to a high-quality college- and career-ready curriculum and up-to-date instructional materials and tools, including computers and related technology" (p. 1).

The onus is on school districts to ensure students attending Title I schools have a quality teacher in every classroom. Extensive professional development for teachers serving in the most fragile schools is the primary avenue to leveling the playing field for

students from low-socioeconomic backgrounds. Teachers must be professionally equipped to meet the demands of diverse 21st century learners. Equally important, students must be exposed to rigorous curriculum, consistent standards-based instruction, and prescriptive interventions to increase proficiency and narrow the achievement gap on standardized assessments.

Implications for Staff and Community Relationships

The primary policy implication for developing improved staff relationships is the increasing need of collaboration between faculty members required to enhance student learning. According to Demonte (2013),

> Many of the professional-learning designs that show improvements in teaching and learning include some kind of regular collaboration among teachers in a school or across grade levels—sometimes with an instructional leader—to work on better strategies and practices for teaching. (p. 2).

Studies revealed that professional development cycles that afford teachers opportunities to collaborate increase student achievement and build camaraderie among team members. Equally important, professional development builds a culture of adult learning between colleagues in a risk-free environment. As a result, the school becomes a learning organization.

The policy implication for community relationships is the shared responsibility needed for ensuring that students receive a quality education. Mizell (2010) commented, "Parents and citizens must demand and support intensive, high-quality professional development that results in better teaching, improved school leadership, and higher student performance" (p. 19). Citizens need to actively voice their concerns to school

board members and elected officials pertaining to increased support for educators. They must hold elected officials accountable for providing educators with ongoing, high-quality professional development. When this occurs, officials are more inclined to create policies in support of educator development to improve student outcomes.

The policy implication for internal and external stakeholders is the economic growth of the nation. In 2010, 1.3 million students dropped out of high school (Zimmerman, n.d.). According to Alliance for Excellent Education and State Farm (as cited by Zimmerman, n.d.), "The best economic stimulus package is a high school diploma. Addressing the high school dropout crises is a key strategy for economic growth" (p. 1). Providing teachers with increased professional development to meet the individualized needs of students will increase student achievement and accelerate graduation rates. As a result, the economic growth of the nation will increase because of a higher percentage of graduates nationwide.

Conclusion

The intent of my policy recommendation is to establish formalized language requiring the school district to provide teachers and administrators with continuous, job embedded professional development. Based upon my policy revision, administrative and instructional staff will receive preplanning and quarterly professional development aligned to district-wide implementation of the core curriculum and intervention programs. Internal and external stakeholders are responsible for ensuring school districts have systems and structures in place that insure educators receive the time they need to grow professionally. Increased learning time for educators equates to higher levels of learning for students.

CHAPTER EIGHT: CONCLUSION

Introduction

Increasing student proficiency and narrowing the achievement gap in mathematics should be a primary focus for educators. The achievement gap in mathematics is a symptom of differential educational opportunities for students in poverty. According to the National Council of Teachers of Mathematics (2012), "Differential access to high-quality teachers, instructional opportunities to learn high-quality mathematics, opportunities to learn grade-level mathematics content, and high expectations for mathematics achievement are the main contributors to differential learning outcomes among individuals and groups of students" (p. 1). It is imperative that district leaders, school-based administrators, and teachers work collaboratively to ensure that students of low-socioeconomic status receive high-quality instruction and prescriptive interventions in a supportive learning environment.

The theme of my dissertation focused on the effectiveness of i-Ready Math as an instructional intervention to increase student achievement of Grade 5 students who were identified as performing below grade level. The findings of my program evaluation led me to examine barriers to fidelity of implementation of i-Ready Math. I discovered that a lack of ongoing professional development prohibited administrators and teachers from implementing the program with fidelity. As a result, I suggested revising the current district policy pertaining to professional staff orientation and training to include preplanning and quarterly professional development aligned to districtwide implementation of the core curriculum and intervention programs. Effective implementation of prescriptive interventions and policies to support increased time for

educators to receive high-quality professional development are a cure for the symptoms of differential education opportunities that hinder student learning.

Discussion

The purpose of my program evaluation was to determine the effectiveness of the i-Ready Math program when utilized as an intervention with Grade 5 students who were identified as performing below grade level on the Mathematics FSA in three Title I schools. This process addressed my purpose by affording me the opportunity to interview administrators and teachers to gain insight on their perceptions of the benefits and challenges of the program. In addition, I was able to analyze the Grade 5 student data of participating schools in my study to ascertain if student performance improved as a result of the math intervention program.

