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A Case Study: Achievement Studies of Persistent, Transitional, and Transient Populations within the Blitz Program Model at a Large Midwestern Elementary School

by

Jackie D. Ramey

A Dissertation submitted to the Education Faculty of Lindenwood University

in partial fulfillment of the requirements for the

degree of

Doctor of Education

School of Education

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This dissertation has been approved in partial fulfillment of the requirements for the degree of

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at Lindenwood University by the School of Education

Dr. Graham Weir, Dissertation Chair	11/1/13 Date
Dr. John Long, Committee Member	11/1/13 Date
Dr. Sherrie Wisdom, Committee Member	11/1/13 Date
Mr. Jason Van Beers, Committee Member	11/1/13 Date

Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

Full Legal Name: Jackie Denise Ramey

Signature: Jackie Denise Ramey Date: 11-1-13

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Abstract

The United States' Public Education system shared concerns regarding declining achievement results across the nation. Numerous research studies suggested significant correlations to various variables, such as, SES (Socio-Economic Status), LEP (Limited English Proficiency), IEP (Individualized Educational Programs), ethnicity, and student mobility. The literature suggested these areas of concern need continued research to address specific issues, such as, how to close the educational gaps between students in these categories and students without these characteristics.

The Primary Investigator completed a case study to assist decision makers with transient students at a Midwest near-urban elementary school by specifically focusing on fifth grade students from the class of 2019. The methodology created by the Primary Investigator differentiated among Persistent, Transitional, and Transient mobility populations who entered a supplemental reading model program called, Blitz. The Primary Investigator divided mobility groups into specific categories to determine if needs were met for transient student populations, as compared to non-transient students. Few studies had addressed programs that specifically focused on methods of measurement tool that allowed for comparisons among mobile students in settings where non-mobile students reside.

The Primary Investigator's methods used in this case study allowed decision makers to continue to develop their program to fit the needs of all students at the case study school and to make decisions as to the effectiveness of their efforts to assist their Persistent, Transitional, and Transient students in their large near urban elementary school.

Results indicated there were improvements in each mobility group that participated in the Blitz supplemental reading model. Students in the most transient group significantly increased achievement and decreased variance in scores when compared to the Persistent population. The Primary Investigator's collected data suggested that students in the Persistent population averaged the highest achievement scores for all data sets. Achievement scores of students in the most Persistent populations who were of Caucasian and African American ethnicity and of low SES-socio-economic status did not have negative impacts on scores. Overall, this case study supported a positive effect of additional reading assistance on a student's independent reading ability and Communications Arts achievement in this large near-urban Midwest elementary school.

Acknowledgments

I would like to thank my committee for their time and dedication to keep me on track throughout the writing process. A special thank you goes to my committee chair, Dr. Graham Weir, for his insight that recognized my potential, my limits, and allowed me to grow through time. I would also like to thank Dr. Beth Kania-Gosche for her unbelievable wisdom on how to motivate profusely and instruct so gently. Another thanks to my statistics professor and committee member, Dr. Wisdom, if it weren't for her, I never would stayed in advanced statistics, which gave me the knowledge I needed to work through to the finish with necessary understanding. To Dr. Long, who taught me how to have the confidence needed to make the best of decisions, when either decision was difficult. Finally, another very special thank you goes to Mr. Jason Van Beers, without whom, this case study would not have been possible. His expertise in the field, mentorship, vision, and his dedication to teaching others has always amazed me, for which I will always be grateful; thank you!

I want to extend my gratitude to the superintendent of schools, staff, and students of the school district, that is the setting of this case study. I have always felt supported in my research efforts and allowed me to collect data and seek the administration team for expert advice. Thank you for your trust and willingness to participate.

Finally, I wish to thank my amazing family who stood by me through such a long journey, cheering me along the way. They were the light in my heart that kept me going. Thank you to my husband, Roy, for loving me, believing in me, and never doubting I could achieve this accomplishment; you are my rock and I love you! To my little ones, Ryan and Megan, who watched me day after day, night after night, persevering. Thank

you for giving me the time I needed to work. I love you both and I dedicate my work to you. Finally, thank you to my parents who told me when I was as young as my children are today, “Yes, you can … your education can never be taken away; go as far as you can. You can do it!” Thank you for planting the seed.

Chapter One: Introduction

According to previous research studies, student mobility became a prominent and concerning trend in the United States' public educational system. The impact of transiency in schools affected not only mobile students, but also non-mobile students in the schools these students attended. Educators had great concerns about students moving in and out of school systems because of negative impacts on student learning and achievement (Rumberger, 2003; Franke, Isken, & Parra, 2003).

The first section of Chapter One focused on the setting background, decreased achievement, changed socio-economic status, increased mobility, and demographic changes that took place in a large public elementary school located in the Midwest. The second section explained the problem statement, rationale, purpose, the Blitz reading model, program development, and each hypothesis statement for the case study. The third section of Chapter One defined terms, explains limitations, and gave a short conclusion of the chapter.

Setting Background

In order to remain in compliance with the district policy of the case study school, the Primary Investigator titled the school with the fictitious name Lakeview Elementary for privacy and anonymity of the school district, staff, and students involved in the research.

Lakeview Elementary struggled with problems of high mobility and low academic achievement levels in the areas of mathematics and communication arts. For example, from the years 2006 through 2012, 234 new students enrolled into the class of 2019, and 122 exited, which yielded an overall 47% transiency rate. Achievement

declined from an overall average of 53% of students who scored proficient or advanced in 2006 on communication arts Missouri Assessment Program (MAP) to 38% who scored proficient or advanced on the MAP in 2012, which yielded a compound percentage decrease of 28%.

The high mobility rate and declining MAP test scores became the focus of the principal of Lakeview Elementary. From 2006 to 2007, proficient and advanced scores for the communication arts portion of the MAP for grades three through five declined from 53% to 44%. The mathematics portion of the MAP average number of students who performed proficient or advanced declined from 57% to 51% (Missouri Comprehensive Data System, 2013).

Problem Statement

Few programs had addressed and studied complications acquired due to transiency within schools that were useful to other school systems with similar variables. Since schools with higher transient populations often had students with lower achievement scores than schools that had Persistent populations, school leaders needed to continue to analyze their efforts to help all students learn and grow through careful analysis of the effects transiency had on all students (Dunn, Kadane, & Garrow, 2003).

The problem of transiency in schools was not a recent phenomenon. As reported in 2003, educators had great concerns about student mobility due to the negative impacts on student learning and achievement (Rumberger, 2003, p. 6; Franke et al., 2003, p. 150). One study suggested that although there was a relationship between poverty and low achievement, not all students in all schools were failing. A Harvard Educational Review article (McCarthy, 1988) explained some schools were successful; therefore, it was

necessary to note that not all low socio-economic status children were performing poorly. Some socio-economically disadvantaged children were performing well in otherwise low-performing schools.

In order to determine causal relationships between academic successes and failures, educational researchers applied several different dependent and independent variables when they conducted research. As they reviewed studies, they often discovered many assorted variables, which created intricate studies that made it difficult to determine which variables correlated with other variables and in what order. This made it challenging to generalize findings even when there were similar variables presented. For example, Rumberger (2003) explained, students who were usually mobile and low achieving also have other factors that affected their achievement scores. He suggested that educators must consider alternative reasons for declining achievement as well, such as poverty and family problems. Rumberger continued to share, "In other words, mobile students came from poorer families and had lower academic performance before they were mobile, a finding supported by other studies" (p. 10; Nelson, Simoni, & Adelman, 1996). However, other researchers determined that as mobility increased, discipline issues and crime also increased within the schools as well, which was another variable that needed further research (Institute of Educational Science [IES], 2010). Many studies in this literature review were similar in demographics and were able to determine possible correlations, however, each environment in each study was unique, which made it difficult to draw generalized conclusions due to generous possibilities of variables that might have also applied.

Rationale

Transiency became a prominent and noticeable trend in the educational system. This trend created an achievement gap for mobile students when compared to the Persistent educational population. Declining scores created a need for change in classroom instruction and teacher practice. Research suggested that student mobility adversely affected student achievement. According to the Kids Count in Missouri 2003 data, "Children who move four or more times during their childhood are more likely to drop out than children who remain in the same school" (2010 Missouri Kids Count Data Book Online, 2010).

As mobility increased and academic achievement decreased at Lakeview Elementary, the impacts became increasingly critical to administrators, instructional leaders, and teachers. Staff wanted to determine if their efforts of placing students into small, flexible, data-driven groups were meeting the needs of each student individually regardless of transiency status. It was essential to determine growth comparisons in categorical groups to determine how mobility variables were impacting achievement outcomes. It was also important to determine if educational gaps between mobility groups at Lakeview Elementary changed over time.

Purpose of the Study: The Blitz Reading Model

High mobility rates and declining scores became the focus of the administrative team, staff, and parents of Lakeview Elementary. Initially, the head principal solicited input from parents, teachers, and community members who were on the school improvement team, regarding his plan to address declining achievement concerns. Based on feedback and student achievement data, the principal made reading improvement the

primary focus of the school improvement plan. He envisioned a unique supplemental reading comprehension model titled, Blitz. The Blitz model he developed was research driven, which focused on differentiated direct instruction in small, on-level groups. The administration team implemented the program and included the instructional specialist at Lakeview Elementary.

Prior to the study, the building-level supplemental Blitz program had not been formally evaluated as to how well it met students' continuously changing needs at Lakeview Elementary, the case study school. Few research studies addressed issues that effected transient populations in schools that were also transferrable to other transient populations for school administrators to evaluate. Therefore, this study gave evidence that guided Lakeview Elementary administrators in instructional decision making for the following years for their transient population in the elementary school. Administrators wanted to determine how well the Blitz program model increased achievement for students in three mobility groups: Persistent, Transitional, and Transient, then make informed decisions that allowed for adjustments and enhancements for their future instructional practices.

Another purpose for this study included sharing the methodology with other researchers with similar concerns regarding transiency and its impact on academic achievement. It was important to the staff and students to meet all students' needs at Lakeview Elementary, by reaching students where they were through supplemental reading instruction on their instructional reading level. Teachers focused on determining student reading level growth to make informed decisions regarding student placement within the Blitz model.

Program Development Overview

The administration team implemented a new small-group model named Blitz to address low achievement concerns of many students enrolling into the school with reading difficulties. The Blitz reading model allowed supplemental, on-level reading instruction for all students. Each student received 40 minutes of uninterrupted instruction on their instructional reading level as determined by MAP assessments, Developmental Reading Assessments (DRA), AIMSweb (Reading Curriculum-Based Measurement [R-CBM]) fluency checks, and Study Island assessments. Teachers continued to instruct students in communication arts in whole-group and small-group settings within their classrooms, as the district curriculum required, for core curriculum. Table 1 illustrates the components in the Blitz Program Model.

Table 1

Blitz-Lakeview Elementary Supplemental Reading Program

Implementation	Program base	Grouping	Lesson focus
2008 to 2013	Collaborative	4 to 7 students	Fluency practice
40 minutes daily	Research based	Differentiated	Comprehension strategies
2 to 4 week sessions	Instructional level	Fluid	Core curriculum supplement
Supplemental	Data driven	Leveled	Direct instruction

Note: This table represents an overview of the Blitz program as it applied to implementation, Program base, grouping and lesson focus.

Methodology Overview

The Primary Investigator created a methodology model that allowed for data collection to assist in determining how well students' needs were met through their participation in a supplemental reading intervention model called Blitz. In order to collect background information regarding the Blitz development process, the investigator met with the building level principal and instructional specialist in January, 2013. In

order to display data, the Primary Investigator organized collections of personally communicated information, research-based data collections, and statistical data collections into five parts:

1. *Lakeview Elementary School Background: Data Collection Part I.*
2. *Blitz Supplemental Reading Program Development: Data Collection Part II.*
3. *Program Design Researched Based Analysis: Data Collection Part III.*
4. *Case Study School vs. Department of Defense schools: Data Collection Part IV.*
5. *Statistical Data Collection: Part V.*

Hypotheses Statements

Hypothesis statement 1. Students attending Blitz sessions at Lakeview Elementary for a longer length of time, characterized by comparison of the Persistent Group-A population to the Transitional Group-B population and the Transient Group-C population, will yield an increase in achievement in scores, as measured by Developmental Reading Assessment (DRA) assessment scores.

Hypothesis statement 2. Students attending Blitz sessions at Lakeview Elementary for a longer length of time, characterized by comparison of the Persistent Group-A population to the Transitional Group-B population and the Transient Group-C population, will yield a decrease in variance in scores, as measured by AIMSweb R-CBM assessment scores.

Hypothesis statement 3. Students attending Lakeview Elementary's Blitz program for a longer length of time, characterized by comparison of the Persistent Group-

A population to the Transitional Group-B population and the Transient Group-C population, will yield a larger growth rate as measured by AIMSweb R-CBM scores.

Hypothesis statement 4. For Free and Reduced Lunch Status (FRPL), there is a relationship between mobility statuses, characterized by samples of the Persistent Group-A population, the Transitional Group-B population, and the Transient Group-C population and achievement for the 2011-2012 fifth grade students at Lakeview Elementary, as measured by MAP scores.

Hypothesis statement 5. For students of African American (AA) ethnicity, there is a relationship between mobility statuses, characterized by samples of the Persistent population to the Transitional Group-B population and the Transient Group-C population and achievement for the 2011-2012 fifth grade students at this elementary school, as measured by MAP (Missouri Assessment Program) assessment scores.

Hypothesis statement 6. For students of Caucasian (C) ethnicity, there is a relationship between mobility statuses, characterized by samples of the Persistent Group-A population to the Transitional Group-B population and the Transient Group-C population, and achievement for the 2011-2012 fifth grade students at this elementary school, as measured by MAP assessment scores.

Hypothesis statement 7. Students attending Blitz sessions at Lakeview Elementary for a longer length of time, characterized by comparison of the Persistent Group-A population to the Transitional Group-B population and the Transient Group-C population, will yield an increase in achievement in scores, as measured by Study Island assessment scores.

The Primary Investigator used *z*-tests to look for differences in mean scores for the three mobility populations, A, B, and C, claiming that the longer students were at this elementary school, participating in the Blitz model, the higher their growth in achievement would be.

Next, the Primary Investigator conducted *F*-tests on all three groups to determine comparisons of variances for AIMSweb R-CBM fluency assessments from fall 2011 through spring 2012 assessments on all three mobility groups. This tested the Primary Investigator's claim that the longer students attended this elementary school's Blitz program, the smaller the variance in scores the students would achieve, which suggested the Blitz program filled these students' gaps in knowledge successfully. Finally, the Primary Investigator used the PPMCC (Pearson's Product Moment Correlation Coefficient) statistical test on students' 2010 through 2012 MAP scores. This tested relationships between mobility statuses, ethnicity statuses, and achievement outcomes through categorical correlation studies.

Definition of Terms

Following are key terms in the problem or question that are not clear and need to be defined:

Achievement. No Child Left Behind (NCLB Act, 2002) required testing benchmarks in reading and math to try and capture academic progress. The Primary Investigator utilized the following assessment tools to measure academic progress and used the term achievement: Missouri Assessment Program (MAP), AIMSweb Reading Curriculum-Based Measure (R-CBM), Developmental Reading Assessment (DRA), and Study Island assessments.

Adequate Yearly Progress (AYP). AYP measured requirements of the No Child Left Behind Act. To meet AYP requirements, school districts must have met proficiency targets that consistently increased with the goal to have all students who performed proficient levels in math and reading by 2014 (NCLB Act, 2002).

AIMSweb R-CBM. Lakeview Elementary utilized AIMSweb Reading Curriculum-Based Measure (R-CBM) formative assessments three times per year, per grade level and rated students according to norms indicated for the case study school's state for that time of the year and grade level. AIMSweb based benchmarks helped teachers monitor progress through frequent and continuous student assessments. Lakeview reported results to students and parents, via a web-based data management and reporting system. Results determined placement into Blitz reading instruction groups (AIMSweb, 2010, p. 1).

Balanced Literacy. The case study school district had identified a set of instructional strategies designed to meet the assessed needs of students:

> Instruction should be performance-based and demonstrate research-based best practices. These may include, but are not limited to, academic reading and writing in all content areas, hands-on active learning, inquiry-oriented learning, and differentiated instruction. Appropriate strategies are selected for each program of instruction to meet the unique needs of the student. (Case Study School District, 2007, p. 7)

Best Practices. According to authors, Hemelman, Daniels, and Hyde (2005), "If a professional is following best practice standards, he or The Primary Investigator is aware of current research and consistently offers clients the full benefits of the latest

knowledge, technology, and procedures" (p. v) and, "So that's why we have imported (and capitalized) the term Best Practice—as a shorthand emblem of serious, thoughtful, informed, responsible, state-of-the-art teaching" (pp. vi-vii). Best practices in the context of this study also included practices in professional development, instructional implementation, and instructional models (Reeves, 2010; Hemelman et al., 2005; Hemelman, Daniels, & Hyde, 2012).

Blitz. The Blitz program was a research based, building-level program developed by the principal and implemented by the instructional specialist of this Midwestern near urban school. Teachers, paraprofessionals, and specialists instructed students for 40 minutes each day in a small group setting where they focused on specific pre-determined reading comprehension strategies. Students received direct instruction, which focused on comprehension skills and reading fluency rates. The principal, instructional specialist, and teachers discussed small group student placement as a data team. They evaluated assessment scores from MAP assessments, AIMSweb R-CBM assessments, DRA assessments, and Study Island assessments. Teachers shared anecdotal records and behavior concerns throughout the school year and adjusted students in and out of groups as needed and agreed upon by everyone (Case Study School, 2006).

Criterion-referenced. Criterion-referenced tests are tests where student performance is compared to a standard, not to the performance of other students. Both norm-referenced and criterion-referenced tests may be standardized tests. Criterion-referenced tests use measures that indicate specific skill strengths and areas needing improvement. The results may indicate skill area needing intervention/instruction (Schinn, Schinn, & Langell, 2009, p. 3).

Developmental Reading Assessment (DRA). Lakeview Elementary teachers used this researched-based formative assessment tool to group students into small, leveled Blitz groups. This tool evaluated each student's reading ability level, gave educators tools needed to observe and document students' reading abilities, and informed instructional practice. Lakeview's school district utilized the DRA on a pre-set schedule at least three times per year, which tested reading fluency and comprehension. "DRA is a criterion-referenced test. No normative data are presented. Rubrics are provided for evaluating story retelling and for oral reading accuracy. Most of the passages are followed by specific comprehension questions" Communication Arts Consultant or Coordinator of Curriculum and Assessment, n.d., p. 10.

FRPL (Free and Reduced Price Lunch). Researchers frequently used this term as a "proxy" to determine poverty levels of schools. The U.S. Department of Education used annual FRPL statuses to determine schools' eligibility for Title I funds and also when they determined whether a subgroup of needy students achieved AYP under No Child Left Behind ("New America Foundation," 2013, para. 11).

Formative Assessment. Formative assessments provided information used as feedback, which led to modified teaching and learning based on students' needs. Formative assessment is the "process of assessing student achievement frequently during instruction to determine whether an instructional program is effective for individual students" (Schinn, Schinn, & Langell, 2009, p. 2).

Guided Reading. Lakeview's school district adopted the book authored by Fountas and Pinnell (1996), titled: *Guided reading: Good first teaching for all children.* Lakeview's school district gave teachers opportunities for professional development to

develop small group instruction strategies that followed these authors' framework (Fountas & Pinnell, 1996).

Lakeview Elementary. The Primary Investigator gave this fictitious name to the large, Midwest case study school for privacy and anonymity of the district, staff, and students involved in the research.

Missouri Assessment Program (MAP).

> The Missouri Assessment Program assesses students' progress toward mastery of the Show-Me Standards, which are the educational standards in Missouri. The Grade-Level Assessment is a yearly standards-based test that measures specific skills defined for each grade by the state of Missouri. The assessment also includes sections from the TerraNova survey, a national norm-referenced test, which is used to compare how well students are performing, compared to their peers across the country. (Missouri Department of Elementary and Secondary Education [MODESE], 2013, para. 4)

Mobility. For purposes of this study, the Primary Investigator placed students who enrolled into Lakeview Elementary and participated in Blitz for 40 minutes daily, according to the primary and elementary Blitz schedules into the following groups in Table 2.

Table 2

Mobility Groups

Mobility Group	Population
A	Persistent
B	Transitional
C	Transient

No Child Left Behind (NCLB). In order to make AYP requirements, school districts had to meet proficiency targets that consistently increased with the goal to have all students who performed proficient levels in math and reading by 2014 (NCLB Act, 2002).

Norm Referenced. Norm-referenced tests are tests that are normed on a larger group to which test takers may be compared. Both norm-referenced and criterion-referenced tests may be standardized tests. "The TerraNova is a norm-referenced test, standardized in 1996 using over 172,000 students nationwide. Normative scores reported include grade equivalents, scaled scores, national stanines, local percentiles, and normal curve equivalents" (Communication Arts Consultant or Coordinator of Curriculum and Assessment, n.d., p. 35).