The goals of my study were to

- ascertain if adaptive diagnostic assessments accurately measured students' math deficiencies,
- determine if online prescriptive instruction improved student performance, and
- assess the worth of the investment in relationship to student learning gains.

I analyzed student data and survey and interview responses to address my goals. The majority of participants commented the program was effective in diagnosing student deficiencies in math. However, my study results were limited because of a lack of fidelity of implementation. I was not able to assess to what degree the online program contributed to or hindered the increase of student achievement as measured by the state

assessment. Consequently, I was unable to determine the worth of the investment in relationship to student learning gains.

The primary issue that emerged from my program evaluation was that administrators and teachers experienced significant challenges implementing the program with fidelity because of insufficient professional development prior to implementation. I addressed this issue within my organizational change plan by proposing an extension of the teacher contract to provide teachers with extensive professional development during preplanning and throughout the school year. Equipping teachers with the necessary knowledge, skills, and strategies will increase student outcomes.

The policy I advocated directly aligns to my program evaluation and organization change plan. Both support the need to provide educators with increased professional development to meet the learning demands of 21st century students. My policy revision focused on providing administrative and instructional staff with preplanning and quarterly professional development aligned to districtwide implementation of the core curriculum and intervention programs. Extensive training for educators will increase instructional improvements and have a significant impact on student learning.

Leadership Lessons

The primary leadership lesson I learned from this process is the importance of proper planning and two-way communication between district leaders, school-based administrators, and teachers to ensure a successful implementation of any curriculum initiative. Prior to the implementation of the i-Ready Math program, principals and teachers at the targeted schools should have been provided an opportunity to discuss the academic needs of their students with district administrators and explore the alignment

between student math deficits and program benefits. In addition, principals and teachers should have been afforded the opportunity to provide input during the planning process to promote buy-in and garner their support. This action would have created an avenue for principals and teachers to ask questions and gain a deeper understanding of the *why* and *how* relating to the fidelity of program implementation. As a result, students would have benefited from the usage of i-Ready Math program at an optimal level.

An additional lesson I learned from this process is the importance of garnering support for educational initiatives that benefit public schools. As an educational leader, I focused the majority of my efforts on providing school level coaching support to administrators and teachers for the purpose of ensuring that students receive a quality education. Prior to developing my policy recommendation, I had not given much attention to the importance of soliciting support for public schools from philanthropist, parents, advisory councils, or faith-based organizations. Because of the increase of state statutes that have an adverse effect on the daily operations of public schools, it is vital that I focus my attention to recruiting public school advocates. The success of public schools is the responsibility of all citizens.

As a result of this study, I have increased my knowledge of the i-Ready Math intervention program. Specifically, I have expanded my understanding of how to guide administrators in analyzing student reports to determine academic growth, support teachers in planning for small-group instruction, and gained an insight to barriers that prevented administrators and teachers from utilizing the program with fidelity. During the inaugural year of district-wide implementation of i-Ready, I had a surface level understanding of the program–similar to the understanding of school-based

administrators and teachers. This process has taught me that in order to effectively support my principals in the implementation of a new intervention program, I need to have an in-depth understanding of the various components of the program to assist school-based administrators in developing effective systems and structures to ensure fidelity of implementation.

I will utilize the knowledge that I have gained through this study to improve my performance as a principal supervisor and district leader. Specifically, I will increase my dialogue with teachers and administrators to determine their professional development needs and solicit ways in which I may help them grow professionally. In the future, I will continue to support administrators and teachers in the implementation of research-based interventions by ensuring they receive sufficient opportunities to plan and access to quality professional development prior to and during the initial implementation. Equally important, I will make certain that I continue to sharpen my knowledge and skills regarding instructional leadership to improve the quality of teaching and learning of the students I serve.

Conclusion

It is imperative that the most fragile schools have administrators who serve as instructional leaders, highly-qualified teachers, a rigorous curriculum, and effective prescriptive interventions to meet the diverse needs of students. The future of the nation will be determined by the quality of education provided to students attending Title I schools today. Ban Ki-Moon commented (2018), “Education promotes equality and lifts people out of poverty. It teaches children how to become good citizens. Education is not just for a privileged few, it is for everyone. It is a fundamental human right” (para. 1).