Response to Intervention (RTI). Response To Intervention (RTI) was a researched-based program that integrated assessment and intervention within a multilevel prevention system that maximized student achievement and reduced behavior problems. "RTI is a structure to enhance instructional effectiveness through the use of evidence-based practice, systematic data collection and data based decision making" (Missouri Department of Elementary and Secondary Education [D.E.S.E.], 2013, para. 1).

School Improvement Team. "The Drummond School Improvement Team (SIT) were a group of parents and teachers who worked together to find researched-based teaching strategies that had positive impacts on student achievement (Case Study SIT, 2007, p. 1).

Standardized Test. Standardized indicates that students take the same test under the same testing conditions; it does not reflect the content of the test. " The

standardization process is conducted under highly controlled conditions, including the time limits (if specified) for each test in the assessment's battery, the materials the students may use during the assessment (such as scratch paper or calculators), and the directions for administering" (Zucker, 2004, p. 3).

Study Island. According to the Study Island website, Study Island was a web-based program that provided instruction, skill practice, and assessments. This program reported results according to one's state standards and academic content, according to grade level (Study Island, 2011).

Subgroups. Lakeview Elementary had the following subgroups: Individualized Education Program (IEP), Language English Proficient (LEP), African American (AA), Caucasian (C), Asian (A), Hispanic (H), English Language Learner (ELL), and Free or Reduced Price Lunch (FRPL). Each subgroup was accountable to meet AYP unless there was 30 or fewer students that subgroup at the time of the MAP. Table 3 lists the common subgroups defined by the Department of Elementary and Secondary Education in the state of Missouri for reporting assessment scores measured by MAP (Department of Elementary and Secondary Education [DESE], 2005).

Table 3

Common MAP Subgroups.

Common MAP Subgroups
Asian & Pacific Islander
African American
Hispanic
American Indian
Caucasian
Free/Reduced lunch
IEP (Special education)
LEP (Limited English proficiency)
Other/Non-response

Note. Source of information: MODESE, 2005.

Transiency. Transiency indicated the movement of students in the case study school district settings. For purposes of this study, the Primary Investigator divided students into three categories and provided the titles: Persistent, Transitional, and Transient. The Persistent population group included students who attended the elementary school from preschool through grade 1. The Transitional population sample included students who arrived during their second or third grade year. The Transient population sample was the population of students who arrived during their fourth or fifth grade year.

Limitations

Cancelations. Although the Blitz model activities occurred daily, the administration occasionally cancelled Blitz sessions due to assemblies, drills, and early dismissal. Most often, this affected only some Blitz sessions, but did not impact every session. This created a limitation in the knowledge of the actual amount of Blitz sessions that occurred for each Blitz session all students attended. This variable was not measured in this study.

Factors beyond the scope of this study. Another limitation was the lack of data available for all students, especially the most transient students. The nature of student transiency limited data collection for transient students, since students without complete data sets were excluded from the study.

Scattered data. Many of the transient students lacked complete sets of data. For example, several students entered the school year late and had no pretest data while others left the school year early yielding no posttest assessment data. Several students

entered the school year late and missed tests. This limited data collections of the most transient students in the Blitz reading model.

Unique program. Another limitation was that this school was the only school in the district that implemented this program model. Study findings could not be generalized as comparative to other schools with like demographics and transiency status.

Differentiated data. Teachers placed students in small Blitz groups according to their independent reading level and used many different materials depending on which instructional level their group required. Teachers used their own discretion regarding which materials they chose to instruct their Blitz group. These variables were not measured nor included in the study, which could have led to a stronger overall interpretation of the Blitz model.

Limited cohort groups. This case study included data collected from one cohort group of students. Additional achievement data collected from other cohort student groups, who also participated in the Blitz reading model achievement, would have helped to triangulate data to create a stronger evaluation and further support conclusions.

Schedules. The administration scheduled Blitz sessions at distinctive times throughout the day for each grade level. This allowed all grade levels to participate in the program. Blitz sessions occurred during all available 40-minute time blocks, which included scheduling around art, music, or physical education periods. This made it difficult to begin and end on time for those affected groups. The Primary Investigator did not address the variables created by scheduled Blitz times in the methodology of the case study.

Subjective data. Researchers have argued that DRAs (Developmental Reading Assessment) are subjective. Feller (2010) counter-argued, based on this analysis, it is clear that the DRA screening tool is comparable to the ORF screening tool in its relationship to statewide assessments (p. 71). In opposition, Madelaine and Wheldall (2005) contended, "over-reliance on teacher judgment for selecting low-progress readers for appropriate instruction, or for instructional decision-making, may be misplaced and that it may be preferable to employ a more objective, quick alternative based on CBM" (p. 33). Lakeview Elementary utilized AIMSweb DRAs three times per year, per grade level, which research has determined mixed reviews of its validity and dependability for older students in elementary grades.

Primary Investigator involvement. The Primary Investigator participated as a teacher in the supplemental Blitz sessions for all five years it was implemented. This may have created unintentional bias in the perception and interpretation of the development of the program and recommendations for further study. The Primary Investigator also participated in the development of assessments for the Study Island assessment pilot, during the 2011-2012 school year. Although Blitz sessions 2 and 4 were randomly chosen for analysis in testing model 4, the involvement as the implementer of the pilot study may have provided unintentional bias in the selection of test questions used in the test development process.

Conclusion

Chapter One gave a brief overview of the case study setting's background. The next section of Chapter One gave an overview of the methodology, problem statement and rationale for the case study, followed by a brief explanation of the case study focus,

achievement studies of the Blitz reading model. The final section in Chapter One stated each hypothesis, definition of terms, and case study limitations followed by a conclusion statement.

Chapter Two: The Literature Review

Chapter Two focused on the review of literature relating to this study on educating transient population of students. The Primary Investigator portrayed the literature review through several studies that examined correlations between poverty, mobility, English Language Learners (ELL), ethnicity and achievement in the first part of Chapter Two. Many researchers described how difficult it was to determine if one variable created the other variable and in what order. In the second part of Chapter Two, the investigator describes research definitions, the negative relationships that poverty and transiency had on achievement, and the methods used in research studies. In the third section of Chapter Two, the Primary Investigator explains what researchers considered effective practices, as a means to reach all students in the public education system in an attempt to close the increasing educational gap between subgroups, such as minority ethnicities, low socio-economic statuses, ELL, and mobility. The final section in Chapter Two concludes the findings of these studies.

Transiency in Public Schools

Mobility issues became increasingly widespread throughout the nation at the turn of the 21st century. Several studies across five central region states, Louisiana (Engec, 2006), Illinois (Beck & Shoffstall, 2005), the Pacific Northwest (Gruman, Harachi, Abbott, Catalano, & Fleming, 2008), rural Pennsylvania (Lesisko & Wright, 2009), and North Carolina (Xu, Hannaway, & D'Souza, 2009) reported that students scored lower on assessments as their mobility increased. Research also suggested that as mobility increased, discipline issues and crime also increased within the schools, as well (IES, 2010, p. 1). Other studies across the nation reported absence and mobility as a problem

in their geographical region, such as the Pittsburgh Public Schools (PPS). According to a 1999-2000 PPS data analysis, student mobility and absence had a negative relationship with academic achievement. The PPS study supported the view that mobility and achievement had negative impacts,

> First, mobility and absence are shown to have, with high probability, negative relationships with academic achievement. Second, the posterior for mobility is viewed in terms of the equivalent harm done by absence: changing schools at least once in the three year period, 1998-2000, has an impact on standardized tests administered in the spring of 2000 equivalent to being absent about 14 days in 1999-2000 or 32 days in 1998-1999. (Dunn et al., 2003, p. 269)

Another research study two years later agreed, "Numerous studies have examined the impact of mobility on several aspects of academic achievement: test scores, grades, retention, and high school completion. As with all research studies, there are limitations to what these studies tell us" (Rumberger, 2002, p. 2). Rumberger (2002) explained that because students who are usually mobile and low achieving had other factors that may have affected achievement scores. He argued that one must consider other alternative reasons for declining achievement as well, such as poverty and family problems. Rumberger (2003) continued to share, "In other words, mobile students came from poorer families and had lower academic performance before they were mobile, a finding supported by other studies" (p. 10; Nelson et al., 1996).

Public education in Louisiana also had growing concerns regarding student performance and its relative relationship with student mobility. Students in this area performed near the bottom when compared with other states. One study suggested that

although there was a relationship between poverty and low achievement, not all students in all schools were failing. A Harvard Educational Review article (McCarthy, 1988) explained some schools were successful, therefore; it was important to recognize that not all low-income and lower socio-economic children performed poorly. Some lower socio-economic status children performed well in low-performing schools. There were many variables they may or may not have applied when researchers evaluated correlations between academic successes and failures.

According to the Program for International Student Assessment's (PISA) 2009 report, the United States' scored at a low level. "American students are poorly prepared to compete in today's knowledge economy," quoted Secretary of Education Duncan (2009) at The Organisation for Economic Co-operation and Development (OECD). Duncan also quoted:

> Here in the United States, we have looked forwardly eagerly to the 2009 PISA results. But the findings, I'm sorry to report, show that the United States needs to urgently accelerate student learning to remain competitive in the knowledge economy of the 21st century. (para. 3)

The reports concluded that in reading literacy, 15-year old American students performed in middle of the pack when compared to 34 OECD nations. The U.S. effectively showed no change in reading skills since 2000. Therefore, U.S. students ranked 14th place in reading literacy among OECD nations. In mathematics, U.S. 15-year olds performed below average among other OECD nations (Duncan, 2009, para. 13-14).

Research incessantly suggested that poverty correlated with student achievement. The United States had the highest percentage of students who lived in poverty in OECD countries, as reported by the United Children's Fund (UNICEF) Innocenti Research Centre (2007). UNICEF reported its comprehensive assessment of the lives and well-being of children and adolescents in the economically advanced OECD nations. The UNICEF Innocenti Research Centre in Florence, Italy, established in 1988, strengthened the research capability of UNICEF and supported its advocacy for children worldwide. UNICEF reported that 21.7% of children reported as living in poverty, as opposed to the 11.2% average of all OCED countries. The United States ranked 25th out of 25 nations reported. The Primary Investigator found it valuable to recognize this data when determining the factors that cause decreased student achievement (UNICEF Innocenti Research Centre, 2007, p. 42).

The United States Government Accountability Office (GAO, 2010) conducted research collected from education's national survey data that suggested that the number of times a student changes from one school to another is correlated with lower achievement. These results were consistent with KIDS COUNT in Missouri (2003), "Children who move four or more times during their childhood are more likely to drop out than children who remain in the same school" (2010 Missouri Kids Count Data Book Online, 2010). The GAO's 2010 report also argued that disproportionate amounts of the highly mobile population were lower socio-economic status, African American, students from families who did not own their own homes. The GAO (2010) report stated:

> According to Education's national survey data, the students who change schools the most frequently (four or more times) represented about 13 percent of all

> kindergarten through eighth grade (K-8) students and they were disproportionately poor, African American, and from families that did not own their homes. About 11.5 percent of schools also had high rates of mobility – more than 10 percent of K-8 students left by the end of the school year. These schools, in addition to serving a mobile population, had larger percentages of students who were low-income, received special education services, and had limited English proficiency. Research suggests that mobility is one of several interrelated factors, such as socio-economic status and lack of parental education, which have a negative effect on academic achievement, but research about mobility effect on student' social and emotional well-being is limited and inconclusive. (para. 1)

Many educational researchers shared concerns regarding the outcomes of transient populations. Specific research, regarding achievement effects began to evolve. These studies allowed researchers to understand the consequences of the effects of highly mobile students. The *Journal of At-Risk Issues,* published a study conducted by Iserhagan and Bulkin (2011). This study examined the effects of highly mobile students and non-mobile students and their academic performance, which determined:

> Nebraska schools were employing diverse strategies—ranging from administrative procedures to classroom instruction—to address the academic and social gaps caused by mobility. With the help of a flexible approach and innovative thinking, schools were able to ensure that all of their students are able to achieve. (Iserhagen & Bulkin, 2011, p. 22, para. 8)

Iserhagen and Bulkin's (2011) study of Nebraska public schools resulted much like that of a study conducted one year later. This study encompassed nearly 300

elementary schools roughly 600 miles away in the state of Nevada. Parr (2010), of the University of Nevada Reno, found similar results. Parr's study indicated that mobile students scored significantly lower than non-mobile students. Both studies noted correlations of characteristics that highly transient students had, such as low SES (Socio Economic Status), as measured by Free and Reduced Lunch Status (FRLS), an Individualized Education Program (IEP), or participated in a Limited English Proficiency (LEP) program. According to Parr, Nevada ranked near the bottom in Reading and Mathematics proficiency (Iserhagen & Bulkin, 2011; Parr, 2010).

Hattie (2009) also conducted a meta-analysis on SES and achievement. Hattie examined hundreds of studies, which resulted in 957 effects that yielded an overall effect of (d = 0.57). Hattie mentioned numerous meta-analyses studies included in his 2009 publication, *Visible Learning: A Synthesis of Over 800 Meta-analyses Relating to Achievement*. Hattie mentioned:

> In the meta-analysis of 58 studies by Sirin (2005), the effect size between achievement and parental education was d = 0.60, parental occupation was d=0.56, and parental income was d= 0.58; very similar indeed. Further there was an effect size of d= 0.50 with neighborhood resources, and d =0.66 with free or reduced cost lunches (a common measure of SES in the US). There was very little variability in the relation between SES and various types of achievement (verbal d=0.64; mathematics d=0.70, science d= 0.54). (Sirin, 2005; Hattie, 2009, pg. 62, para. 2)

Hattie also argued that exposure resources, which allowed for rich language acquisition, allowed for higher achievement. He contended:

> It is likely that the effects from socio-economic resources are more influential during the preschool and early years of schooling. For example, Hart and Risley (1995) showed that when students from lower SES groups start school, they have, on average, spoken about 2.5 million words, whereas those from higher groups have spoken 4.5 million words; this demonstrates a remarkable difference in what students bring to school. The lack of resources, the lower levels of involvement in teaching and schooling, the lesser facilities to realize higher expectations and encouragement, and the lack of knowledge about the language of learning may mean that students from lower SES groups start the schooling process behind others. (Hart & Risley, 1995; Hattie, 2009, p. 62)

Hattie also reviewed a few hundred studies regarding mobility, which ranked as 138 out of 138 analyses that yielded a negative effect of (d = -0.34). This review studied 540 effects that encompassed over 150,000 participants. Hattie conveyed Galton and Willcocks' (1983) analysis that followed students in a longitudinal study. Hattie (2009) cited:

> The reasons for this decline may be many, but a most important clause relates to peer effects. Galton and Willcocks (1983) followed students longitudinally and every change of school caused negative effects. They noted that typically there were adjustment issues including problems with friendship patterns, particularly friendships to support learning. Whenever there is a major transition in school, then the key success factor is whether a child makes a friend in the first month (cf. Galton, 1995; Pratt & George, 2005). It is incumbent, therefore, for schools to attend to student friendships and ensure the class makes newcomers welcomed, if

this marked decline from mobility is to be reduced. (Galton & Willcocks, 1983; Galton, 1995; Pratt & George, 2005; Hattie, p. 82, para. 2)

Yet another study conducted by Wright (1999), published in the *Journal of Educational Research*, studied the effect of student mobility on achievement test scores. This review also confirmed a connection of low SES and introduces a connection of ethnic minority status and how this status influenced student mobility (Wright, 1999).

Previous research titled, "A Revolving Door: Challenges and Solutions to Educating Mobile Students," prepared through the Rennie Center for Education Research and Policy (2011), examined causes of student mobility and how different types of mobility challenged schools, districts, and the students in Massachusetts. The Primary Investigators discovered housing instability, immigration, employment changes, and family instability were common reasons students and their families moved. Massachusetts' schools and districts faced challenges with academic gaps due to students faced with unaligned curriculum across and within school districts, as well as, periods of time students were not in school, and family crises. Another challenge schools and districts faced were students who arrived without academic records, which made it difficult for staff to determine classroom placement. The students faced changes in and out of school due to the recent move. Many students tried to adapt to leaving friends and family and learning new routines and rules. They felt fear and had high stress levels while they tried to adjust to their new environment. In addition, school district staff talked of how difficult it was to meet the needs of their mobile students. Many schools needed an academic specialist to assist students with severe social or family issues. They

lacked the appropriate staff to meet their students' needs, which made it challenging to meet accountability targets. One principal explained:

> I know I need to make a 3-point gain in ELA and math this year. So, we've identified students who are on the cusp, of going to the next level, so we can really target them with interventions. So I've got a game plan, and mid-year, I look at the students and, 40 of them are gone, and I have 60 new ones. So now I've got to re-invent and change my plan. (Rennie Center for Education Research & Policy, 2011, p. 13, para. 8)

The research conducted by the Rennie Center for Education and Research also quoted a school superintendent:

> We have students coming and going on a regular basis, and you say that the expectation is that we run the race as far and as fast as a community where student mobility is almost non-existent? Why is it that the system expects the same results in the same period of time-when a whole group of students are carrying a ton of additional burden on their backs? This puzzles me all the time. (p. 14, para. 8)

Transiency in the Department of Defense (DOD) Schools

An alternative setting that included high transiency is that of the Army base school setting. According to the literature reviewed by the Rennie Center for Education Research and Policy (2011) the DOD school systems house 100,000 students in the United States and overseas with 40% of the total population being minority students. Despite the high turnover rate that averaged 37%, many students continued to achieve at high levels on the National Assessment of Educational Progress (NAEP) in both African

American and Hispanic Ethnic groups. Their researchers' suggested, "While no causal claims can be made research on DoDEA schools has sought to shed light on some of the other factors that might contribute to these outcomes" (Rennie Center for Education Research & Policy, 2011, p. 28). Smrekar and Owens (2003) suggested successful interventions in DoDEA schools included:

1. "Sufficient staffing,
2. Individual attention,
3. Expectations of parental involvement in school,
4. Experienced and stable teaching force,
5. High expectations, use of standardized test scores,
6. Small schools, a robust sense of community,
7. Social capital, and
8. Racial diversity and integration" (p. 28, para. 2).

Effective Practices

Mobility, poverty, and declining scores continued to create necessities for change in practice in school districts across the nation. Educators needed to conduct research that reviewed educational "best-practices." Best practices in the context of this study included effective practices in professional development, instructional implementation, and instructional models. According to Reeves' (2010) researched conclusions, there were four essential implications that transformed his vision of best practices:

> First, test scores alone are not a sufficient reflection of student learning, but we must base our conclusions on the evidence of student success…Second, the fundamental purpose of assessment is not merely to evaluate students but to teach

> them…Third, assessment is most effective as a preventative rather than a remediating, punitive strategy…Fourth, the purpose of assessment in a standards-based environment is not only to provide feedback to students for improvement, but also improve the performance of teachers and leaders. (p. 57-58, para. 1)

Reeves (2010) focused his research around those four principles. He believed that providing feedback to professionals who assessed their present competence levels that were designed for growth through continuous learning goals, allowed teachers to grow, just as it did for students. He also proposed that providing, "low-risk, frequent, and constructive feedback that is designed to be formative," allowed professionals to grow, as well (Reeves, 2010, p. 59). He explained that just as test scores for students should not be used as evidence for proficiency, the same was true for teachers. He suggested the creation of a "Pre-flight Checklist" (pg. 59) that collected information and planned support for students prior to making decisions that could end up with a negative impact on achievement, are important to implement. He suggested that educators should make conclusions based on evidence of accomplishment to transform innovative plans of success and achievement into reality.

According to authors of *Best Practice: Today's Standards for Teaching and Learning in America's Schools, Third Edition*, Hemelman et al. (2005), best practices are explained as, "the newest scientific evidence on effective teaching practices, show how the standard of proficient teaching is evolving in every major teaching field, and added new classroom stories from several different states" (Hemelman et al., 2005, p. v). The views of Hemelman et al. (2012) continued to evolve over time. A fourth edition was written in 2012 that focused questions on answering the question, "What is best

practice?" The fourth edition changed the focus of defining best practices with a bigger picture in mind. Then, they defined educational best practices as, "the single most powerful variable in student achievement—more than socioeconomic status or school funding—is the quality of the teaching learners receive. But what does *quality* mean?" (Hemelman et al., 2012, p. x). In 2012, these three authors revealed that teaching is minute-to-minute, student-to student, teacher-to-student, and unique in every student-teacher relationship and in every classroom environment; therefore they recognized that best practice is defined differently for each educational setting. The fourth edition explained the concept through stories that included how teachers uniquely worked with their students utilizing best practices (Berman & McLaughlin, 1978; Crandall & Associates, 1982). They agreed that the educational field could not be compared to other professional fields. Hemelman et al. (2012) clarified:

> Some people insist that education as a field does not enjoy the clear-cut evolution of medicine, law, or architecture. But still, if educators are people who take ideas seriously, who believe in inquiry, and who subscribe to the possibility of human progress, then our professional language must label and respect practice that is at the leading edge of the field. So that's why we have imported (and capitalized) the term Best Practice—as a shorthand emblem of serious, thoughtful, informed, responsible, state-of-the-art teaching. (p. 2, para. 1)

Researchers Marzano (2007), Hattie (2009), and Gallagher (2009) also believed to increase the impact of effective teaching it required a clear focus on practice. This type of practice required having a concrete goal in mind. Gallagher (2009) stated that

professionals should focus on one area. He offered that placing focus in too many areas created a need for shuffling choices that ultimately led to ineffective practice.