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Appendix A: Participant Email

Hello:

I am a doctoral candidate in the Doctorate of Educational Leadership program at National Louis University. I am interested in exploring the effectiveness of i-Ready Math with 5th grade students at your school who have been identified as performing below grade level. I would like to meet with you in your school's media center on (date and time) to discuss the purpose of my program evaluation and solicit your participation in the study. This meeting will occur during non-instructional time and your participation is voluntary. The meeting will last for approximately 20 minutes. Please email me at Tbrown-cannon@my.nl.edu to confirm your attendance at this meeting.

Thank you,

Tashanda Brown-Cannon

Appendix B: Participant Survey

I am currently a doctoral student at National-Louis University, completing my dissertation, "An Evaluation of an i-Ready Math Program for 5th Graders in One School District." As part of my research, I would like to survey your responses to the following statements, in order to assess perceptions of the effectiveness of i-Ready Math instruction as an intervention for 5th grade students who are performing below grade level in mathematics. Your participation is voluntary, and I would like to thank you in advance for your consideration. Please indicate below, if you are willing to participate in the interview.

1. What is your title? _____
2. Years of experience in education? _____
3. Years of experience in your current role? _____

Read each statement, place an X in the appropriate column for each item.

Strongly Agree	Agree	Disagree	Strongly Disagree	Statements
				4. .i-Ready Math professional development effectively provides strategies to ensure fidelity of implementation of the program.
				5. i-Ready Math is effective in diagnosing student deficiencies in math.
				6. i-Ready student reports are useful in planning for differentiated instruction.
				7. i-Ready Math reports accurately reflect student achievement gains.
				8. i-Ready Math assessments accurately measure students' understanding of the Florida Standards.
				9. i-Ready Math increases students' ability to solve math problems.
				10. i-Ready Math tutorial lessons are aligned to the Florida Standards.
				11. i-Ready Math program increases the overall math achievement levels of students performing below grade level mathematics.

_____ Yes, I am willing to participate in an interview (30 minutes) and I will email my contact information to tashandacannon@yahoo.com with WILLING TO INTERVIEW in subject line.

Appendix C: Administrator Interview Protocol

I am currently a doctoral student at National-Louis University, completing my dissertation, "An Evaluation of an i-Ready Math Program for 5th Graders in One School District." As part of my research, I would like to conduct an interview in order to assess perceptions of the effectiveness of i-Ready Math instruction as an intervention for 5th grade students who are performing below grade level in mathematics. Your participation is voluntary, and I would like to thank you in advance for your consideration.

1. What is your title?
2. Years of experience in education? _____
3. Years of experience in your current role?
4. What type of professional development opportunities will you provide for teachers implementing the i-Ready Math program?
5. What strategies will you implement to encourage teachers to utilize i-Ready Math with fidelity?
6. How will you support teachers that are utilizing i-Ready reports to provide differentiated instruction?
7. Describe aspects of the i-Ready Math program that you perceive as working well.
8. Describe aspects of the i-Ready Math program that you perceive as needing to be improved.
9. What are some challenges you have observed with the implementation of the i-Ready Math program?
10. What suggestions do you offer to improve the i-Ready Math program as an administrator?
11. What feedback have you received from your teachers pertaining to the i-Ready Math program?
12. Is there anything else you would like to discuss about the i-Ready Math program?

Appendix D: Teacher Interview Protocol

I am currently a doctoral student at National-Louis University, completing my dissertation, "An Evaluation of an i-Ready Math Program for 5th Graders in One School District." As part of my research, I would like to conduct an interview in order to assess perceptions of the effectiveness of i-Ready Math instruction as an intervention for 5th grade students who are performing below grade level in mathematics. Your participation is voluntary, and I would like to thank you in advance for your consideration.

1. What is your title?
2. Years of experience in education? _____
3. Years of experience in your current role?
4. How did you utilize progress monitoring data and student reports to develop lesson plans for small group remediation?
5. Explain how you ensured that students identified as performing below grade level in math utilized i-Ready Math for a minimum of 45 minutes per week.
6. Describe aspects of the i-Ready Math program that you perceive as working well.
7. Describe aspects of the i-Ready Math program that you perceive as needing to be improved.
8. What are some challenges you have observed with the implementation of the i-Ready Math program?
9. If student achievement does not increase, what do you believe will be the contributing factors?
10. Is there anything else you would like to discuss about the i-Ready Math program?

Appendix E: Informed Consent for Adult Participant Survey

My name is Tashanda Brown-Cannon, and I am a doctoral student at National Louis University, Tampa, Florida. I am asking for your consent to voluntarily participate in my dissertation project. The study is entitled: "An Evaluation of an i-Ready Math Program for 5th Graders in One School District." The purpose of the study is to determine the effectiveness of the i-Ready Math program on 5th grade students who have been previously identified as performing below grade level in mathematics. The study will also examine if i-Ready Adaptive Diagnostic Assessments accurately depict students' deficiencies in mathematics and conclude to what extent the individualized online modules increase students' core math skills.

My project will address the effectiveness of i-Ready Math intervention and how it impacts student achievement at your school. I will use the data I collect to understand the process and changes that may possibly need to be made regarding math interventions for students performing below grade level.

You may participate in this study by signing this Consent form indicating that you understand the purpose of the study and agree to participate in a printed survey that I will give to you, to be completed and returned using specific instructions I will include at the end of the survey. It should take approximately 15 minutes for you to complete the survey. All information collected in the survey reflects your experience and opinion of the i-Ready Math program.

Your participation is voluntary and you may discontinue your participation at any time without any negative effects. I will keep the identity of you, the school, the district, and all participants confidential, as it will not be attached to the data and I will use pseudonyms for all participants in the report. Only I will have access to the survey data, which I will keep in a locked cabinet at my home and/or on a hard drive that is password protected for up to 5 years after the completion of this study, at which time I will shred all data. Participation in this study does not involve any physical or emotional risk beyond that of everyday life. While you are likely to not have any direct benefit from being in this research study, your taking part in this study may contribute to our better understanding of i-Ready Math intervention at your school and what changes, if any, need to be made to the program or implementation.

While the results of this study may be published or otherwise reported to scientific bodies, your identity will in no way be revealed. You may request a copy of this completed study by contacting me at Tbrown-cannon@my.nl.edu.

In the event you have questions or require additional information, you may contact me at: email Tbrown-cannon@my.nl.edu. If you have any concerns of questions before or during participation that you feel I have not addressed, you may contact my dissertation chair, Dr. Carol A. Burg, email: cburg@nl.edu; or the NLU's Institutional Research Review Board: Dr. Shaunti Knauth, NLU IRRB Chair, shaunti.knauth@nl.edu,

312.261.3526, National Louis University IRRB Board, 122 South Michigan Avenue, Chicago, IL 60603.

Thank you for your participation.

_____
Participant Name (Please Print)

_____ _____
Participant Signature Date

_____
Researcher Name (Please Print)

_____ _____
Researcher Signature Date

Appendix F: Informed Consent for Adult Participant Interview

My name is Tashanda Brown-Cannon, and I am a doctoral student at National Louis University, Tampa, Florida. I am asking for your consent to voluntarily participate in my dissertation project. The study is entitled: "An Evaluation of an i-Ready Math Program for 5th Graders in one School District." The purpose of the study is to determine the effectiveness of i-Ready Math program on 5th grade students who have been previously identified as performing below grade level in mathematics. The study will also examine if i-Ready Adaptive Diagnostic Assessments accurately depict students' deficiencies in mathematics and conclude to what extent the individualized online modules increase students' core math skills.

My project will address the effectiveness of i-Ready Math intervention and how it impacts student achievement at your school. I will use the data I collect to understand the process and changes that may possibly need to be made regarding math interventions for students performing below grade level.

You may participate in this study by signing this Consent form indicating that you understand the purpose of the interviews and agree to participate in up to one 30-minute interviews, with possibly up to 5 email exchanges in order clarify any questions I may have regarding your interview data. I will audio tape the interview and transcribe the tapes. All information collected in the interviews reflects your experience and opinion regarding the i-Ready Math program.

Your participation is voluntary and you may discontinue your participation at any time without any negative effect. I will keep the identity of the school and all participants confidential, as it will not be attached to the data and I will use pseudonyms for all participants. Only I will have access to all of the interview tapes and transcripts, and field notes, which I will keep in a locked cabinet at my home or on a password protected hard drive for up to 5 years after the completion of this study, at which time I will shred all data. Participation in this study does not involve any physical or emotional risk beyond that of everyday life. While you are likely to not have any direct benefit from being in this research study, your taking part in this study may contribute to our better understanding students of i-Ready Math intervention at your school and what changes, if any, need to be made to the program or implementation.