Reeves (2009) suggested that when professionals focused on curriculum alone, insufficient results appeared. Reeves' research resulted in the understanding that it took time to receive continuous positive results. Researchers Borman, Hewes, Overman and Brown (2002) agreed. The research suggested that it takes five years or more to show effective results. These four researchers examined 29 studies that related to comprehensive school reform models. This research indicated that direct instruction was an effective best practice. Borman et al. (2002) determined direct instruction to have the largest average effect size (+0.21) and to be of high reliability in 49 studies containing a total of 182 comparisons. This research advocated that direct instruction was a reliable instructional practice. Additional research suggested a variety of instructional practices that were effective for educational school reform. These researchers focused on Comprehensive School Reform (CSR). Borman et al. stated:

> Schools implementing CSR models for five years or more showed particularly strong effects, but the models benefited equally schools of higher- and lower-poverty levels…A long-term commitment to research-proven educational reform is needed to establish a strong marketplace of scientifically based models capable of bringing comprehensive reform to the nation's schools. (p. 1, para.1)

Various researchers determined that several studies and reviews of CSR and the process of school change had "identified several common, substantive factors that have a bearing on the success or failure of externally developed reforms" (Borman et al., 2002, p. 6). They also argued that program implementation, program design, and continuous staff

development and training, as well as, “buy-in’, or “helping to co-construct”, indicated how well Comprehensive School Reform would take place. As stated by Borman et al., “A number of researchers have demonstrated a strong relationship between reform implementation and positive effects—both qualitative and quantitative—across a variety of reforms (e.g., Berman & McLaughlin, 1978; Crandall et al., 1982; Datnow, Borman, & Stringfield, 2000; Stringfield et al., 1997)” (p. 7, para.1).

Direct instruction. Many behaviorist researchers argued that direct instruction was a powerful use of best practice. Table 4 illustrates a collection of several researchers’ results that included the use of direct instruction as a scripted model, such as a basal series, as well as, direction instruction as it related to instructional practice (Borman et al., 2002; Stockard, 2010; Hattie, 2009).

Florida’s Center for Research and Innovation defined direct instruction as, “Direct Instruction: The teacher defines and teaches a concept, guides students through its application, and arranges for extended guided practice until mastery is achieved” (Florida’s Center for Reading Research, 2006, para. 3). Another definition, as explained by Rosenshine (2008), from Collins, Newman, and Brown’s (1990) study stated, “instructional procedures for teaching cognitive strategies that involved providing students with scaffolds, or temporary supports, on which they could rely during initial learning” (Rosenshine, 2008, p. 3). Rosenshine discussed the importance of knowing the different meanings of direct instruction according to Borman et al. (2002):

> the models meeting the highest standard of evidence, Direct Instruction, the School Development Program, and Success for All, are the only CSR models to have clearly established, across varying contexts and varying study designs, that

their effects are relatively robust and that the models, in general, can be expected to improve students' test scores. (Rosenshine, 2008, p. 37, para. 5)

Table 4

Direct Instruction Research

Researcher(s)	Research Results
Borman et al. (2002)	Examined studies pertaining to 29 comprehensive school reform models Direct Instruction (DI) was found to have the largest average effect size and to be grounded in the greatest number of studies, 49 studies containing a total of 182 comparisons with an effect size = (0.21) (Hattie, 2009, p. 205; Borman et al., 2002, p. 29, para. 4)
Stockard (2010)	Examined changes from first to fifth grade for students in a large urban school system with a high proportion of economically disadvantaged students. By fifth grade, DI students had the highest vocabulary and comprehension averages that exceeded the fifth grade national average.
Hattie (2009)	Conducted 4 meta-analyses' with 304 studies, 42,618 people and 597 effects Overall meta-analysis resulted in an effect size (d = 0.59) Regular education students resulted in an effect size (d = 0.99) (Hattie, 2009, p. 205)
Adams & Englemann (1996)	Determined that 32 of the 34 studies' effect-size scores were positive, with a mean effect size of 0.87 Special education students resulted in an effect size (d = 0.86) Reading education students resulted in an effect size (d =0.89) (Hattie, 2009, p. 206; Adams & Engelmann, 1996, p. 43)

Note. The Primary Investigator created this table to illustrate research outcomes for previous research.

Borman et al. (2002) referred to a scripted program that utilized ready-made materials, not the practice of direct instruction as a way to teach, although the lessons within the program did use the direct instruction, scaffolding approach.

Small-group instruction. Table 5 illustrates results from research studies that examined small group instruction-models.

Table 5

Small Group Instruction Research

Researcher(s)	Research Results
Lou et al. (2001)	Extracted 486 independent findings from 122 studies involving 11,317 learners comparing individual and group learning with computer technology Group learning had significantly more positive effects than individual learning Individual achievement mean effect size = (0.16) Group task performance effect size = (0.31) (Lou et al., 2001, table 3)
Hiebert et al. (1992)	Studied small groups of six to seven students Comparisons showed that the group receiving the small group intervention did better than the comparison group.
Taylor et al. (2000)	Studied whole group versus small group K: Whole group effect size (r = -0.38) K: Small group effect size (r = 0.38) 4-6: Small group effect size (r = 0.16) Emphasized small group instruction 60 minutes, effect size (r = +0.30) in addition to whole class instruction Provided an extra edge in opportunity for independent reading 28 minutes/day, effect size (r = +0 .32) (Taylor et al., 2000, p. 121-165)
Fountas & Pinnell (2001)	Studied small groups of students in guided reading Comparisons showed that the group receiving the small group intervention did better then the comparison group. Small groups are better used to help intermediate grade readers' work collectively to comprehend and respond to texts
Hattie (2009)	Examined 2 meta-analysis', 78 studies, 155 effects, with 3,472 people Small group learning correlated to achievement Effect size (d=0.49) (Hattie, 2009, p. 95)

Note. The Primary Investigator created this table to illustrate research outcomes for previous research.

These researchers' studies suggested that small group instruction was an effective practice for increased achievement (Hiebert, Colt, Catto, & Gury, 1992; Taylor, Pearson, Clark, & Walpole, 2000; Lou, Ambrami, & D'Apollonia, 2001; Fountas & Pinnell, 1996; Hattie, 2009).

Researcher, Taylor (2007) stated:

> Not surprisingly, having almost all whole group or almost all small group instruction has not been found to be beneficial to students' overall reading growth. Too much whole group instruction tends to lead to high levels of passive student responding. Often, students are "tuning out" as the teacher is talking or another student is either reading aloud or answering a question the teacher has posed. On the flip side, too much small group instruction leads to large amounts of independent "seatwork" time for students that may primarily be "busywork". (p. 13, para 2)

Professional development. Several researchers reported that on-going professional development was necessary for all educators. These researchers' studies suggested that professional development was a powerful best practice for increased achievement. The repetitive message researchers reiterated was that it was that teachers made the difference, not programs or materials. International Reading Association (IRA, 2007) also expressed the view that only well-prepared teachers effectively differentiated reading instruction for students (IRA, 2007). Another researcher, Schmoker (2006), argued, "Instruction itself has the largest influence on achievement (a fact still dimly acknowledged)" and "Most (though not all) instruction, despite our best intentions is not effective but could improve significantly among teachers and administrators" (p. 10).

Formative assessment. Table 6 illustrates results from research studies that examined formative assessment models (Fuchs & Fuchs, 1986; Hattie, 2009). These researchers' studies suggested that formative assessment was a powerful best practice for increased achievement.

Table 6

Formative Assessment Research

Researcher(s)	Research Results
Fuchs & Fuchs (1986)	Examined the effects of systematic formative assessment Displaying results graphically with Students with a mild learning disability effect size (d = 0.70) Evaluation (interpretation) by a set of rules (d = 0.91) (Fuchs & Fuchs, 1986, p. 199-208)
Hattie (2009)	Examined 2 meta-analysis', 30 studies, 78 effects, 3,835 people Providing formative evaluation effect size (d = .90) (Hattie, 2009, p. 181)

Note. The Primary Investigator created this table to illustrate research outcomes for previous research.

Popham (2008) defined formative assessment as, "Formative assessment is a planned process in which assessment-elicited evidence of students' status is used by teachers to adjust their ongoing instructional procedures or by students to adjust their current learning-tactics" (p. 6). Black and William (1998) reported their review of 700 results that regarded formative assessment use in the classroom as highly effective. They stated, "The research reported here shows conclusively that formative assessment does improve learning" (Black & William, 1998, p. 61). Schmoker (2006) agreed. He believed that working with formative assessment results allowed teams of teachers and principals to guide their instructions. He stated, "Principals need to look at evidence that

teams are crafting and improving lessons and units together, adjusting their instruction on the basis of formative assessment results" (Schmoker, 2006, p. 143).

Summative assessment. Table 7 illustrates results from research studies that examined summative assessment models. These researchers' studies suggested that summative assessment was a powerful best practice for increased achievement (Invernizzi, Meier, & Juel, 2003; Feller, 2010).

Table 7

Summative Assessment Research

Researcher(s)	Research Results
Feller (2010)	Studied correlation (Pearson's *r)* between ORF and statewide accountability assessments in grades three through five ORF: 0.61 to 0.80 ($p < .001$) DRA: 0.62 to 0.79 ($p < .001$) (Feller, 2010, p. 71)
Invernizzi et al. (2003)	Validity study with 197 students in Grades 1 through 3 reported in the Phonological Awareness Literacy Screening–Grades 1-3 (Form B) DRA instructional level was highly correlated with the spring 2001 PALS summed score (a combination of word list reading and spelling) ($r = .82$, $p < .01$) For a subsample of 96 students DRA independent level and PALS summed score were also strongly related ($r = .81$) (Invernizzi et al., 2003, form B)

Note. The Primary Investigator created this table to illustrate research outcomes for previous research.

Feller's 2010 research determined the DRA (Development Reading Assessment) to be a successful predictor of year-end standardized test accomplishment. He concluded, "The research conducted for this dissertation has demonstrated the strength of the DRA as an interim assessment that is compatible with Balanced Literacy and also robust enough to become an essential component of a comprehensive assessment system" (Feller, 2010, p. 96, para. 2).

Author and assistant clinical professor at George Washington University, Rathoven (2006) reviewed the DRA. Although Dr. Rathoven was in opposition to Feller's (2010) conclusion, her review of the DRA model included research that claimed there was a high correlation between a combination of word list reading and spelling. Rathoven claimed the DRA was ambiguous because it relied on teacher judgment and was not an effective measurement tool for older students in the elementary school setting. Rathoven indicated DRA allows for educators to predict future reading achievement and responsiveness for lower level readers. However, her research also suggested there is very little evidence of predictability of higher-level readers. The higher-level test administration has more criterion-related validity which allows for subjective scoring procedures due to inconsistencies.

Also in opposition, Madelaine and Wheldall (2005) contended, "over-reliance on teacher judgment for selecting low-progress readers for appropriate instruction, or for instructional decision-making, may be misplaced and that it may be preferable to employ a more objective, quick alternative based on CBM" (p. 33). CBM stands for curriculum-bases measurement procedure.

An example is the AIMSweb R-CBM fluency assessment, used in Lakeview Elementary's case study and defined in Chapter One.

Data analysis and collaboration. Table 8 illustrates results from research studies that examined data analysis and collaboration models. Several researchers argued that there is no end to data collection. As students' scores fluctuated, teachers continued to adjust instruction for continued growth (Reeves, 2010).

Table 8

Data Analysis and Collaboration

Researcher	Research Results
Khattri & Kane (1995)	Teachers are given time to learn about their students before setting up structures. This allowed teachers to be better able to adapt, modify, or create structures for independent work for a specific group of students.
Taylor et al. (2000)	It is only through assessment that teaching decisions can be made. Assessment provides data that informs good instruction.
IRA (2007); Taylor et al. (2000)	The recurring message from research is that it is the teacher, not the programs or materials that make the difference; therefore, only a well-prepared teacher can effectively differentiate reading instruction for students.
Reeves (2010)	Data gathered from schools in United States and Canada from 2005 through 2007: Specific goals and reading achievement in 3rd grade: % proficient gains were 4.4%, 18.4%, and 24.2% (Reeves, 2010, figure A.10) Monitored plan and reading achievement in grade 4: % gains were 6.8%, 1.9%, and 17.6% (Reeves, 2010, figure A.18) Targeted Research-Based strategies and reading achievement in 5th grade (2005-2007): % proficient gains were 4.4%, 1.7% and 10.4% (Reeves, 2010, figure A.19)

Note. The Primary Investigator created this table to illustrate research outcomes for previous research.

Teachers adapted, modified, and created differentiated, independent work for specific groups of students. They utilized appropriate amounts of time and learned as much as they could learn about their students (Khattri & Kane, 1995; Taylor et al., 2000; Taylor, 2007; IRA, 2007; Reeves, 2010).

Fluency. Table 9 illustrates results from research studies that examined fluency practice models. These researchers' studies suggested that utilizing summative assessment was a powerful best practice for increased achievement (Taylor et al., 2000; Therrien, 2004).

Table 9

Fluency Practice Research

Researcher	Research Results
Taylor et al. (2000)	Evaluated fluency practice Grade 1: effect size r = - 0.32 (telling & instructional reading level) Grade 1: effect size r = +0.28 (active responding/reading fluency) Grade 2-3: effect size r = +0.19 (modeling & reading fluency Grade 2-3: effect size r = +0.18 (coaching & reading fluency) Grade 2-3: effect size r = - 0.17 (telling & reading fluency) (Taylor et al., 2000, p. 121-165)
Therrien (2004)	Evaluated repeated reading Immediate comprehension and fluency: effect size of (d = .76) Far transfer of comprehension and fluency: effect size of (d = .50) (Therrien, 2004, p. 252-260)

Note. The Primary Investigator created this table to illustrate research outcomes for previous research.

Comprehension. Table 10 illustrates results from research studies that examined comprehension instruction models. These researchers' studies suggested that comprehension instruction was a powerful best practice for increased achievement (Rowe, 1985; Guthrie, McRae, & Klauda, 2007; Sencibaugh, 2005; Hattie, 2009).

Table 10

Comprehension Strategies Research

Researcher	Research Results
Rowe (1985) (as reported by Hattie, 2009)	Conducted a large meta-analysis Vocabulary effects effect size (d = 1.77) Reading comprehension effect size (d = 1.28) Measures using words effect size (d = 1.28) Measures using whole texts effect size (d = 0.82) Poor readers effect size (d = (0.80) Good readers effect size (d = 0.74) Processing strategies effect size (d = 1.04) Repetition effect size (d = 0.77) (Hattie, 2009, p. 136)
Guthrie et al. (2007) (as reported by Hattie, 2009)	Evaluated a concept oriented program (12 week program: inference, asking questions, during, summarizing, comprehension monitoring) Test comprehension effect size (d = 0.93) Fluency effect size (d = 0.73) Story comprehension effect size (d = 0.65) Motivation: curiosity effect size (d = 0.47) Motivation: Engage effect size (d = 0.31) Self-Efficacy effect size (d = 0.49) (Hattie, 2009, p. 136)
Sencibaugh (2005) (as reported by Hattie, 2009)	Tested visual dependent strategies, auditory, or language Pre-reading effect size (d = 0.94) Post reading effect size (d = 1.18) (Hattie, 2009, p. 136)
Hattie (2009)	Conducted 9 meta-analysis, 415 studies, 2,653 effects, 11, 585 participants Effect size (d = 0.58) (Hattie, 2009, p. 136)

Note. The Primary Investigator created this table to illustrate research outcomes for previous research.

Early intervention. Hattie (2009) examined 16 meta-analyses regarding early intervention. His meta-analysis included 1,704 studies, 88,047 participants with 9,369 effects, which resulted in an effect size of (d = 0.47). Hattie's study suggested that early intervention was a powerful best practice for increasing achievement.

Reading exposure. Hattie (2009) also examined six meta-analyses, 114 studies, and 293 effects with 118,593 participants. This study had an effect size of (d = 0.36). This researcher's study on reading exposure suggested that instruction frequency was a powerful best practice for increased achievement (Hattie, 2009).

Differentiation of instruction. Taylor et al.'s (2000) research suggested that differentiating instruction was a powerful best practice for increased achievement they studied primary level reading instruction in low income schools. Taylor et al.'s research suggested:

> We do know that exemplary teachers of literacy were observed teaching more often in small groups based on the instructional reading level of the students which involved prompting children to use a variety of strategies as they were engaged in reading during small-group instruction or one-on- one reading time. (p. 136)

Time on task. Table 11 illustrates results from research studies that examined time on task. These researchers' studies suggested that time on task was a powerful best practice for increased achievement (Frederick, 1980; Taylor et al., 2000; Donovan & Radosevich, 1998; Hattie, 2009).

Table 11

Time on Task Research

Researcher	Research Results
Frederick (1980) (as reported by Hattie, 2009)	Studied the relationship between "engaged" instructional time and outcomes from 35 studies. Effect size (d = .34) (Hattie, 2009, p. 185)
Taylor et al. (2000)	Effective schools Devoted 60 minutes to small group reading instruction
Donovan & Radosevich (1998)	Spaced time on task vs. mass time on task Effect size spaced time (d = 0.46) Effect size spaced time acquisition (d = .045) Effect size spaced time retention (d = 0.51) (Donovan & Radosevich, 1998, p. 308-315)
Hattie (2009)	4 meta-analysis', 100 studies, 136 effects Effect size (d = 0.38) (Hattie, 2009, p. 184)

Note. The Primary Investigator created this table to illustrate research outcomes for previous research.

Behavior management. According to a 2002 study, "In adolescence, delinquent behavior was a significant predictor of underachievement, even when attention problems were controlled" (Barriga, Dorran, Newell, Morrison, & Robbins, 2002, p. 237).

Feedback. Table 12 illustrates results from research studies that examined feedback. These researchers' studies suggested that giving feedback was a powerful best practice for increased achievement (Kluger & DeNisi, 1996; Marzano, 2007; Hattie, 2009).

Table 12

Feedback Research

Researcher	Research Results
Kluger & DeNisi (1996) (as reported by Hattie, 2009)	Addressed feedback through a systematic study, 131 studies, 470 effect sizes, 12, 652 participants Effect size (d = 0.38; 2 % negative) Better when feedback provided on correct answer rather than not correct answer (Hattie, 2009, p. 175)
Marzano (2007)	Evaluated scoring and feedback A Meta-analysis of 7 School District, 209 teachers, 16 schools, grade 3, P = 0; effect size = 3.66 (Marzano Research Laboratory, 2013)
Hattie (2009)	23 meta-analysis', 1,287 studies, 2050 effects 67, 931 participants Effect size (d = 0.73) (Hattie, 2009, p. 173)

Note. The Primary Investigator created this table to illustrate research outcomes for previous research.

Definitions

The National Center for Homeless Education published a project titled, Project Hope, through the College of William and Mary in Williamsburg, Virginia, which defined the term "highly mobile" as, "Students who move six or more times in the course of their K-12 career" (National Center for Homeless Education, 2003, p. 12). This publication clearly defined the term associated with highly mobile youth and gave a checklist of interventions and strategies to support highly mobile students. According to Rumberger (2003), mobility is "students making non-promotional school changes" (p. 6). Yet another study defined the term "more-mobile" as, "students who changed four or more times" and "less mobile" as, "students who changed school two or fewer times"

(GAO, 2010, p. 4). Each study defined the term "mobility" differently within the methodology of their research.

Impact

Mobility impacted education, which affected student achievement. This created an academic achievement gap between mobile students to that of the Persistent student population. Declining scores prompted educators to change instructional methods and teacher practice. Researchers who reviewed literature from 2003, discussed negative impacts of highly mobile students on other highly mobile students, non-mobile students, teachers, and schools overall (Franke et al., 2003, p. 150). Two years later, researchers Kaase and Dulaney (2005) also supported arguments that stated that the impact of moving from residence to residence played a role in poor school performance and heightened levels of anxiety. They found significant correlations between mobility and achievement. Further, according to Iserhagan and Bulkin's (2011) recent study titled, "The Impact of Mobility on Student Performance and Teacher Practice," there continued to be connections between academic achievement and mobility. They too, found similar results, six years later that argued, "Much of the research conducted on mobility and achievement concludes that mobility is a large threat to academic achievement and the school environment" (Iserhagan & Bulkin, 2011, p. 17).