While the results of this study may be published or otherwise reported to scientific bodies, your identity will in no way be revealed. You may request a copy of this completed study by contacting me at Tbrown-cannon@my.nl.edu.

In the event you have questions or require additional information, you may contact me at: email: Tbrown-cannon@my.nl.edu. If you have any concerns of questions before or during participation that you feel I have not addressed, you may contact my dissertation chair, Dr. Carol A. Burg, email: cburg@nl.edu; or the National-Louis Institutional Research Review Board: Dr. Shaunti Knauth, NLU IRRB Chair, shaunti.knauth@nl.edu,

312.261.3526, National Louis University IRRB Board, 122 South Michigan Avenue, Chicago, IL 60603.

Thank you for your participation.

_____
Participant Name (Please Print)

_____ _____
Participant Signature Date

_____
Researcher Name (Please Print)

_____ _____
Researcher Signature Date

Appendix G: Informed Consent for School Site Administrator: Consent to Conduct Research at School Site

My name is Tashanda Brown-Cannon and I am a doctoral student at National Louis University, Tampa, Florida. I am asking for your consent for selected staff at your school to voluntarily participate in my dissertation project. The study is entitled: "An Evaluation of an i-Ready Math Program for 5th Graders in One School District." The purpose of the study is to determine the effectiveness of the i-Ready Math Instruction program on 5th grade students who have been previously identified as performing below grade level in mathematics.

My project will address the effectiveness of i-Ready Math intervention and how it impacts student achievement at your school. I will use the data I collect to understand the process and changes that may possibly need to be made regarding math interventions for students performing below grade level. I will survey and interview up to 9 administrators and up to 12 teachers in regards to their thoughts on the effectiveness of i-Ready Math intervention at your school.

I will give teachers and administrators who volunteer a printed survey to be completed and returned using specific instructions as included, and an Informed Consent form indicating that they understand the purpose of the survey and agree to take the survey. The survey should take approximately 15 minutes to complete. Also, participating teachers and administration may volunteer for a maximum of one 30minute interview. I will audio tape the interviews and transcribe the tapes. I will conduct one 30minute interview with those participants who have completed an Informed Consent form indicating that they understand the purpose of the interview and agree to be interviewed with possibly up to 5 email exchanges in order clarify any questions I may have regarding your interview data. I will audio tape the interviews and transcribe the tapes. Additionally, I will request access to the Fall 2016 i-Ready Adaptive Diagnostic Assessment student data, Winter 2017 i-Ready Adaptive Diagnostic Assessment student data, and i-Ready School Usage reports. Data from up to 70 5th grade students from your school will be involved in the study. All information collected in the survey and interview reflects the participants' experience and opinion regarding the i-Ready Math program.

By signing below, you are giving your consent for me to ask for voluntary participation from selected stakeholders to participate in this research study: to complete a survey, participate in one interview, and access to the student data.

All participation is voluntary and participants may discontinue participation at any time without any negative effects. I will keep the identity of the school and all participants confidential, as it will not be attached to the data and I will use pseudonyms for all participants. Only I will have access to all of the surveys, interview tapes and transcripts and field notes which I will keep in a locked cabinet at my home, and on a password protected hard drive, to which only I have access for up to 5 years after the completion of this study, at which time I will shred all data. Participation in this study does not involve

any physical or emotional risk beyond that of everyday life. While participants are likely to not have any direct benefit from being in this research study, taking part in this study may contribute to our better understanding of i-Ready Math Intervention program and what changes, if any, need to be made to the program or implementation.

While the results of this study may be published or otherwise reported to scientific bodies, participants' identity will in no way be revealed. Participants may request a copy of this completed study by contacting me at Tbrown-cannon@my.nl.edu.

In the event you have questions or require additional information, you may contact me at: email Tbrown-cannon@my.nl.edu. If you have any concerns of questions before or during participation that you feel I have not addressed, you may contact my dissertation chair, Dr. Carol A. Burg, email: cburg@nl.edu ; or the NLU's Institutional Research Review Board: Dr. Shaunti Knauth, NLU IRRB Chair, shaunti.knauth@nl.edu, 312.261.3526, National Louis University IRRB Board, 122 South Michigan Avenue, Chicago, IL 60603.

Thank you for your participation.