Immigration continued to create an increasing new mobility movement in the United States. The Rennie Center for Education Research and Policy's 2011 study, sought to understand the impact mobility had on Massachusetts' students and teachers. Researchers interviewed teachers and collected students' drawings regarding their feelings about student coming and going. Then, researchers collected and analyzed both

the interviews and student drawings to determine likenesses. They found students' and teachers' perceptions aligned.

As reported by Kieffer (2008), according to unpublished projections by the PEW Hispanic Center's Senior Demographer, Passel (2008), migrant children are predicted to increase profoundly by the year 2020. Passel indicated the number of school age children will increase by a five and half million students. Kieffer also reported Passel's projection that one out of every five of those students will be a migrant child with limited English speaking abilities.

ELL and poverty researcher Frazier (2013) examined the impact of ELL graduation rates in relationship to poverty using school reported data collected by DESE. Her findings supported findings within her literature review from Payne (2003), Frye (2008) and Kieffer (2008). According Frazier's research, ELL students living in poverty have lower graduation rates from a sample Eighty-nine school buildings in the state of Missouri were selected (Frazier, 2013, p. 17-18).

Methodology

Each researcher the Primary Investigator discussed in the literature review focused on creating measurement tools that determined differences in academic performance between students that were highly mobile and students who stayed in the same educational system throughout their elementary education. Wright's (1999) study noted a study performed by Nelson et al. (1996). Nelson et al. conducted a three- year study that collected achievement and behavior data early in their study then followed the students for three years. The study discovered that the most mobile students rated lower

in the area of behavior and school adjustment. They also noted that findings also suggested influences such as being an at-risk family.

Wright's (1999) study examined the effects of student mobility on achievement test scores. Wright defined mobility categorically and examined those categories within the district he labeled as internal mobility, as well as outside the district, which he called external mobility. Wright also categorized students by ethnicity and family income. Students who completed state and national tests during the 1996-1997 school year and in third and fourth grade from one of 33 elementary schools in a large Midwest urban school district became his studied population (Wright, 1999).

Parr (2010) titled his study, "A Quantitative Study of the Characteristics of Transient and Non-transient students in the Nevada Elementary Schools." Parr's research purpose was similar to Wright's study. Parr studied the relationship between highly-mobile populations and non-mobile, or less mobile populations. Parr also studied the relationship of test scores (achievement scores) and mobility statuses. However, Parr tried to identify the characteristics that distinguished transient (mobile) students from non-transient (non-mobile) students. Parr determined his methodology through the use of criterion-referenced individual data in the Nevada School District study. Parr also provided definitions and parameters for the study, such as SES, IEP status, and LEP program participation. The quantitative research findings in Parr's study suggested patterns were Persistent with lower achievement scores and mobility statuses on criterion-referenced assessments, when he compared scores to their more non-mobile classmates. Qualitative data collected included interviews from schools that had high mobility rates and high school performance, as well as schools with students who had

high mobility rates and low school performance. This study suggested that successful schools addressed mobility issues when they provided a solid transition program, utilized administrative procedures that increased the overall quality of the school, utilized flexible classroom strategies, and used collaborative support and effective communication (Parr, 2010).

Isernhagan and Bulkin (2011) conducted their study using a mixed method. They collected data from Nebraska public schools for the schools years 2007-2008 and 2008-2009 school years. These researchers collected data from the Nebraska Department of Education, which resembled Wright's (1999) study. Iserhagen and Bulkin also utilized criterion-referenced test data for assessment measures in math, reading, science and writing, as well as, a quantitative measure to make their conclusions regarding their study.

The Rennie Center for Education Research and Policy's (2011) study was a qualitative study which included descriptive mobility rate data, as well as, an analysis of interview questions, in order to gain insight into the challenges highly mobile schools faced. This study determined many challenges and offered promising strategies for overcoming those challenges. The final portion of the research methodology included sharing considerations with policy makers to promote action to create policies that would prevent many challenges faced by students, schools, and school districts with highly mobile populations.

Conclusion of Studies

Each mobility study in the literature review had similar outcomes, which conceded that students with a higher mobility rates scored lower on proficiency tests and

criterion-referenced based exams. Researchers recognized several other factors appeared consistent among the highly mobile student populations, such as, lower SES ethnicity, language barriers, and an overall disconnection with school. As a result of these studies, researchers recognized the need for continued focus on the educational problem of highly mobile students and their correlation to lower achievement.

Past and present researchers recommended programs that aided students to adjust to mobility, such as, transition programs and attention to curriculum and school processes. Researchers also recognized the broader implications beyond student achievement, such as, avoiding the "pitfall" as Wright (1999) states, "the pitfall that one needs to avoid is that student mobility seems to be a plausible explanation for poor performance, although the observed effects are likely attributable more directly to poverty" (p. 350). These conclusions allowed researchers to recognize common threads between impoverished students and mobility, as well as, lower student achievement outcome trends. The Rennie Center for Education Research and Policy's (2011) study recommended improving intake and placement processes through implementation of a statewide electronic records transfer system, creating a mechanism for sharing effective and promising practices, such as an annual statewide conference, professional development for teachers regarding differentiation of instruction practices, flexible funding for schools or districts that have high mobility, additional support staff, and a changed accountability system that takes mobility into consideration. The study also recommended creating increased access to community and school based services to aid students and also to gain assistance from the state (Rennie Center for Education Research & Policy, 2011, p. 21).

The Rennie Center for Education Research and Policy (2011) concluded:

> If the Commonwealth is truly committed to closing its Persistent achievement gaps, additional attention and support must be provided to mobile students and the schools who serve the largest populations of these students. As the study revealed, schools are limited in their capacity to serve the range of academic, social and emotional needs of mobile students. In addition to the efforts taking place inside public schools, attention must be paid to the non-school factors (such as housing, employment and family instability) that cause mobility as well as the range of factors (such as lack of food, proper clothing, dental and health care) that impact students' readiness to learn. In order for Massachusetts public schools to achieve the goal of "all students college- and career-ready," the Commonwealth must prioritize addressing non-school factors so all students come to school ready to learn and are provided with every opportunity to achieve their fullest potential. (p. 30, para. 4)

This statement aligned with Fraizer's (2013) conclusions, which reported ELL students in 89 Missouri schools have lower graduation rates than their non-poverty stricken peers. Frazier recommended further research to be conducted in the area of ELL and immigration growth. Considering immigrants who are migrant and poverty stricken, and the projection of Passel (2008), future research is warranted.

Researchers conducted many studies that suggested educators should use researched-based methods that have proven successful in classroom settings. These effective practices repeated common themes, such as: direct instruction, small group settings for differentiation, formative assessment, summative assessment, data collection

and collaboration, comprehension strategies, early intervention, reading exposure, differentiation of instruction, time on task, behavior management, feedback, and professional development (in the areas of best practices, working with students of high mobility, high poverty, limited English, and crisis). The reviewed literature concurred that effective teaching through promised, effective, or best practices is key to gaining academic success.

Chapter Three: Methodology

In the first section of Chapter Three, the Primary Investigator explained the research problem statement, methodology, the case study background, development of the supplemental reading model, best practices as applied to the Blitz program design, and a comparison of the case study school to a North Carolina Department of Defense school system. The next section included a description of the statistical analysis, collection of assessment data, the methodology purpose, and eligible case study participants. The final section of Chapter Three included seven hypotheses and a thorough description of each data model, as well as each statistical test chosen for hypotheses analysis, which allowed the investigator to provide a quantitative analysis. Chapter Three ended with a brief conclusion.

Problem Statement

Few programs have addressed and studied complications acquired due to transiency within schools that were useful to other school systems with similar variables. Since schools with higher transient populations often had students with lower achievement scores when compared to those with Persistent populations, school leaders needed to continue to analyze efforts to help all students learn and grow, through careful analysis of the effects transiency had on all students (Dunn et al., 2003). As a result, many educators had concerns about student mobility due to the perceived negative impacts on student learning and achievement (Rumberger, 2003, p. 6; Franke et al., 2003, p. 150). One study suggested that although there was a relationship between poverty and low achievement, not all students in all schools were failing. A Harvard Educational Review article (McCarthy, 1988) explained some schools were successful; therefore, it

was necessary to note that not all low-income and lower socio-economic status children were performing poorly. Some socio-economically disadvantaged children were performing well in low-performing schools.

Methodology

In order to display data, the Primary Investigator organized collections of personally communicated information, research-based data collections, and statistical data collections into five parts, titled:

1. "Lakeview Elementary School Background: Data Collection Part I"
2. "Blitz Supplemental Reading Program Development: Data Collection Part II"
3. "Program Design Researched Based Analysis: Data Collection Part III"
4. "Case Study School vs. Department of Defense schools: Data Collection Part IV"
5. "Statistical Data Collection: Part V"

The Primary Investigator cross-referenced the program design analysis against past and current research as it applied to each instructional practice incorporated into the Blitz design. This allowed the Primary Investigator to evaluate the Blitz program design as it related to past and current action researched results.

Next, the Primary Investigator compared collected standardized data and Terra Nova scores from the case study school to the TerraNova scores from a Department of Defense (DOD) school located in North Carolina. This data comparison helped the Primary Investigator to determine similarities and differences noted from a school system that had student demographics that were similar, yet had different achievement outcomes.

The final part of the methodology described the purpose of the methods, eligible participants, and statistical data collection procedures, which included the development of four testing models that allowed the investigator to provide a quantitative analysis of seven hypotheses statements. The statistical methodology of this case study allowed the Primary Investigator to examine the differences and likenesses in academic achievement of three mobility groups, and their subgroups. The analysis of hypotheses results allowed for greater accountability for students and teachers. The methodology also permitted the Primary Investigator to inform the staff at Lakeview Elementary of the improvement in achievement of their Persistent, Transitional, and Transient populations and the suggested causal relationships between their socio-economic status (SES) as measured by Free and Reduced Lunch Status (FRLS), mobility, ethnicity and achievement. The Primary Investigator believed this to be an influential component to closing the educational gap between students categorized transient, low socio-economic status, and of minority ethnicity at this large Midwest near-urban elementary school.

Population Determined. The Primary Investigator divided students into three sample population groups, defined by the school years they enrolled into specific grade levels. The Primary Investigator titled these groups the Persistent, Transitional, and Transient populations and labeled them: Persistent Population Group-A, Transitional Population Group-B, and Transient Population Group-C. The Persistent population group included students who entered the elementary school from preschool through grade 1. The Transitional population sample included students who arrived during their second or third grade year. The Transient population sample was the population of students who arrived during their fourth or fifth grade year. For the purpose of the case study, the

Primary Investigator analyzed achievement according to mobility statuses, as indicated in Table 13.

Table 10

Population Determination

Mobility Group	Population	Entered Lakeview
A	Persistent	PK / 1
B	Transitional	2 / 3
C	Transient	4 / 5

The Primary Investigator explored whether the amount of time students attended Blitz sessions at this large elementary school affected achievement scores. The Primary Investigator compared achievement data of the population of fifth grade students, from the 2011-2012 school year, who had attended the school's Blitz reading comprehension model for different combinations of time.

Quantitative Methodology. The Primary Investigator chose a quantitative methodology. Descriptive data was analyzed to compare average means of pre- and posttest data of each mobility group. The Primary Investigator analyzed hypotheses 1, 2, and 7 using *z*-tests for difference in means that measured student achievement and academic growth. These tests compared the Transitional Population Group-B and the Transient Population Group-C to the Persistent Population Group-A. The Primary Investigator also applied an *F* test for difference in variance for hypothesis 2. These tests were conducted to compare Group-B and group-C to Group-A. Next, The Primary Investigator determined relationships between independent and dependent variables with the application of a Pearson Product Moment Correlation Coefficient (PPMCC) for hypotheses 4, 5, and 6. These tests categorized data to measure achievement correlations

between mobility groups and socio-economic status as measured by FRLS and ethnicity of the two largest, changing ethnicities, African American and Caucasian. All test models included descriptive data, which included comparisons of the two more mobile populations (Transitional Group-B and Transient Group-C) mean assessment scores.

The final part of the methodology described the purpose of the methods, eligible participants, and statistical data collection procedures. These procedures included the development of four testing models that allowed the investigator to provide a quantitative analysis of seven hypotheses statements.

The Primary Investigator. During this study, the Primary Investigator was the District Technology Specialist (DTS) for two schools in the school district. Prior to this position, the Primary Investigator worked at Lakeview Elementary as a third grade teacher. While in this position, the Primary Investigator participated in the Blitz model for four years as a third grade teacher and one year as the leader in the fifth grade Study Island pilot. The Blitz model and the analysis of how it met the needs of students through meeting students where they were in reading ability was the focus of this case study.

Purpose of Methodology

Purpose 1. In order to provide staff members at Lakeview Elementary an analysis of achievement within the supplemental reading model, it was important for the Primary Investigator to consider variables consistent with current research that suggested the use of Best Practices in instruction. Current researchers' conclusions suggested, as mobility and poverty increased, achievement decreased (Engec, 2006; Beck & Shoffstall, 2005; Gruman et al., 2008; Lesisko & Wright, 2009; Xu, Hannaway, & D'Souza, 2009). . Therefore, the Primary Investigator determined it was critical to establish what

instructional practices teachers used when addressing their highly mobile student population.

Purpose 2. The creation of the mobility groups also allowed the Primary Investigator to provide a statistical analysis to adequately determine achievement through the use of *z*-tests, *F* tests, and (PPMCC) analyses. This methodology allowed the Primary Investigator to examine differences and likenesses of these different ethnic groups and subgroups. This allowed for greater accountability of students and teachers for the administrators of this elementary school.

Purpose 3. In order to provide a methodology that allows others to study student achievement in similar schools with similar demographics, the Primary Investigator collected background data that described the supplemental model created. The collection of background data allowed for the possibility of the implementation of this program and its research methods to be replicated. The Primary Investigator believed this to be an important component to closing the educational gap between students who were categorized transient and/or low SES for current and future students at this large Midwest elementary school.

The Data Collection and Analysis Procedures

Data Collection and analysis procedures began with a formal meeting with the superintendent of the school district where the case study school resided. The Primary Investigator gained official approval to begin the study and included an approval letter in the submission to the Institutional Review Board (IRB). Next, the Primary Investigator created a visual figure to illustrate the methodology procedures (Figure 1), as well as a table to illustrate each hypothesis, dependent and independent variables, and statistical

tests (Table 21). Then the Primary Investigator met with the principal of the case study setting. He also granted the Primary Investigator permission to access records and personal communication regarding the supplemental Blitz program's vision, goals, and procedures

Lakeview Elementary School Background: Data Collection Part I

The Primary Investigator created a methodology model that allowed for data collection that helped her to determine how well students' needs were met through their participation in a supplemental reading intervention model called Blitz. In order to collect background information regarding the Blitz development process, the Primary Investigator met with the building level principal and instructional specialist. To remain in compliance with the district policy of the case study school, the Primary Investigator titled the school with the fictitious name Lakeview Elementary. Changing the school name allowed for privacy and anonymity of the school district, staff, and students involved in the research.

Through personal communication with the building administrator, the Primary Investigator learned the Midwestern, near urban elementary school opened its doors in August 2002. The large 95,389 square foot building accommodated students from two schools that closed due to a nearby airport expansion project. The airport expansion closed two smaller neighborhood schools, both located in the Midwest. Engineers constructed the school on a 14-acre campus, which included 33 general education classrooms. Each classroom had indirect lighting, an amplification system, a Promethean interactive board, and wireless networking. Most of the building had carpeted floors, with the exception of the sink area in each classroom, the two gyms, art rooms, and

restrooms. The building contained five kindergarten rooms and two preschool classrooms, each with 1,200 square feet. Kindergarten and preschool students had access to an enclosed courtyard providing an outside, primary playground with rubberized cushioned flooring. The 900 square foot first-through-fifth grade classrooms included sinks and walk-in closets. All students within the school had access to a large exterior playground, which included four basketball courts, two tetherball posts, a large football field and track, and an outdoor playground system. Students had access to three computer labs with approximately 300 laptops in movable carts, as well as a large open library with partial glass walls approximately 25 to 30 feet tall. The library housed one of the computer labs in a KIVA, which was a room with rounded walls and stadium seating. The KIVA allowed students to enjoy special presentations, plays, and other productions. The library exited to a fenced-in exterior garden that faced the front of the building. The students at Lakeview Elementary had access to two gyms, located near the east wing totaling approximately 4,000 square feet. The entire school had a computer controlled climate system and a four pipe system for heating, ventilation, and air conditioning (Principal, personal communication, January, 2013).

Demographics changed. The Primary Investigator noted that the demographics of Lakeview Elementary changed over a period of six years. Table 14 represents demographical changes from 2006 through 2012, provided by the DESE (2013) website.

African American (AA) student ethnicity increased from approximately 26% in 2006, to approximately 48% in 2012. The Hispanic (H) student ethnicity increased slightly from approximately 8% in 2006 to roughly 12% in 2010, then decreased slightly again to approximately 10% in 2012, while Caucasian (C) student ethnicity decreased

from approximately 60% in 2006, to approximately 37% in 2012. The two most notable changes in ethnicity were African American and Caucasian students. The net difference over six years of 22.7%, from 25.6% to 48.3%, resulted in close to 89% growth in the African American population, while the net difference of 22.8% over six years, from 60.3% to 37.5%, resulted in a decrease of 38% in the Caucasian population (Missouri Comprehensive Data System, 2013).

Table 11

Changing Demographics

Year	% Asian (A)	% African American (AA)	% Hispanic (H)	% Indian (I)	% Caucasian (C)
2006	6.1	25.6	08.0	0.0	60.3
2007	4.8	26.8	10.2	0.2	58.0
2008	4.6	32.5	12.4	0.2	50.4
2009	5.2	34.8	11.9	0.4	47.8
2010	2.9	41.8	10.6	0.2	44.5
2011	2.9	44.2	10.0	0.3	42.3
2012	2.5	48.3	09.6	0.0	37.5

Note. The Primary Investigator noted the demographics of students for each year reflected in the table from the Missouri Comprehensive Data System online website: http://mcds.dese.mo.gov/Pages/default.aspx

Changed SES/Increased Percentages FRLS. During the 2006-2007 school year, 57% of the student population qualified for FRL status. Students who were 130% below the annual income poverty level, established by the U.S. Department of Health and Human Services, were entitled to free breakfasts and lunches.

The qualifying amount in 2012 was $21,756 for a family of four. The U.S. Census Bureau updated this number annually. Students living in homes that received food stamps or cash assistance through the Temporary Assistance for Needy Families block grant, as well as, runaway, homeless, and migrant children, also qualified for free

meals ("New America Foundation," 2013, para. 6). The percentage of FRLS entitled students in 2012, at Lakeview Elementary, was 72%, yielding a difference of 15% from 2006 through 2012, which is a net percentage increase of 26%, as reflected in Table 15.

Table 12

Net Percentage Change in Free and Reduced Lunch Status (FRLS)

Year	Percent	Difference
2006	57%	N/A
2007	56%	-1%
2008	61%	+5%
2009	61%	+0%
2010	65%	+4%
2011	69%	+4%
2012	72%	+3%
Overall Net % Difference		15% difference
Overall Net % Increase		26% Growth

Note. The Primary Investigator noted the percentage of students who were entitled to Free and Reduced Priced Lunch from the Missouri Comprehensive Data System online website and then calculated the % difference from one year to the next, as well as the overall net % increase. http://mcds.dese.mo.gov/Pages/default.aspx

Student mobility increased. Between the 2006-2007 school year and the 2011-2012 school year, the transiency rate increased. Lakeview Elementary had 133 students enrolled in kindergarten 2006-2007; however, 23 students exited prior to the end of the school year, which left 110 students enrolled in grade one the following year. During the 2007-2008 school year, 24 new students enrolled in grade one and 21 exited prior to grade 2, leaving 113 students who completed the year. During 2008-2009, 24 new students enrolled in grade 2 and 11 exited prior to grade 3, leaving 126 students who

completed the year. During 2009-2010, nine new students enrolled in grade 3 and 15 exited prior to grade 4, leaving 120 students who completed the year. During 2010-2011, 17 new students enrolled in grade four and 25 exited prior to grade 5, leaving 112 students who completed the year. During 2011-2012, 27 new students enrolled into grade 5 then 17 exited prior to grade 6, which left 122 students who completed the year and were eligible to be one of the three mobility populations represented in this case study.

The potential population of students for this cohort study was 234. However, student mobility lowered the final number of participants. Several new students enrolled and exited, which left a total of 122 students eligible for this study, as a cohort group of students. Of those students, 41 students were at Lakeview Elementary 2006-2007, the school year they enrolled into kindergarten (Case Study District PowerSchool Data, 2013). Table 16 illustrates the transiency of the case study's cohort group of students from the class of 2019. This table represents students who entered and exited from 2006 through 2012. The net lowered difference of student population over six years was 112 students, dropping from 234 students to 122 students, which resulted in a cumulative transiency rate of 48%, as indicated in Table 16.

Achievement declined. Lakeview Elementary had approximately 608 students enrolled during the 2011-2012 school year. Third, fourth, and fifth grade students accounted for 285 students of the district who scored an average of 38% proficient or above proficiency, in the area of communication arts, as measured by the annual MAP scores. The two largest ethnic groups were African American, with 24% who scored

proficient or higher and Caucasian; with 57% who scored proficient or higher (Missouri Comprehensive Data System, 2013).

Table 13

Study Population Transiency Rate

Year	Grade Level	Carry Over	New	Moved Out	End Year	Transiency Rate
2006-07	Kindergarten	0	133	23	110	17%
2007-08	Grade 1	110	24	21	113	16%
2008-09	Grade 2	113	24	11	126	8%
2009-10	Grade 3	126	9	15	120	11%
2010-11	Grade 4	120	17	25	112	18%
2011-12	Grade 5	112	27	17	122	12%
Total Movement			234	112	122	+48%
Total Difference = 112 Students						
Total % transiency Rate = 48% Change						

Note. The Primary Investigator collected data from the school districts PowerSchool database. Numbers calculated based on entry data enrollment data (Case Study District PowerSchool Data: Enrollment Version 7.7.1, 2005-2013)

Table 14

MAP Net Change of Percentage Proficient or Advanced (3-5 Averages)

2006	2007	2008	2009	2010	2011	2012
53%	44%	44%	41%	44%	40%	38%
Net % Difference					15%	
Net % Decrease from 2006					28%	

Note. Data collected from the Missouri Comprehensive Data System [Database record] (2013).

Blitz Supplemental Reading Model Development: Data Collection Part II

Personal communication with the head principal and instructional specialist on January 31, 2013 allowed the Primary Investigator to gather additional data regarding the development of the Blitz supplemental reading model. Student achievement declined from an overall average of 53% of students who scored proficient or higher in 2006 on the MAP assessment to 38% who scored proficient or higher on the MAP assessment in 2012, which yielded an overall net difference of 15% and an overall percentage decrease of 28%, as indicated in Table 17. The high mobility rate and declining scores became the focus of the principal of Lakeview Elementary. Initially, the principal solicited input from parents, teachers, and community members who were on his school improvement team, regarding his plan to address declining scores. Based on feedback and student achievement data, he made reading improvement the primary focus of the school improvement plan. This led the head administrator to read professional educational journals and research articles regarding the impact of these issues of transiency on student achievement. He also investigated which practices in instruction were considered best practices, according to current school district adopted curriculum (Case Study School District, 2007).

The principal's research reinforced his overall vision, which focused on strategy of instruction for students on their personal learning level and professional development for teachers to contribute to an increase in student achievement in reading. The principal believed teachers needed to know how to evaluate student data in order to differentiate instruction for students, rather than utilize expensive programs that did not change the overall practice within the school setting. The administrator's vision led to the program

development and implementation of the supplemental Blitz model (principal, personal communication, January, 2013). The Blitz program focused on analyzing combinations of communication arts data in order to guide teacher instruction. Teachers made informed instructional decisions when they implemented differentiated instruction in a small group setting.

As time passed, new research continued to re-affirm the building principal's vision. For example, Reeves stated, "Should schools invest in programs, or should they instead focus on practices and people?" (p. 43). This was the same foundation that helped the administration team create the Blitz reading model at Lakeview Elementary. Reeves' research continued to impact decisions made in the on-going development of the Blitz Model at Lakeview Elementary (principal, personal communication, January, 2013).

Program development. The Primary Investigator continued to collect and explore data regarding the Blitz program development, which began at the beginning of the 2006-2007 school year and continued through the end of the 2012-2013 school year. The supplemental instruction groups were small, flexible, and data driven. Small groups of approximately four to seven students, in grades 2 through 5, received an additional 40 minutes of guided reading instruction daily. Lakeview administrators began the program with second grade through fifth grade, then added kindergarten and first grade, as they became able to successfully implement the program with best practices in mind for primary students, as well. By 2013, all grade levels were participating in the Blitz reading Model at Lakeview Elementary, which was a full five years after the program was implemented. According to researchers, Borman et al. (2002):

> Schools implementing CSR models for five years or more showed particularly strong effects, but the models benefited equally schools of higher- and lower-poverty levels…A long-term commitment to research-proven educational reform is needed to establish a strong marketplace of scientifically based models capable of bringing comprehensive reform to the nation's schools. (p. v., para. 5)

Borman et al. (2002) focused on Comprehensive School Reform (CSR), which suggested a variety of instructional practices that were effective for educational school reform. For example, current research suggested that small-group instruction allowed teachers to better meet students' needs, which was not possible in a large classroom setting (Lou et al., 2001; Hiebert et al., 1992; Taylor et al., 2000; Fountas & Pinnell, 1996; Hattie, 2009).

As reported by Hattie (2009) in *Visible Learning: A synthesis of over 800 Meta-Analyses Relating to Achievement*, small group instruction ranked 48 out of 138 measured achievement effects with effect sizes that ranged from (d = +1.44) with self - reported grades to (d = - 0.34) with mobility. Hattie's meta-analysis included 78 studies and 155 effects, which yielded an effect size of (d = 0.49) for small group instruction. According to statistical research, this effect was considered significant.
Lakeview teachers placed students in small groups of approximately six to seven students, which aligned with past and current research.

The Primary Investigator noted that grade level teacher teams, the instructional specialist, and the administration team carefully examined students' individual formative and summative assessment scores. Formative scores included the AIMSweb R-CBM (Reading Curriculum-Based Measurement) scores, DRA (Developmental Reading Assessment) results, and summative scores, which included MAP (Missouri Assessment

Program), and Study Island assessments. Teachers also examined observation notes, considered concerns regarding specific student's behavior issues and students' personality conflicts, and discussed learning difficulties that warranted a referral to the school counselor to investigate the possibility of a learning disability or emotional problem that could interfere with student progress.

This practice also aligned with research. Schmoker (2006) suggested that working with formative assessment results allowed teams of teachers and principals to guide their instructions. He stated, "Principals need to look at evidence that teams are crafting and improving lessons and units together, adjusting their instruction on the basis of formative assessment results" (Schmoker, 2006, p. 143). Several researchers concluded that formative and summative assessments all educators to make knowledgeable decisions to plan for, and guide instruction (Fuchs & Fuchs, 1986; Black & William, 1998; Invernizzi et al., 2003; Schmoker, 2006; Feller, 2010).

The instructional specialist created a monthly schedule that allowed each grade level team to meet and make adjustments regarding instruction and student placement according to new formative data collected which included fluency checkpoints provided by the school district adopted curriculum materials (Case Study School District, 2007) and teacher created anecdotal records. Grade level teams continued to meet each month throughout each school year beginning with the 2006-2007 school year (instructional specialist, personal communication, January 25, 2016; principal, personal communication, January 25, 2013).

As noted in Table 17, MAP scores continued to fluctuate. Researcher Reeves' (2010) research suggested that as teachers analyzed data, they should continue to adjust

instruction practices to plan for continued growth. Khattri and Kane (1995) agreed that when teachers adapted, modified, and created differentiated, independent work for specific groups of students, they utilized appropriate amounts of time and learned as much as they could learn about their students. Lakeview Elementary's supplemental reading Blitz model aligned with current research regarding collaboration and data analysis. Lakeview Elementary teachers' collaborative ongoing analysis of summative and formative data supported researchers' reviews of what was considered an effective or "best practice (Khattri & Kane, 1995; Taylor et al., 2000; IRA 2007). According to IRA (2007), "Not only do beginning teachers need to learn how different assessment strategies, models, and approaches test student learning, they also need to be taught how to interpret assessment data critically and adjust classroom instruction accordingly" (IRA, 2007, p. 5).

Lakeview's Blitz sessions focused on specific school district adopted strategies within their Balanced Literacy Communication Arts Program. The Balanced Literacy Communication Arts Program was a district created collection of adopted beliefs and curriculum focuses. The curriculum within their program included professional development documents that provided examples of effective instruction through current researched-based strategies. According to Lakeview Elementary's school district's curriculum guide, "having proficient knowledge of these skills were determined 'best-practices' in reading comprehension instruction" (Case Study School District, 2007, p. 10).

The Primary Investigator noted that the building principal developed the supplementary Blitz program to address the decline in reading comprehension levels

believed to be an effect of decreasing SES and increasing mobility rates in the case study school. Lakeview Elementary's demographics and transiency status changed, and achievement scores declined. The investigator learned the head principal created the Blitz program with a vision in mind for increased achievement for all students affected by their heightened enrollment, increased transiency, and decreased achievement scores. According to research, the impact of transiency in schools affected not only mobile students, but also non-mobile students in the schools these students attended. Educators had great concerns about students moving in and out of school systems because of negative impacts on student learning and achievement (Rumberger, 2003; Franke et al., 2003).

The principal began the development of the program at the end of the 2007-2008 school year. He met with his school improvement team, which consisted of parents, teachers, students, and community members, during the May 2008 school improvement team meeting. At this meeting, he shared his vision, which included his idea of creating a program that addressed all students' needs. He then met bi-weekly with his administrative team, which consisted of himself, the vice principal, and instructional specialist in June of 2008 leading up to the 2008-2009 school year and discussed concerns regarding increased transiency and declined achievement scores. They also discussed the head principal's idea to create a supplemental reading comprehension program that provided additional support to all students in a small group setting. He explained that he wanted to meet the needs of all students as if they had an IEP (Individualized Education Plan) and wanted all students to grow whether they were below grade level, on grade level, above grade level, or advanced. He felt it was

important to instruct all students on their instructional reading levels as measured by the DRA (Developmental Reading Assessment). The principal also shared this vision with his School Improvement Team (SIT). He explained what he envisioned for students and staff at Lakeview Elementary. The principal of Lakeview Elementary shared how he envisioned an environment that was able to meet all students on their own individual levels of achievement for all subjects. He explained that his background in Special Education really applied to all students. He discussed how all students' learning differed depending upon so many variables. He believed that teachers needed to become well versed in data collection, which would allow them to differentiate instruction for all students. He explained that this was his ultimate goal. The principal of Lakeview Elementary envisioned a total leveled-learning setting. He also shared, however, that this type of thinking was new. He believed it would take time to create a full school model that applied to this vision. Therefore, the principal decided to begin the leveled-learning focus with on-level reading instruction. His vision included a daily on-level supplemental reading session in a small group setting, which focused on comprehension strategies as outlined in the district adopted curriculum (Case Study School District, 2007, p. 10). As a result, the administration and leadership team decided to create a new building schedule that allowed teachers to have common planning sessions, as well as an outline that shared the topics that would be covered within the small group reading instruction sessions they named, Blitz.

Next, the school principal and instructional specialist formulated a framework for the Blitz program model that focused on heightened achievement for all students, including students whose scores progression, as well as students who showed little

progression, the most transient students. The principal developed the framework with the school district curriculum, current research, and the current data available in mind. The administration team determined that it was imperative to provide specific non-negotiables that would allow success, according to researched strategies for change. These non-negotiable included: team collaboration, on-going data collection, and small-group settings (Hiebert et al., 1992; Taylor et al., 2000; Fountas & Pinnell, 1996; Lou et al., 2001; Hattie, 2009) and supplemental direct instruction (Borman et al., 2002; Hattie, 2009; Stockard, 2010). The administration team suggested utilizing comprehension strategies with a scaffolding approach, that used district-adopted curriculum and the district adopted materials guide by Fountas and Pinnell (1996). This text gave teachers the guided reading format as their delivery method, which also took place during their core instruction. Therefore, training in the delivery method was not required. Teachers were already meeting with their students in small group settings within their daily reading workshops. The difference was that teachers got the opportunity to focus on one small group of approximately four to seven students, for a full 40 minutes each day with students that are not necessarily in their homeroom class. The administration team decided that student placement needed to be data driven and determined that students needed to be grouped according to reading ability levels as measured by DRA.

Together, the head principal, vice principal and instructional specialist evaluated the school to determine changes needed to allow time for teachers to collaborate, as well as time for teachers to instruct students in daily small groups. The administration team made decisions based on research. They decided that teachers needed time to collaborate regarding student improvement and determined this was an integral part of the reform

process. With this in mind, the principal created schedule changes that allowed teachers to meet with team members during common planning sessions. He also created blocks of time for each teacher in grade level 2 through 5 to meet with students each day in small groups for 40-minute supplemental reading sessions without interruption. The principal, vice principal, and instructional specialist decided to begin with students in grade levels 2 through 5 because they were more familiar with the building and could travel safely to their designated meeting point for Blitz sessions. They did realize the importance to meet all students' needs in all grade levels so they decided to continue to discuss how Blitz sessions would work in the primary grades, as well.

The administration team determined it was important to place students in guided reading groups that matched their reading level through careful analysis of MAP data, DRA data, AIMSweb data, and available scores. Together they examined this data collected the previous school year, 2007-2008, to determine appropriate group placements for students. Each assessment score for each student was placed into a spreadsheet prepared by the instructional specialist. Teachers reviewed data on spreadsheets, which made it easier for them to sort students according to specific assessment scores, or groups of assessment scores so they could look at each group of student scores ranked in order of achievement. They decided this would help teachers make an accurate overall synthesis of what level instructional group each student needed. They also decided that DRA data would be the primary data used to group students according to reading levels, since this data was both formative and summative. Teachers identified independent reading levels of all students, as well as create an instruction plan

that addressed their individual weaknesses (instructional specialist, personal communication, January 25, 2016; principal, personal communication, January 25, 2013).

The Blitz data collection process. Lakeview Elementary staff agreed to collect formative data to guide instruction. "Formative assessment is a planned process in which assessment-elicited evidence of students' status is used by teachers to adjust their ongoing instructional procedures or by students to adjust their current learning-tactics" (Popham, 2008, p. 6). According to research, the effects of systematic formative assessments have a positive correlation to student achievement (Fuchs & Fuchs, 1986; Hattie, 2009, p. 181; Popham, 2008).

Grade level data teams focused on summative data, such as previous MAP scores, end of year AIMSweb MAZE and R-CBM summative data from the previous year. Then, per district guidelines, teachers began each year with a repeated DRA assessment to measure changes over the summer. Lakeview Elementary used analyzed DRA data together at its first data team meeting of the year for discussion of placement and for formative instruction. During the first data meeting, teachers worked together with the instructional specialist to place students on the data wall to help determine groups for Blitz sessions. Prior to the next data team meeting, students were given the fall assessment, AIMSweb MAZE and AIMSweb R-CBM web tests, to add additional consideration as to students' overall levels for their next group placement according to state norms, as well as school district norms.

Teachers continued to meet 40 minutes, one time a month, as grade level teams with administration and the instructional coach, throughout the school year to discuss each collection of data and specific details regarding their observations of their students.

This aided teachers in determining placement of students into each Blitz session. Scores were compared against the normative scores for grade level expectations expected at specific times throughout the school year. Grade level data teams cross-referenced students' assessment scores with school data, district data, and state data norms to determine learning level goals. Once teachers placed students into Blitz groups, teachers continued to measure achievement with formative assessment tools, such as Study Island and anecdotal records to measure growth during their subsequent Blitz sessions. These assessments allowed teachers to make group decisions from week to week to help determine their knowledge increase from session to session.

Within the Blitz framework, data was collected on an individual and small group basis then placed into the students' Blitz folders, which traveled with them from group to group, for future Blitz group teachers to review and analyze. According to research, teachers that pay attention to the effects of their teaching see heightened academic gains in their students (Fuchs & Fuchs, 1986; Hattie, 2009, p. 181).

The instructional specialist created a spreadsheet that placed all students for each grade level in order of achievement from lowest scores to highest scores. These students' scores were color coded under specific categories to help for placement on the school's data wall, according to independent reading level, as measured by DRA scores. Within the spreadsheet, each section of scores was sorted to cross reference additional student's needs. Stickers were placed on index cards to represent additional needs.

Each grade level team of teachers met to determine appropriate group placement for students that would meet their individual needs most accurately. Index cards and

stickers matching the color codes were analyzed during each trimester grade level meeting. Teachers updated their data cards with the color coded stickers and placed those cards on the correct level on the data wall, according to their current DRA reading levels (instructional specialist, personal communication, January 25, 2016; principal, personal communication, January 25, 2013).

For the purpose of this study, each mobility population's normative data was used to group students. DRA assessments, AIMSweb fluency assessments, as well as Study Island pretests and posttests were statistically analyzed to determine correlations between mobility status and achievement, as well as ethnicity status and socio-economic status. Statistical testing was also conducted to determine if there were increases in growth, as well as decreases in variance of scores as compared to students who were in the Blitz comprehension model the longest. Students' scores were divided into three groups, based on their transiency status. The Primary Investigator added the process used for analysis in statistical data analysis: Data Collection Part V, as well as, in Chapter Four data analysis for testing models 1 through 4, which included hypotheses 1 through 7.

Data wall. The data wall gave teachers a visual cross-reference of student needs. Teachers placed an index card for each student on the data wall categorized first by their reading DRA (Developmental Reading Assessment) scores. The color-coded stickers represented the other specific needs each student had.

All teachers in each grade level noted the progress for each group of students with respect to their grade level and needs each time they visited the data wall. The color-coded system was used as a visual, which facilitated discussion and collaboration within grade level teams, as indicated in Table 18. Teachers determined students' needs in each

specific level of achievement. According to research, the practice of collaboration and data analysis in order to determine where to place the focus of instruction was in line with researchers Marzano (2007), Hattie (2009), and Gallagher (2009). They suggested that to increase the impact of effective teaching, a clear focus on practice is required. This type of practice required having a concrete goal in mind. Gallagher (2009) believed professionals should focus on one area. He believed that placing focus in too many areas created a need for shuffling choices that ultimately led to ineffective practice.

Table 15

Data Wall Coding System

Sticker Code			
Sticker Color	Meaning	Sticker Color	Meaning
Black	Below Basic MAP Score	Light Blue	AIMSweb 75%
Dark Purple	Basic MAP Score	Dark Green	AIMSweb 50%
Brown	Reading Services	Light Green	AIMSweb 25%
Orange	IEP-SSD	Yellow	AIMSweb 10%
White	AIMSweb 90th %	Red	AIMSweb below 10%
Letter Code			
C		N	
Care Team Packet		New to the School	

Note. Teachers placed data on a large wall with magnetic cards. Each student's individual card had stickers representing their scores and needs. The wall had four sections: Below Basic, Basic, Proficient, and Advanced. This made it easier for teachers to see their students' achievement as their cards moved to the right toward proficient or advanced.

In order to review students' categorized scores, grade level data teams referenced data the instructional specialist organized into a color-coded spreadsheet. This spreadsheet was used to sort students according to reading fluency rates (AIMSweb R-CBM scores), reading level (DRA scores and AIMSweb MAZE scores), communication

arts achievement (MAP scores), as well as, teachers anecdotal notes which regarded strengths and weaknesses in each category. Within the scope of this researcher's knowledge, this model was unique in the school district.

The Blitz model addressed the need to reach all students on their independent instructional levels in order to fill educational gaps in knowledge with respect to comprehension skills necessary for successful learning. At the time of this case study, the Blitz program completed four years of practice at the end of the 2011-2012 school year, in this Midwestern setting. The program was structured to have students meet daily for 40 minutes on fluency and comprehension reading strategies in differentiated groups according to their normative, summative, and formative English Language Arts data collected throughout each year. Each grade level met at a specified time of day, which was determined each year by the administration team and instructional specialist. Each leveled group of students had the same strategies (Appendix A through Appendix E) taught, but on their individual instructional level (instructional specialist, personal communication, January 25, 2016; principal, personal communication, January 25, 2013).

Implementation 2008-2009. In order to begin the first Blitz session, the instructional specialist grouped students in grades 2 through 5 with like reading comprehension abilities together in small groups. The administration decided to begin the program with older students that would be able to adjust to the changes of moving from classroom to classroom. They determined it was important for the younger primary students to work on getting used to their routines first. The administration decided to evaluate adding kindergarten and grade 1 sometime in the future.

In order to determine student placement for the second Blitz session, teachers worked with the instructional specialist during the first professional development meeting of the year, August 2008. The instructional specialist provided instruction on how to do fluency checks and benchmark assessments within their classroom core-reading instruction time. This aided teachers in their student placement decisions for the second Blitz rotation.