_____
Principal Name (Please Print)

_____ _____
Principal Signature Date

_____
Researcher Name (Please Print)

_____ _____
Researcher Signature Date

Appendix H: Baseline AS-IS 4Cs Analysis for 3 Title I Schools in ECPS

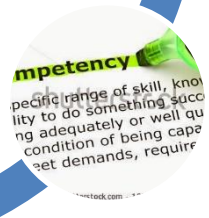
- 3 Title I Schools
- Historically low performing on standardized tests
- Principals with less than 3 years of experience
- Receive support from the Education Turnaround Office
- Receive funding for extended learning opportunities

Culture

- Teachers demonstrate low expectancy of students in poverty.
- Administrators lacked trust in the capacity of teachers to teach the program effectively.

Conditions

- Elementary teachers have an average daily planning time of 60 minutes.
- 10-month employees receive 5 days of preplanning and two days of post planning.
- Math Florida Standards were fully implemented during the 2014-2015 school year.
- New implementation of i-Ready Math program
- Teachers did not receive adequate professional development on new math standards.



Competencies

- Teachers lack an in-depth understanding of the Florida Standards.
- Teachers lack an understanding of how to implement i-Ready Math program to fidelity.
- Teachers need to enhance their instructional practices to meet the needs of all learners.
- Based on 2015 Math FSA data, teachers in grade 5 lack the skills to deliver rigorous standards-based instruction.

Appendix I: Vision TO-BE 4Cs Analysis for 3 Title I Schools in EPS

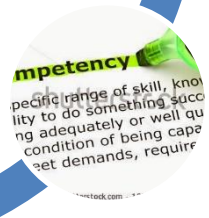
- 3 Title I Schools
- High Performing on standardized tests
- Experienced principals with a proven a proven track record of transforming fragile schools
- Schools transition back to their learning communities
- Extended learning opportunities

Culture

- Teachers demonstrate high expectancy of students in poverty.
- Administrators trust in the capacity of teachers to teach the program effectively.

Conditions

- Elementary teachers have an average daily planning time of 60 minutes.
- Teacher contract extends from 10 months to 11 months. Teachers will receive 25 days of preplanning and two days of post planning.
- Math Florida Standards were fully implemented during the 2014-15 school year.
- Teachers will implement i-Ready Math Program.
- Teachers receive extensive professional development on i-Ready and the new Florida Math Standards.



Competencies

- Teachers demonstrate an in-depth understanding of the Florida Standards.
- Teachers implement the i-Ready Math program effectively.
- Teachers improve their instructional practices to meet the needs of all learners.
- FSA Math assessment data indicate that teachers consistently deliver rigorous standards-based instruction.

Appendix J: Strategies and Actions Chart

4Cs	Strategies	Actions
Context		
	Build the leadership capacity of school-based administrators	• School-based administrators will participate in monthly professional development. • District administrators will meet with school-based administrators monthly to conduct instructional reviews. • Associate superintendent will assign each of the targeted principals with a mentor.
	Develop sustainable systems and structures to improve teaching practices and accelerate student performance	• Principals will align resources based on instructional trends and student data. • Principals will establish a teacher leadership academy to develop leadership in instructional resource teachers.
Culture		
	Create a school-wide culture of high expectations for all students	• Teacher leaders will facilitate a book study on Engaging Students with Poverty in Mind with their grade level teams. Teachers will implement newly acquired strategies. • Students will establish individual academic and social goals. Teachers will meet with students monthly to monitor their progress toward targeted goals.
	Develop a culture of trust and respect	• Continuous open dialogue will occur between the principals and teachers at the three targeted schools. • School-based administrators will create a recognition system to acknowledge the accomplishments of teachers.

4Cs	Strategies	Actions
Conditions		
	Increase teacher planning days	• The district will extend the teacher contract from 10 months to 11 months.
	Provide targeted professional development for teachers	• School-based administrators will survey the professional development needs of teachers. • Continuous professional development for teachers will be provided during preplanning and the school year.
	Effective implementation of the i-Ready Math program	• Administrators will continuously observe teachers' implementation of i-Ready Math and provide them with actionable feedback.
Competencies		
	Extend teachers' understanding of the Florida Math Standards and effective instructional practices	• Instructional coaches will facilitate the coaching cycle for teachers in need of improvement.
	Fidelity of implementation of the i-Ready Math program	• School-based administrators will meet with teachers monthly to review i-Ready usage reports. • District administrator will meet with principals to discuss each school's framework of implementation.