Blitz Topics 2008-2009. Each year Blitz topics were discussed as grade level teams, evaluated, and decided upon. Teachers created pacing charts during the first grade level meeting of each school year. They established Blitz topics for each one to two month session. Every six to eight weeks, teachers met together as teams with the principal, assistant principal, and the instructional specialist to determine changes in group placements based on reading levels through DRA assessments, fluency checks through R-CBM AIMSweb assessments, and anecdotal records. The pacing guide for the 2008-2009 school year is illustrated in Appendix A (instructional specialist, personal communication, January 25, 2016; principal, personal communication, January 25, 2013).

Implementation 2009-2010. Many modifications took place during the second year of Blitz. The first change was that kindergarten and first grade participated in the Blitz model. For the first time, all staff at Lakeview Elementary contributed input regarding the supplemental Blitz reading model in staff development meetings throughout the school year. Teachers worked together to discuss strategies and processes regarding the execution of the Blitz model, as well as, discuss progress, and specific concerns for the 2009-2010 Blitz program.

In order to assist newly registered students, administrators created two positions titled success teachers. Two teachers were hired into these positions for the school year. These certified teachers provided assistance in the assessment of newly registered students. They also led intense interventions, performed strategic and progress interventions, as well as taught remedial mathematics classes. These teachers collected data on students who missed the regularly scheduled assessments, which aided teachers in quick placement of students into their appropriate groups for English Language Arts and mathematics.

In order to support students who displayed a significant risk for failure as indicated by their low-achievement results, the instructional specialist trained both the reading specialists and success teachers how to progress monitor. Progress monitored students received short sessions of fluency practice with goal-oriented targets. This allowed staff to intensively monitor students who showed a need for additional interventions through weekly and/or bi-weekly R-CBM AIMSweb fluency assessments.

Professional development for the second year of Blitz included whole school meetings, which introduced and trained teachers on how to use the assessment tool. Grade level meeting for professional development consisted of training teachers in utilizing AIMSweb as an intervention tool. Teachers learned of their collaboration schedule and how their bi-weekly grade level meetings would be used to discuss data collected and fine-tune to student placement, as needed. Teachers also had the opportunity to discuss student concerns about students that might have needed to be evaluated for placement in a reading specialist group or a referral to the school care team for special school district evaluation. Another additional tool utilized for supplemental

instruction was the Study Island program. The second year of Blitz began with training the teachers how to use the program. All teachers worked together in their teams, by grade level. They explored the features of the program to determine which items would be useful for their supplemental small group instruction during their Blitz reading sessions.

Further changes occurred during the 2009-2010 school year for the third grade classrooms at Lakeview Elementary. This grade level had an unusually large enrollment and exit of students, leaving them at full capacity. Since group sizes were such an integral focus of the program, the administration decided to add a paraprofessional to work with this grade level full time. The third grade group of students began the school year with 126 students, all of whom were enrolled but not all actually attended. Throughout the first 10 weeks of the school year an influx and out-flux of students made it difficult to determine the need for an additional teacher to be added to the third grade level. By mid-October, the student enrollment numbers held steady at 26, 26, 27, and 25. To stay within the district goals and policy regarding staff-to-student ratios additional staff were hired. Teachers re-evaluated and divided those 104 students, which balanced class sizes to the appropriate student to staff ratio that matched district guidelines and state recommendations. Teachers divided the students between the five teachers. This left each teacher with approximately 21 students per class. By the end of the year, more students left, while new students enrolled, resulting in 120 students. End of the year class sizes aligned to district policy with an average of 24 students per class.

Final adjustment to the Blitz program during the second year of Blitz, Lakeview staff learned that grade levels 2 through 5 would utilize the AIMSweb assessment tool to

guide their intervention instruction. These teachers attended training sessions that allowed them to learn the AIMSweb assessment tool and learn how to work with their schedule to allow for implementation of assessments. Researchers' studies suggested that summative assessment was a powerful best practice for increased achievement (Invernizzi et al., 2003; Feller, 2010).

Blitz Topics 2009-2010. During the first half-day planning session, teachers cross-referenced student data and their curriculum guides to determine an appropriate pacing chart for the school year. Teachers searched for patterns of low achievement in order to determine their instructional focus. Grades 1 and 2 determined they needed a separate pacing guide from the ones used in the intermediate grades. Grades 3 through 5 met in the school library during the first early dismissal day and developed their pacing guide together. The teachers and the administration agreed upon the Blitz topics and grade level-pacing guide illustrated in Appendix B (instructional specialist, personal communication, January 25, 2013; principal, personal communication, January 25, 2013).

Implementation 2010-2011. In order to create a deeper instructional focus, the third year of staff development included the use of district adopted (Case Study School District, 2007) core-reading instruction coupled with supplemental strategy instruction with the school district's focus of balanced literacy in mind. The administration team shared that instruction would be differentiated by individual students' needs during their small group period. Teacher procedures included provided students with re-teaching, extended practice, and extension of lessons as needed. Then, all staff went beyond the core instruction within their supplemental Blitz sessions. This instruction was to be used when the core program did not provide enough instruction or practice in key areas to

meet the needs of the students in a particular classroom. The 2010-2011 school year included the use of supplemental materials from district created and adopted materials from the Balanced Literacy (Case Study School District, 2007).

In order to provide support for the use of the additional supplemental materials, the instructional specialist provided teachers with professional development opportunities. The instructional specialist modeled the use of supplemental materials in a variety of ways. Together, teachers and the instructional specialist brainstormed what they had already implemented, then added collections from their Balanced Literacy (Case Study School District, 2007) district binders that housed the supplemental materials using that they felt would be considered supplemental instruction methods or strategies that would work from implementation of the school-wide Blitz model (Appendix C).

Administrators shared how monthly monitoring for students, who were mild to moderately at risk for failure, would take place. Response to Intervention (RTI) instruction was discussed as instruction that would only be provided to students who were behind their classmates in the development of critical skills, which placed them at critical risk for failure. These students would be determined based upon their AIMSweb data, Special School District (SSD) data, DRA data, MAP Data, and NAEP data. The 2010-2011 school year all students in the building assessed reading comprehension and reading fluency using the AIMSweb assessment tools. The administration discussed the new focus on the collection of AIMSweb data and explained how to use the benchmarks within the assessment program as a universal screening for each student. It was determined that only communication arts goals would be analyzed through the AIMSweb data, and not mathematics data at that time, since this was still the School Improvement

Team's primary focus (Case Study SIT, 2007). The instruction was to be guided with a specific focus in one or more of the key areas of reading development: phonemic awareness, phonics, fluency, vocabulary, and comprehension.

The next adjustment included kindergarten, first grade, and third grade. They were given additional support to use within their Blitz model. The kindergarten and first grade students were still learning so many routines and were too small to travel to different places throughout the building for instruction, therefore paraprofessionals came into the classroom and worked with students in the classroom setting while the teachers also worked in small groups. These two grade levels had a fulltime paraprofessional assigned specifically to their grade level. These paraprofessionals worked mostly with students who were above and on grade level. The paraprofessional received training with the instructional specialist regarding best practices and strategies to use in their small group instruction. They were also given access to skill bags that were aligned to the pacing of their communication arts curriculum, as well as planning times to use to develop their lessons and collaborate with their classroom teachers. While the paraprofessional worked with students, the classroom teachers worked in small groups with students who were at risk. Teachers in kindergarten and first grade were now able to work on these targeted skills in 30-minute sessions every day.

Additionally, the ELL teachers were added to the Blitz model. This allowed for students who had needs that related to having their first language be other than English, have their additional needs met in the small group setting, as well.

Blitz Topics 2010-2011. During the first half-day planning session, teachers cross-referenced student data from the previous year (with the exception of kindergarten)

and their curriculum guides again to determine an appropriate pacing chart for the school year. Teachers made a few changes to the pacing guide to accommodate the needs for that school year's data. The pacing guide for the 2010-2011 is illustrated in Appendix C (instructional specialist, personal communication, January 25, 2013; principal, personal communication, January 25, 2013).

Implementation 2011-2012. In order to decrease group sizes that had become larger, administration decided to have additional staff participate in the supplemental Blitz reading model; the instructional technology specialist and the librarian, were utilized to decrease group sizes in specific grade levels, as needed.

Additionally during the 2011-2012 school year, the Primary Investigator was selected by the building principal to implement a pilot study with the fifth grade students from the class of 2019, the cohort group within this dissertation study. The Primary Investigator was asked to work with fifth grade teachers to create pretests and posttests for each comprehension topic. The Primary Investigator's experiences of being a teacher in this program for four years, allowed the Primary Investigator to have first-hand experience within the program to become aware of its limitations. Implementing the pilot program, which created a specific common measurement tool for each Blitz session, provided teachers with data that helped with accountability for academic achievement and measurements tools for growth within the program.

The focus of the Study Island portion of the Blitz program was created as a measurement tool to analyze progress for students who have participated in the Blitz program for specific amounts of time on specific comprehension strategies. Another

purpose of the Study Island pilot was to determine the value of the use of Study Island as an assessment tool for formative decision-making.

The Study Island pilot. In order to determine differences in achievement scores of more transient students the researcher implemented a pilot study, which categorized students into mobility groups under the direction of the administration. Teachers continued in their Blitz sessions as usual and placed students into groups as they had been in the past, according to DRA reading levels. Teachers cross-referenced DRA scores, R-CBM AIMSweb fluency scores, and the previous year's MAP data and determined appropriate group placement for Blitz sessions. Teachers referenced spreadsheets and stickers on the building data wall, then visually analyzed how students were moving across the data. Student movement on the data wall indicated a decrease, lack of movement, or increase in achievement from trimester to trimester.

The Study Island pilot added an additional focus on data from pretests and posttests that the Primary Investigator collected and organized according to mobility statuses to compare each mobility groups' overall achievement. The Primary Investigator also looked through all available data for all students in the fifth grade for the 2011-2012 school year. The Primary Investigator then created a chart that had a breakdown of groups that created three categories of data, the Persistent Population, the Transitional Population, and the Transient Population. Student data was grouped into three categories; Persistent Group-A was the data from students who participated in the Blitz sessions since their second grade year, 2008, at Lakeview Elementary and have been enrolled in the school since preschool, 2006, or grade 1, 2007. This was the Persistent student population. Transitional Group-B students participated in the Blitz program since

grade 3 and had been enrolled at Lakeview Elementary since grade 2, 2008 and/or grade 3, 2009. This was the Transitional student population. Transient Group-C were students who were enrolled in the their fourth grade year, 2010 or their fifth grade year, 2011, making them the newest and most transient student population in the Study Island testing pilot. This group was the Transient Sample. Once these groups were determined, students' names were entered into the Study Island program as classes labeled, Persistent Group-A, Transitional Group-B, and Transient Group-C. Tests were assigned at the same time to all 122 students. Students took their pretests and posttests in their regular Blitz group, which consisted of students from all three mobility groups, since Blitz placement only placed students by their instructional reading level, not their mobility status. This was just a data collection tool to easily monitor differences between and within all three mobility groups.

At the time of the Study Island pilot testing period, teachers used the data to help them determine how well their students within their Blitz groups were doing compared to the peers, as it applied to their mobility status. The principal, fifth grade teachers, and the instructional specialist of the school wanted to be reassured that although scores seemed flat, growth was actually occurring for all students regardless of their entrance within the Blitz reading comprehension model setting.

Later, the principal and investigator broke each group's scores into further subgroups, such as amount of time they have participated in the program, as well as subgroups, such as: IEP, LEP, Free/Reduced Lunch, African American, Caucasian, and Asian. At this time, the principal of the school and the Primary Investigator cross-referenced the scores without the teacher's involvement. This data was utilized as a

decision making factor, as to how useful the Study Island tool was to the Blitz comprehension model. It was determined by the school principal that the Study Island program was not useful in the Blitz model setting as an indicator for measurement of growth in achievement. Through careful analysis of pretest and posttest scores for each mobility group, it was determined the data was mostly useful for report card reporting for grade level equivalency, rather than for determination as to placement in the Blitz program. It appeared the program was being used more as grade level summative tool, rather than on-level formative tool to guide instruction and placement within the Blitz reading model. The decision was then at the end of the 2011-2012 school year to cease the inclusion of the Study Island assessment pretest and posttest tool within the Blitz comprehension model. This dissertation study included data from the categories of retell/paraphrasing, making connections, and visualizing.

Table 19

Study Island Testing Schedule Grade Five 2012 - 2013

Topic /Number	Week of Pretest/ Posttest
1: Retell/Paraphrase	Sept. 26 /Oct. 17
2: Monitoring for Meaning	Oct. 17/ Oct. 31
3: Making Connections/Visualizing	Oct. 31/ Nov. 28
4: Questioning and Predicting	Nov. 28/ Dec. 19
5: Inferring	Dec. 19/ Jan. 23
6: Summarizing	Jan. 23/ Feb. 21
7: Determining Importance	Feb. 21/ March 12
8: Comparing	March. 12/ March 26
9: Synthesizing	March 26/ April 30
10: Evaluating	April 30/ May 21

Table 19 represents the implementation of the testing schedule that took place for this piloted assessment tool. Each topic matched the topics the teachers chose at the

beginning of the school year for their pacing guide of implementing their comprehension strategy topics. *Blitz Topics 2011-2012.* The school year, 2011-2012, each grade level decided to choose their topics separately as grade level teams, rather than as a primary and secondary group. Appendix D and E reflect the changes for each grade level. The kindergarten team divided their topics by skills and included mathematics skills, as well in Appendix D. Their pacing chart stated specific dates the topics would be covered by, rather than by trimester. Grades 1 through 5 divided their pacing chart on a set of dates illustrated in Appendix E (instructional specialist, personal communication, January 31, 2013; principal, personal communication, January 25, 2013).

Program Design Analysis: Data Collection Part III

The Primary Investigator cross-referenced the program design analysis against past and current research as it applied to each instructional practice incorporated into the Blitz design. This allowed the Primary Investigator to determine the Blitz program design as it related to past and current action researched results.

The Blitz framework placed attention on instruction in a setting that research had previously proven strong correlations to achievement. According to Hallinger and Murphy's (1986) study, it was leaders who place more attention on teaching and focused achievement domains that had higher effects. The school principal and instructional specialist put together a model that research supported positive correlations with achievement, with the following components in mind (Hattie, 2009, p. 83).

Professional development. Six half-day early release days allowed for professional development sessions for staff members who participated in the Blitz program. During the first half-day session, each grade level team of teachers, the

instructional coach, and administrator met in small groups to determine the Blitz schedule of topics for the year. These subsequent half-day sessions provided for on-going development and training allowing teachers to participate actively in this unique school based program. The Blitz program was fine-tuned each year during professional development days for each grade level. These six half-day sessions had provided opportunities for teacher input and had allowed for on-going discussions regarding specifics about the successes and challenges of the Blitz program. Teachers also used this opportunity to plan their Blitz sessions together to maintain consistency within the Blitz sessions.

The Primary Investigator noted that the Lakeview Elementary staff also participated in additional training sessions during their six half-day early dismissal professional development time to utilize the Study Island program as a supplemental instructional tool for the classroom setting, as well as the Blitz small group sessions. The Primary Investigator's participation in these training sessions allowed for access to building assessment tools to implement during the Study Island pilot program that was initiated during the last year for the fifth grade students of the class of 2019. This aligned with current research, The Rennie Center for Education Research and Policy's (2011) study recommended improving professional development for teachers regarding differentiation of instruction practices, flexible funding for schools or districts that have high mobility, additional support staff, and a changed accountability system that takes mobility into consideration.

Small, fluid, flexible groups. Through conversations with the instructional specialist and the school's head principal (January, 2013) the Primary Investigator

discovered the Blitz school-based design was created to allow for students to move fluidly in and out of groups as their skills developed and improved. Students were grouped first by grade levels, then according to achievement levels determined by AIMSweb scores, MAP scores, and DRA reading assessments, NAEP scores, and teacher input. The framework of the Blitz program was a way to instruct students in English Language Arts (ELA) in a small group setting, which focused on specific comprehension strategies. Students and staff worked in small groups with pre-determined reading strategy lessons to increase achievement in both reading comprehension skills and reading fluency rates. This aligned with previous research that focused on small-group settings for increased achievement (Hiebert et al., 1992; Taylor et al., 2000; Lou et al., 2001; Fountas & Pinnell, 1996; Hattie, 2009).

Comprehension strategies. The Primary Investigator also learned the Lakeview Elementary's school district set comprehension strategies for each grade level that had pre-determined skills, which were collaboratively chosen based on Lakeview School Districts initiatives in guided reading. These initiatives appeared in the district's adopted Balanced Literacy program (Case Study School District, 2007, p. 10). Each school's beginning year, teachers collaboratively determined a Blitz schedule for each grade level to incorporate into uninterrupted 40-minute sessions. Teachers studied comprehension strategies at building level professional development meetings. The administration, the building instructional leader, and each grade level collaboratively decided which strategies required their focus utilizing a direct instruction approach. They based their decisions upon on a cross-referenced analysis created by the administration team, which consisted of building data, such as, MAP, AIMSweb, DRA, and NAEP scores.

Appendix A illustrates the topics chosen for the 2008-2009 school year that this dissertation study examined. The first year the Blitz program took place the grades 2 through 5 focused on the same topics. Kindergarten and grade 1 did not participate in the Blitz program the first year it was implemented. Implementation during the first year consisted of data that was collected from end year DRA scores, the previous years' MAP scores, as well as National Assessment of Educational Proficiency (NAEP) scores. The district also began implementation of the AIMSweb assessment model across the school district. Grade 3 was the grade level chosen to participate in the pilot study that collected AIMSweb data for the entire district. Several researchers' studies suggested that comprehension instruction was a powerful best practice for increased achievement (Rowe, 1985; Guthrie et al., 2007; Sencibaugh, 2005; Hattie, 2009).

Collaboration with colleagues. The Primary Investigator then noted at the beginning of each school year, staff decided which comprehension strategies they would focus on according to district standard and best practices. Teachers met together and examined data from their students' previous years to determine specific instructional needs there were for their current grade level as a whole. Topics were set according to this data. Student groups were evaluated and adjusted, as needed, according to collaborative data interpretation, every four to six weeks. Each year Blitz grade level teams discussed, evaluated, and decided upon topics to include in the supplemental reading program. They created pacing charts during the first grade level meeting of each school year. The Primary Investigator determined that Lakeview's use of collaboration aligned with previous researcher's conclusion that collaboration is a powerful best

practice used for formative decision-making (Khattri & Kane, 1995; Taylor et al., 2000; Taylor, 2007; IRA, 2007; Reeves, 2010).

Data driven. Next, the investigator examined the process of how staff adjusted student groups, as needed. The investigator determined adjustment took place according to collaborative data interpretation, every four to six weeks. Session lengths and student placement depended upon the specific skills taught and current needs each grade level needed. Lakeview staff based placement decisions on previous analysis of norm-referenced building data of student performance. This analysis included cross-references of data, such as the previous MAP exam scores, previous and current formative assessments, and AIMSweb assessment data. Cross analysis also included student assessment scores from their scheduled trimester formative assessment evaluation, the DRA (Development Reading Assessment). Every two to three years, Lakeview Elementary qualified for the criterion-based assessment, the National Assessment of Education Progress (NAEP). When NAEP data was available, Lakeview staff included students' scores in order to help to determine student placement and the length of each Blitz session. The NAEP assessment broke data down into specific categories, which allowed the administration and the instructional coach to consider any specific needs of qualified subgroups based on categories such as demographics, Individualized Education Program (IEP), Language English Proficient (LEP), African American (AA), Caucasian (C), Asian (A), Hispanic (H), English Language Learner (ELL), and Free or Reduced Lunch (FRPL). Teachers continued to adjust instruction for continued growth (Reeves, 2010). Lakeview teachers also adapted, modified, and created differentiated, independent work for specific groups of students. The Primary Investigator determined teachers

utilized appropriate amounts of time and learned as much as they could learn about their students (Khattri & Kane, 1995; Taylor et al., 2000; Taylor, 2007; IRA, 2007; Reeves, 2010). These practices aligned with current research.

Fluency practice. The Primary Investigator noted that Lakeview staff incorporated reading fluency practice in to each Blitz rotation. Students spent approximately 20 minutes weekly on reading probes designed to increase students' reading rates. Students who participated in Response to Intervention (RtI) practiced fluency probes approximately 40 minutes weekly. Students were verbally tested for improvement every three to four weeks, according to their RtI plan that had a strict schedule and data collection process. The Primary Investigator determined the use of fluency practice in the supplementary Blitz model aligned with current research (Taylor et al., 2000; Therrien, 2004). Therrien's (2004) research resulted in effect sizes of (d=0.76) for immediate transfer and (d=.50) for far transfer.

Reading exposure. Next, the Primary Investigator noted that students participated in Blitz sessions with an approximate 1:6 student teacher ratio, 40 minutes, five days a week, unless there was an early dismissal day or a school-wide assembly, or other school-wide function that prevented scheduled Blitz sessions. Since current research suggested reading exposure was an effective practice, the Primary Investigator determined this to be an effective practice for all students. Hattie's (2009) research examined six meta-analyses that resulted in an effect size of (d=0.36), which ranked 76 out of 138 of his meta-analysis collection of study that related to achievement.

Early intervention. The Primary Investigator learned that during the 2009-2010 school year, the administration team at Lakeview Elementary determined early

intervention to be Lakeview Elementary's focus for increasing comprehension for all students, therefore, year 2 (2009-2010) of Lakeview Elementary's Blitz program included kindergarten in the daily Blitz rotations. This allowed for kindergarten students to benefit from early intervention by participating in a differentiated curriculum setting to meet their needs, as well. Years 2009-2010 through 2011-2012, all students at Lakeview Elementary participated in the Blitz program.

Hattie's (2009) meta-analysis consisted of 16 meta-analyses, which determined the practice of early intervention to have an effect size of (d=0.47), which was considered significant. The administration team encouraged teachers to post their strategy plans and process in their grade level on-line WIKI, which allowed for continued partnership within and between grade levels. This helped the staff keep in mind that continued collaboration was considered a best practice and allowed continued development of their teaching practices, which had the potential to reach all students on their individual levels (Schmoker, 2006; Dufour, Dufour, Eaker, & Many, 2006). The Primary Investigator determined that including the early primary students was an effective strategy, according to research.

Direct instruction. Teachers used direct instruction to instruct students in a small group setting using research driven instructional techniques, such as guided reading (Stockard, 2010; Hattie, 2009). Teachers scaffolded their instruction, which allowed learners to have extended practice through a gradual release approach. Instruction included district curriculum comprehension strategies according to grade level needs for each group of students placed within their groups. Direct instruction was the chosen method to teach and re-teach skills that students' test scores indicated a need. Teachers

gave students plenty of guided practice, which helped students achieve mastery learning for each comprehension strategy. Current research suggested direct instruction was a successful instructional method to aid students to become proficient on grade level material. According to Borman et al. (2002):

> the models meeting the highest standard of evidence, Direct Instruction, the School Development Program, and Success for All, are the only CSR models to have clearly established, across varying contexts and varying study designs, that their effects are relatively robust and that the models, in general, can be expected to improve students' test scores. (p. 37, para. 5)

Borman et al. (2002) examined 29 studies that related to comprehensive school reform models. These researchers found direct instruction to have the largest average effect size (+0.21) and to be of high fidelity in 49 studies, which suggested that direct instruction was a reliable instructional practice (Adams et al., 1998; Borman et al., 2002; Stockard, 2010; Hattie, 2009). The Primary Investigator determined the use of direct instruction in the Blitz session to be a researched based effective strategy.

Formative and summative data. Teachers worked together on early release days, which happened approximately six half days a year. During these professional development sessions, teachers collaborated on their students' needs according to summative and formative data collected, which included anecdotal records, fluency practice numbers, progress monitoring records, where applicable, as well as DRA, MAP assessments, and AIMSweb R-CBM scores. Lakeview staff created and shared specific teaching strategies that applied to their students' determined needs. During one of their early release days, teachers created additional lesson plans to share as best practice

examples. Teachers organized those new supplementary lessons into crates for intra and intergrade level use for their future Blitz session. Teachers included models of direct instruction, as well as collaborative group examples to share with one another to add to their collection of resources. Black and William (1998) reported their review of 700 results that regarded formative assessment use in the classroom as highly effective. They stated, "The research reported here shows conclusively that formative assessment does improve learning" (Black & William, 1998, p. 61). Schmoker (2006) agreed. He believed that working with formative assessment results allowed teams of teachers and principals to guide their instructions. He stated, "Principals need to look at evidence that teams are crafting and improving lessons and units together, adjusting their instruction on the basis of formative assessment results" (Schmoker, 2006, p. 143). Therefore, the Primary Investigator determined the use of formative assessment in the supplemental Blitz reading model aligned with current research, which suggested its use was an effective practice.

The building principal and instructional specialist shared summative and formative building data with the Primary Investigator, such as, MAP, AIMSweb, DRA, and Study Island assessment scores. The Primary Investigator collected data from the students from the fifth grade cohort group from the 2011-2012 school year. In order to evaluate the achievement of students in the case study school's Persistent, Transitional, and Transient populations, the investigator included the data in the development of testing models 1, 2, 3, and 4 for the analysis of this case study. The investigator included this data the case study's methodology section, *Statistical Data Analysis: Data Collection Part V.*

Decreasing disruptive behavior. The Primary Investigator noted that teachers reported few behavior issues during their Blitz sessions. The Primary Investigator discovered that research suggested that decreasing disruptive behavior had a positive impact on scores. According to a 2002 study, "In adolescence, delinquent behavior was a significant predictor of underachievement, even when attention problems were controlled" (Barriga et al., 2002, p. 237).

Study Island use. According to Watts' (2009) case study in her research, collection and analysis of aggregate data and statistical testing suggested that schools that utilize Study Island in their reading programs have higher achievement scores than schools that do not. According to another researcher, Bracht (2011), the Study Island instrument was a powerful tool for student instruction and assessment. He noted how students participated in formative assessment without realizing they were evaluated. His quantitative study investigated the effect of Study Island on student achievement, as measured by MAP scale scores. Bracht's evaluation noted, "It would be beneficial to determine whether this method of identifying students for interventions and tutoring was effective and accurate" (p. 159). Therefore, the Primary Investigator determined the use of their Study Island assessment pilot program as another effective choice, which was considered a best practice.

The Study Island program was used during the 2011-2012 school year within the regular classroom setting at Lakeview Elementary. However, the Primary Investigator was asked by the administration team to implement a pilot that included assessments for the current fifth-grade students. The Primary Investigator accepted the task and participated with the fifth grade teaching team. Fifth grade teachers worked together, to

collaborate with the Primary Investigator. They determined test questions within the Study Island program that would create a focus of instruction and allow for collecting data to evaluate growth in achievement, as well as, to create a testing environment that would allow all students the same testing experience. This was to aid in the validity of the test itself, as research has suggested. Teachers gave students assessments on the same days, assessed the entire class in the computer lab to protect the testing environment, and gave feedback to each other. The continuous feedback allowed teacher to determine if their students reached their proficiency goals, as determine by the district-adopted curriculum, which included state standard learning outcome goals. The Primary Investigator determined that protecting the testing environment was an important, as suggested by researcher, Yates (2004).

According to Yates (2004), author of *What Does Good Educational Research Look Like,* researchers have long debated over how research should be conducted. Yates discussed quotes from Hamilton (1977) about behaving "Like hemlines" (Yates, 2004, p. 29-30). "Before-and-after research designs assume that innovatory programs undergo little or no change during the period of study. This built-in premise is rarely upheld in practice" (Hamilton, 1977, pp. 7-9).

While another researcher, author of *Evaluation of Research Methods,* (Bennett, 2003, pp. 29-30), noted Norris' (1990) beliefs that the environment must have prior planning and control: "Educational evaluation is about social planning and control" (Norris, 1990, p. 16). Another researcher, Stenhouse (1975) suggested that teachers have a crucial role in evaluation and that evaluation is the key element in curriculum

evaluation. He suggested teachers should study their work themselves. He recommended that teachers needed to take on the role of a researcher as well.

The Primary Investigator determined that the fifth grade Blitz Study Island Assessment Pilot program aligned with current research regarding collaboration, controlled testing environment, and providing feedback (Khattri & Kane, 1995; Taylor et al., 2000; Taylor, 2007; IRA, 2007; Reeves, 2010, Kluger & DeNisi, 1996; Marzano, 2007; Hattie, 2009). The Primary Investigator and teachers created assessments collaboratively.

In order to evaluate student achievement in the case study school's Persistent, Transitional, and Transient populations, the investigator included Study Island testing pilot scores from two Blitz sessions' pre-and posttests. The investigator created the data analysis testing as model 4. The methods used for analysis are included in this case study and discussed within, *Statistical Data Analysis: Data Collection Part V.*

Comprehension strategies. The Primary Investigator noted that the staff at Lakeview Elementary collaborative discussed then chose each comprehension strategy topic for each grade level. Staff used the same process to determine the pacing guide for the school year. Changes were made as needs were made aware and agreed upon by the grade level teachers and the administration team. The Primary Investigator determined the use of comprehension strategies as an instructional focus was considered an effective practice according to past and present research.

Ongoing development. Each year, the Blitz program was slightly re-designed during professional development days for each grade level. Then, teachers had the

opportunity to discuss which topics were important to work on according to data, summative and formative feedback, from the previous school year.

The Blitz school-based design was created to allow for students to move in and out of groups as their skills developed and grew. It was meant to be fluid and formative to help students move from wherever they are and take them as far as they can go. This was true in the ongoing development of the Blitz program. It remained fluid in its development, which allowed for continuous fine-tuning to better meet students' needs. This practice aligned with Reeves' (2010) research. He believed that providing feedback to professionals who assessed their present competence levels that were designed for growth through continuous learning goals, allowed teachers to grow, just as it did for students (Reeves, 2010).

Case Study School Comparison to DOD Schools: Data Collection Part IV

Next, the Primary Investigator compared collected standardized data MAP (Missouri Assessment Program) TerraNova scores from the case study school to the TerraNova scores from a Department of Defense (DOD) school located in North Carolina. This data comparison helped the Primary Investigator to determine similarities and differences noted from a school system that had student demographics that were similar, yet had different achievement outcomes.

Table 20 indicates the case study on transient students at Lakeview Elementary study did not replicate data with a North Carolina DOD school district setting, which could be due to differences in backgrounds, SES, and family involvement. The Primary Investigator compared North Carolina DOD's district results with results of the case study school district and the case study school. The Primary Investigator analyzed data,

which suggested that the North Carolina DOD district did not have lower scores within similar demographical groups, such as African American and Caucasian.

Table 20

Comparison of North Caroling DOD Data and Case Study Data for Transient Students

Data Collection	# Enrolled	# Took Test	% Proficient or ADV	African American **(A)**	Caucasian (C)
North Carolina DoDEA Data	8263	2162	64%	54%	69%
Missouri Case Study-District Data	5518	1179	54%	35%	67%
Missouri Case Study-School Data	608	285	38%	24%	57%

Note. The primary investigator calculated from the Department of Defense Activity website and Missouri Comprehensive Data System: http://mcds.dese.mo.gov/Pages/default.asp

DOD school district. The Primary Investigator discovered through conducting research on the Department of Defense Education Activity (2013) website that 8,263 students attended the Department of Defense Education Activity (DoDEA) district in North Carolina during the 2011-2012 school year. The Primary Investigator determined that students from this district scored above the overall national average of 50%, on the nationally normed TerraNova test with 64% of students who scored proficient or advanced. DoDEA Director, Marilee Fitzgerald, stated in an American Forces Press Service interview,

> DOD schools struggle with a 35 percent turnover in student body every year, challenging teachers not only to learn new names and faces, but also to assess each child's abilities and deal with the variance of what they are taught from school to school. (Daniel, 2012, para. 4)

Fitzgerald also noted, that “DOD schools not only have high student turnover, but the system’s teachers are transient as well” (Daniel, 2012, para. 7).

DOD school. The Primary Investigator also learned that during the 2011-2012 school year, third, fourth, and fifth grade students accounted for 2,162 of the total population of students, 58% of whom scored an average of 58% proficient or above proficient in the reading portion of the test. The two largest ethnic groups were of Caucasian and African American ethnicity. Fifty-four percent of the African American students scored proficient or advanced, and 69% of the African American students scored proficient or higher in the area of reading. The Primary Investigator noted similar scores through other schools within the Department of Defense school system (Department of Defense Education Activity, 2013).

Case study school district. The Primary Investigator determined through the Department of Elementary and Secondary Education (DESE) website, (2013), the case study school district had 5,518 enrolled during the 2011-2012 school year. Thirty-five percent of the African American students scored proficient or higher, and 67% of the African American students scored proficient or advanced in the area of reading (Missouri Comprehensive Data System, 2013).

Case study school. The Primary Investigator also determined through the DESE website (2013), that the case study school, Lakeview Elementary, had approximately 608 students enrolled during the 2011-2012 school year. Of the 285 students who were in third, fourth, and fifth grade, 38% scored proficient or advanced in the area of reading. The two largest ethnic groups were also African American and Caucasian ethnicity. Twenty-four percent of the African American students scored proficient or advanced, and

57% of the Caucasian students scored proficient or advanced in the area of reading (Missouri Comprehensive Data System, 2013).

Statistical Data Analysis: Data Collection Part V

The Primary Investigator chose a quantitative method that utilized *z*-tests to test for difference in means, which measured achievement and academic growth. The Primary Investigator also chose to utilize *F* tests to test the differences in variance of academic achievement scores. In order to determine relationships between independent and dependent variables the investigator also applied the Pearson Product Moment Correlation Coefficient Model (PPMCC).

Table 16

Hypothesis Independent and Dependent Variables and Statistical Tests

Hypothesis	Independent Variables	Dependent Variables	Statistical Test
1	Mobility Groups A, B, and C	DRA Scores	*z*-test
2	Mobility Groups A, B, and C	AIMSweb R-CBM Scores	*z*-test
3	Mobility Groups A, B, and C	AIMSweb R-CBM Scores	*F* test
4	Mobility Groups A, B, and C	MAP 2010-2012 Scores	PPMCC
4	Free and Reduced Lunch Status		
5	Mobility Groups A, B, and C	MAP 2010-2012 Scores	PPMCC
5	African American Ethnicity		
6	Mobility Groups A, B, and C	MAP 2010-2012 Scores	PPMCC
6	Caucasian Ethnicity		
7	Mobility Groups A, B, and C	Study Island Scores	*z*-test

Table 21 represents each data model chosen and how each statistical test connected to each hypothesis and student mobility group. This table also illustrates the independent and dependent variable for each statistical test.

The building principal and instructional specialist shared building data with the Primary Investigator, such as, MAP, AIMSweb, DRA, and Study Island assessment scores. The Primary Investigator collected data from the students from the fifth grade cohort group from the 2011-2012 school year.

In order to determine growth comparisons the Primary Investigator created testing model 4. This model analyzed scores through the use of a *z*-test for difference in means. After statistical analysis of testing model 4, the Primary Investigator determined that the teachers' tests given to all fifth grade level students in the Blitz model setting, did not address formative decision-making, which was the pilot study goal. The investigator noted that the pretest scores were low and yielded little growth on posttests. Therefore, the Primary Investigator determined the use of Study Island, as implemented in the pilot program within the Blitz model, did not address meeting students' independent instructional needs. Students were not tested in this particular pilot on the same level they received instruction, which made it difficult to determine growth. The investigator determined the pilot did however give teacher's levels of proficiency or lack-there-of, for reporting purposes. The Primary Investigator learned through research, that the Study Island program was designed to meet students where they were and guide students along their instructional path through a non-threatening testing and instructional environment, as noted by Bracht in his 2011 dissertation study.

Mobility population groups. The Primary Investigator compared the results of four data models to determine growth rates, variance, and correlations to achievement for the fifth grade, 2011-2012 cohort group of students, based on their transiency status.

For the purpose of comparing students based on the amount of time they spent in the Blitz reading model, data was collected and organized into sample populations. Students were divided into three sample population groups, defined by the amount of time they have been enrolled in specific grade levels. As indicated in Table 22, they were categorized as the Persistent, Transitional, and Transient populations, and were labeled as Persistent Group-A (Persistent), Transitional Group-B (Transitional), and Transient Group-C (Transient).

Table 22

Mobility Groups

Transiency Group	Population	Entered Lakeview
A	Persistent	PK / 1
B	Transitional	2 / 3
C	Transient	4 / 5

In order to analyze achievement of students whom had different mobility patterns, the Primary Investigator labeled all participants who participated in the Blitz intervention model into one of three categories. Students enrolled at Lakeview Elementary since grade 4 and/or grade 5 who participated in Blitz for 40 minutes daily, according to the primary and elementary Blitz schedules, were labeled as the Transient population. Students present since grade two and/or grade three and had participated in Blitz for 40 minutes daily, according to the primary and elementary Blitz schedules, were labeled the Transitional population. Students enrolled since preschool, kindergarten and/or grade 1

and have participated in Blitz since grade 2 (when Blitz began) for 40 minutes daily, according to the primary and elementary Blitz schedules, were labeled the Persistent population.

Students who were enrolled at Lakeview Elementary since grade 4 and/or grade 5 and participated in Blitz since for 40 minutes daily, according to the primary and elementary Blitz schedules, were the Transient population. Students, who were present since grade 2 and/or grade 3 and participated in Blitz for 40 minutes daily, according to the primary and elementary Blitz schedules, were the Transitional population. Students who were enrolled since preschool, kindergarten and/or grade 1 and have participated in Blitz since grade 2, for 40 minutes daily, according to the primary and elementary Blitz schedules, were called the Persistent population. The Persistent population was the only population that participated in the Blitz reading model all four years it existed. Students who were not present for both pre-and posttests for the Study Island scores for any given comprehension strategy session were removed from the study. Students who did not have data sets from other normative tests that were compared, such as MAP (Missouri Assessment Program) scores, AIMSweb R-CBM (Reading Comprehension-Based Measurement) scores, DRA (Developmental Reading Assessment) scores were removed. Students who enrolled and un-enrolled and re-enrolled to this elementary school from 2008 through 2012 were excluded from this study. Forty-one out of 122 fifth grade students entered the case study school sometime during their kindergarten year or first grade year. Twenty-four students entered during their second grade or third grade year, and 38 entered during their fourth or fifth grade year.

Table 23

Eligible Participants

Label	Data Set:	School Years:	Entered	# of Students
Persistent	Persistent Group-A	2005 - 2006 2007 - 2008	PK / K / 1	41 students
Transitional	Transitional Group-B	2008 - 2009 2009 - 2010	2 / 3	26 students
Transient	Transient Group-C	2010 - 2011 2011 - 2012	4 / 5	34 students
Total				101

Two students enrolled, left and then came back. In order to remain consistent with data collection within the methodology, the Primary Investigator excluded them from the study, as were other students whose entry date or exit date prevented collection of full data sets. This allowed 101 eligible students from the class of 2019 to be compared to one another (Table 23).

Table 24

Data Reference Table

Test	Type	Measurement	Administrator	Time Frame	Formative Summative	Referenced
			MODEL 1			
DRA	Verbal Written	Independent Reading Level	Teacher	Begin/End Trimester As needed	Formative Summative	Standardized Criterion
			MODEL 2			
AIMSweb R-CBM	Verbal	Fluency	Trained Assessment Team	Begin/End Trimester As needed	Formative Summative	Standardized Norm
			MODEL 3			
MAP-CA	Written Multiple Choice	Proficiency	Teacher specialists	Annual Grades 3-5	Summative	Standardized Norm
			MODEL 4			
Study Island	Multiple Choice	Comprehension	5th grade teachers (pilot)	Begin/End Each Blitz	Summative	Standardized

Data measurement descriptions. Table 24 illustrates each test type, which included who administered the test, when tests were administered, whether the test was formative or summative, and how it was referenced.

Classroom teachers, members of a trained assessment team, paraprofessionals, or reading specialists administered assessments. In order to triangulate data, the teachers used both formative and summative testing models to analyze data to determine growth and instructional needs. Each chosen data model measured different parts of reading, such as, verbal and written comprehension, fluency, grade level equivalency, and independent reading level.

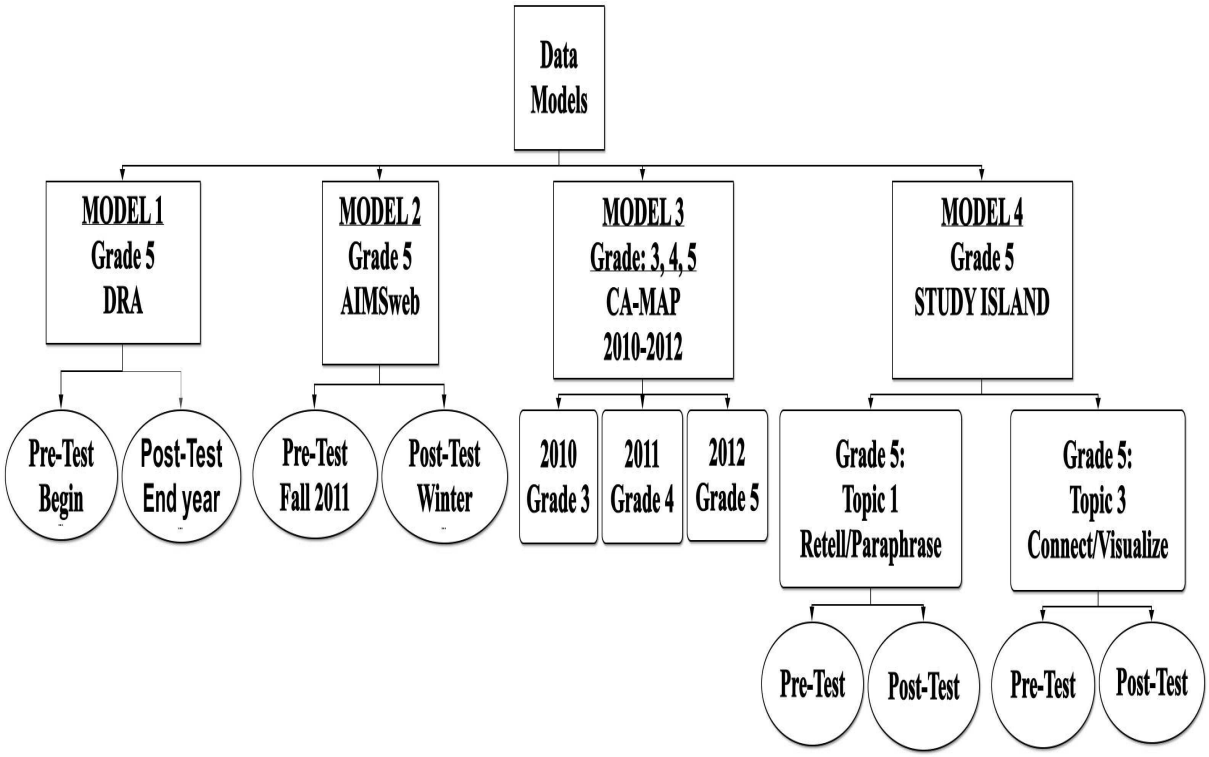


Figure 1. Data Models

Figure 1. Illustrates each data model and the assessments that apply to each model, such as: Model 1: DRA assessments, Model 2: AIMSweb R-CBM assessments, Model 3: MAP assessments, and Model 4: Study Island assessments.

Figure 1 divided assessment data into four testing models, which made it easier for the Primary Investigator to illustrate the data chosen, which analyzed the supplemental Blitz program. This figure also represented what grade level the case study participants were in for each data set analyzed.

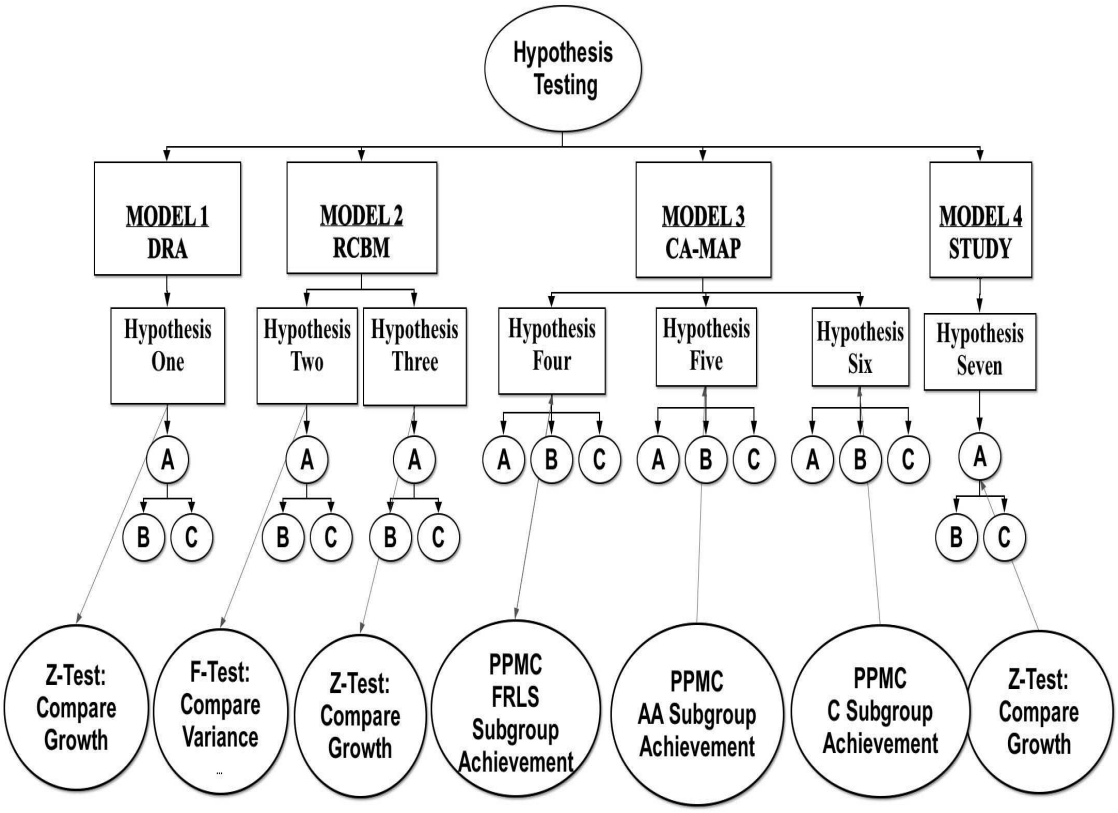


Figure 2. Hypotheses Testing For Each Data Model

Figure 2. The Primary Investigator created a second visual model that illustrated each data model and their respective hypotheses that were tested (Figure 2). Figure 1 and 2 explained the methodology in a format easy to understand and comprehend for approval of the IRB submission.

Figure 2 allowed the primary investigator to describe data chosen for analysis as it applied to each hypothesis. Mobility group A was compared to groups B and C for data

models 1, 2, and 4. Data model 3 compared all three mobility groups to one another in correlation studies for FRLS, AA ethnicity, and C ethnicity. These four data models answered hypotheses 1 through 7.

Coding system. The Primary Investigator created a coding system that protected the privacy of the school district, case study building, teachers and participants in the cohort study group. Students' names were removed and codes were applied, such as 1A, 2A, and 3A for the Persistent population sample group members, 25B, 26B, and 27B for the Transitional population samples, and 71C, 72C, and 73C for the Transient population. Once data was collected from the school's files it was organized into a spreadsheet that allowed for anonymity. The spreadsheet also allowed the Primary Investigator to determine complete data sets for each assessment type. The Primary Investigator also determined that if the sample sizes were too small, it would be appropriate to use nonparametric testing. It was also determined if sets were too small for statistical testing, descriptive reporting was to be employed.

The Primary Investigator determined the methodology of the study and sent the proposal to be considered by the IRB, which was approved. The investigator received the IRB approval letter and forwarded the letter to the superintendent of schools, as well as the administrator of the building where the study took place. The investigator then received an additional letter from the superintendent of schools, which provided guidelines as to how data must be collected to maintain anonymity. The investigator then collected data, coded it, and maintained it in a code-protected computer.

Statistical Tests and Hypotheses

Each testing model represented is paired with the hypothesis used for statistical testing. This visual model was used to illustrate the comparison of each mobility group to the Persistent Group-A. For descriptive purposes, Transitional Group-B was also compared to Transient Group-C, even though it was not part of the hypothesis. Descriptions of those results were noted in this case study as well.

Hypothesis Testing

There were approximately 120 students in this cohort group of students with 101 students eligible for analysis from the class of 2019. Each category, such as: Persistent Group-A, Transitional Group-B, and Transient Group-C, were compared to one another. There were four models used for testing: DRA scores, AIMSweb R-CBM scores, MAP data scores, and Study Island pilot data scores.

Model 1: DRA Scores

The Primary Investigator created model 1, which focused on analysis of DRA (Developmental Reading Assessments) data collected during the 2011-2012 school year. Analysis of model 1 determined results for hypothesis statement 1.

Hypothesis statement 1. Students attending Blitz sessions at this elementary school for a longer length of time, characterized by comparison of the Persistent Group-A to the Transitional Group-B and the Transient Group-C, will yield an increase in achievement in scores, as measured by DRA scores.

Hypothesis 1 table. The statistical tests used for analysis of DRA data are represented in Table 25. In order to create visual graphs for reporting purposes, the Primary Investigator collected DRA pretest and posttest scores, then tested hypothesis 1

through mobility group comparisons. Persistent Group-A was compared to Transitional Group-B, Transitional Group-B to Transient Group-C, and Persistent Group-A to Transient Group-C. The Primary Investigator then compared Group B to Group C for descriptive purposes, not to answer the hypothesis statement. To test for differences in means, the Primary Investigator used the statistical *z*-test, which compared the difference in means and allowed the investigator to measure growth rates in comparison to one another.

Table 17

Testing Table Hypothesis 1

Test #	Statistical Test	Mobility Population	Mobility Population
1	z-test for difference in variance	A	B
	fall 2011 and spring 2012	B	C
	DRA Assessments	A	C

Note. Mobility population Group A will be compare with mobility population Groups B and C. Group B will also be compared to Group C for descriptive purposes, not to test Hypothesis 1.

Table 18

DRA Data Population Samples

Label	Data Set:	Entered Lakeview	Number of students:
Persistent	Persistent Group-A	PK / K / 1	39 students
Transitional	Transitional Group-B	2 / 3	23 Students
Transient	Transient Group-C	4 / 5	32 students
Total Sample Participants			94

DRA data population samples. Two students in sample A population group moved prior to the posttest, leaving 39 out of 41 students for inclusion in this sample group. Three students moved prior to taking the posttest in Transitional Group-B, leaving 23 out of 26 for inclusion in sample B population group. Two students moved prior to taking the posttest in Group C, leaving 32 students in sample C population group. Scores from 94 students out of 101 were included in this statistical test (Table 26).

Table 19

DRA Assessment Descriptive Data

	Fall 2011	Spring 2012
Descriptive Statistics	Persistent Group-A	
Mean	51.076	55.333
Standard Error	2.370	2.372
Standard Deviation	14.802	14.813
Sample Variance	219.125	219.438
Kurtosis	-0.202	-0.737
Skewness	0.130	-0.196
Descriptive Statistics	Transitional Group-B	
Mean	55.333	50.260
Standard Error	2.372	2.986
Standard Deviation	14.813	14.324
Sample Variance	219.4385	205.201
Kurtosis	-0.737	-0.433
Skewness	-0.196	0.222
Descriptive Statistics	Transient Group-C	
Mean	42.125	50.260
Standard Error	2.2823	2.986
Standard Deviation	12.910	14.324
Sample Variance	166.693	205.201
Kurtosis	1.701	-0.433
Skewness	0.784	0.222

DRA assessment descriptive data table. Table 27 represents the descriptive data for each population sample of the fifth grade cohort group in this study for fall 2011 and spring 2012 DRA scores. This table allowed the Primary Investigator to compare descriptive statistics and rank groups in order of achievement.

Model 2: Winter and Spring 2012 R-CBM AIMSweb Scores

The Primary Investigator created model 2, which focused on analyzing AIMSweb R-CBM data collected during the 2011-2012 school year. The Primary Investigator's Analysis of model 2 determined results for hypotheses statements 2 and 3.

Hypothesis statement 2. Students attending Blitz sessions at this elementary school for a longer length of time, characterized by comparison of the Persistent Group-A to the Transitional Group-B and the Transient Group-C, will yield a decrease in variance in scores, as measured by AIMSweb R-CBM scores.

Hypothesis statement 3 Students attending Blitz sessions at this elementary school for a longer length of time, characterized by comparison of the Persistent Group-A to the Transitional Group-B, and the Transient Group-C, will yield a larger growth rate as measured by AIMSweb R-CBM scores.

Hypothesis testing tables 28 and 29. The statistical tests used for analysis of AIMSweb R-CBM data are represented in Table 28 and Table 29.

Table 28

Testing Table: Hypothesis 2

Test #	Statistical Test	Mobility Population	Mobility Population
1	*F* test for difference in variance	A	B
2	fall 2011 and winter 2012	B	C
3	AIMSweb R-CBM assessments	A	C

Note. Mobility population Group A will be compare with mobility population Groups B and C. Group B will also be compared to Group C for descriptive purposes, not to test Hypothesis 1.

The Primary Investigator compared Group B to Group C for descriptive purposes, not to answer the hypothesis statement. The Primary Investigator used the statistical *F* test for difference in variance to answer hypothesis question 2 and the statistical *z*-test for difference in mean to answer hypothesis question 3.

Table 20

Testing Table Hypothesis 3

Test # 1	Statistical Test	Mobility Population	Mobility Population
	z-test for difference in means	A	B
	fall 2011 and winter 2012	B	C
	AIMSweb R-CBM assessments	A	C

***Notes*.** Mobility population Group A will be compared with mobility population Groups B and C. Group B will also be compared to Group C for descriptive purposes, not to test Hypothesis 1.

Table 21

AIMSweb R-CBM Assessment Descriptive Data

	Fall 2011	Winter 2012
Descriptive Statistics	Persistent Group-A	
Mean	155.868	138.447
Standard Error	6.931	6.766
Standard Deviation	42.729	41.712
Sample Variance	1825.847	1739.929
Kurtosis	-0.514	-0.802
Skewness	-0.335	-0.359
Descriptive Statistics	Transitional Group-B	
Mean	116.125	136.416
Standard Error	6.935	7.818
Standard Deviation	33.978	38.304
Sample Variance	1154.548	1467.21
Kurtosis	-0.202	0.061
Skewness	-0.687	-0.479
Descriptive Statistics	Transient Group-C	
Mean	124.969	139.454
Standard Error	6.997	7.049
Standard Deviation	40.195	40.497
Sample Variance	1615.655	1640.068
Kurtosis	0.505	-0.192
Skewness	0.443	0.007

AIMSweb R-CBM assessment descriptive data table. Table 30 represents descriptive data for each population sample of the fifth grade cohort group in this study for fall 2011 and 2012 winter AIMSweb R-CBM scores. This data allowed the Primary Investigator to compare the pre- and post-assessment scores with one another and rank groups in order of achievement.

Model 3: MAP (Missouri Assessment Program) Scores

The Primary Investigator created model 3, which focused on analysis of communication arts MAP data collected during the 2009-2010, 2010-2011, and 2011-2012 school year (while participants were in grade 3, 4, and 5). For the purposes of this study, the two ethnicities that represented the greatest change, African American and Caucasian, were reviewed while compared to other ethnicities for significant increase in academic achievement. Next, categories of students who qualified for free and reduced lunch, compared to those who did not qualify were reviewed These MAP scores were statistically tested to measure correlations as to whether each mobility population's MAP scores from 2010 through 2012 correlated to FRLS (Free or Reduced Lunch Status), C (Caucasian) ethnicity, and AA (African American) ethnicity.

The Primary Investigator computed correlation coefficients (the absolute value of -*r*) to measure the strength of the relationship between the independent variable (FRLS) and the dependent variables (2010 through 2012 MAP scores to analyze hypothesis 4). The Primary Investigator then repeated the process to measure the strength of the relationship between the independent variables (AA and C ethnicity) and the dependent variable (2010 through 2012 MAP scores).

Table 22

Table I Pearson's Product Moment Correlation Coefficient (PPMCC) Values

Mobility Population	2010	2011	2012
A	0.301	0.301	0.308
B	0.381	0.381	0.410
C	N/A	0.406	0.406

Note. PPMCC Table I is from Bluman (2009).

The Primary Investigator referenced Bluman's (2009) Elementary Statistics Table I to determine critical values for Pearson's Moment Coefficients (PPMCC). Table 31 notes the *r*-coefficient critical values for a two-tailed test to determine significance of relationships between variables. Analysis of model 3 determined results for hypotheses statements 4, 5, and 6.

Hypothesis statement 4. For FRPL status, there is a relationship between mobility statuses, characterized by samples of the Persistent Group-A to the Transitional Group-B, and the Transient Group-C, and achievement in the 2011-2012 population at this elementary school, as measured by MAP scores.

Hypothesis Statement 5. For AA, there is a relationship between mobility statuses characterized by samples of the Persistent Group-A population to the Transitional Group-B, and the Transient Group-C, and achievement in the 2011-2012 population at this elementary school, as measured by MAP scores.

Hypothesis statement 6. For Caucasian subgroup status, there is a relationship between mobility statuses, characterized by samples of the Persistent Group-A to the

Transitional Group-B, and the Transient Group-C, and achievement in the 2011-2012 population at this elementary school, as measured by MAP scores.

Hypothesis tests for MAP (Missouri Assessment Program) assessments. The statistical tests used for analysis of MAP data are represented in Table 32. The Primary Investigator compared Persistent Group-A, B, and C using the Pearson's Product Moment Correlation Coefficient (PPMCC) test.

Hypothesis 4, 5, and 6 testing table. The statistical tests used for analysis of MAP data are represented in Table 32. In order to create visual graphs for reporting purposes, the Primary Investigator collected 2010 through 2012 MAP data, then tested hypothesis 4, 5, and 6 through analysis of Pearson's Product Moment Correlation Coefficient (PPMCC).

Table 32

Testing Table Hypothesis 4, 5, and 6

Test # 1 Statistical Test	Mobility Population	Mobility Population
Pearson's Product Moment	A	B
Correlation Coefficient	B	C
2010 – 2012 Map Assessments	A	C

Note. Mobility population Group-A will be compare with mobility population Groups-B and C. Group B will also be compared to Group C for descriptive purposes, not to test Hypothesis 1.

In order to compute the PPMCC for hypothesis 4, the Primary Investigator assigned variables of numerical 1 and numerical 2, as: FRLS=1 while, not FRLS=2. Next, in order to compute the PPMCC for hypothesis 5, the Primary Investigator assigned variables of numerical 1 and numerical 2, as: African American=1 while, not African American =2. Last, in order to compute the PPMCC for hypothesis 6, the Primary Investigator assigned variables of numerical 1 and numerical 2, as: C ethnicity=1 while, not C ethnicity=2.

MAP (Missouri Assessment Program) descriptive data. Data from Table 33 represents descriptive MAP Data for the fifth grade cohort group of students while they were in grades 3 (2010), 4 (2011), and 5 (2012). This table represents the data collected for three years of MAP data to be compared for correlations to ethnic groups and FRPL status and to rank groups in order of achievement.

Table 33

Missouri Assessment Program 2010-2012 Descriptive Data

	Persistent Group-A	Transitional Group-B	Transient Group-C
Descriptive Statistics		2010	
Mean	633.951	626.960	N/A
Standard Error	8.018	7.404	N/A
Standard Deviation	51.341	37.024	N/A
Sample Variance	2635.997	1370.790	N/A
Kurtosis	5.815	2.848	N/A
Skewness	-2.103	-0.967	N/A
Descriptive Statistics		2011	
Mean	659.170	651.92	641.695
Standard Error	5.250	6.028	5.886
Standard Deviation	33.617	30.142	28.228
Sample Variance	1130.145	908.576	796.857
Kurtosis	0.603	-0.906	-0.730
Skewness	-0.498	-0.270	-0.221
Descriptive Statistics		2012	
Mean	673.128	664.619	656
Standard Error	5.032	7.082	4.546
Standard Deviation	31.425	32.456	26.51
Sample Variance	987.535	1053.447	702.6
Kurtosis	1.118	1.899	2.721
Skewness	0.186	-1.068	0.450

Model 4: Study Island

The Primary Investigator created model 4, which focused on analysis Blitz data collected from Study Island pre- and posttest data collected during the 2011-2012 school years. The Primary Investigator's analysis of the model answered hypothesis 7.

Teachers collectively generated matching pretest and posttest assessments with sets of questions they gathered from their Study Island assessment bank. These assessments were given to all students in grade 5 during the 2011-2012 school year. The Primary Investigator randomly chose two out of the ten possible Blitz sessions to analyze for hypothesis testing in model 4. There were three separate topics tested within this data model. The first data set included pretest and posttest scores on story retell and paraphrasing. This assessment was one assessment with 14 questions. The second data set included two Blitz topics 4-A and 4-B, which focused on connections and visualizing. These two topics were taught during the same rotation but had two separate sets of pretests and posttests data collected for analysis. The first test in this Blitz model had six questions and the second test had six questions. A total of three Blitz tests were analyzed from two different Blitz sessions; the second and fourth sessions. Analysis of model 4 determined results for hypothesis statement 7.

Hypothesis statement 7. Students attending Lakeview Elementary's Blitz program for a longer length of time, characterized by comparison of the Persistent Group-A to the Transitional Group-B, and the Transient Group-C, will yield a larger growth rate as measured by Study Island test scores topic 2 (retell/paraphrase) and topic 4-A (connections) and 4-B (visualizing) (Table 34).

Table 23

Testing Table Hypothesis 7

Test #	Statistical Test	Mobility Population	Mobility Population
1	*z*-test for difference in means	A	B
2		B	C
3		A	C

Note. Mobility population Group-A will be compared with mobility population Groups-B and C. Group B will also be compared to Group C for descriptive purposes, not to test Hypothesis 1.

Study Island descriptive data table. Tables 35 and 36 represent the descriptive data for each population sample of the fifth grade cohort group in this study for pre- and posttest scores from two topics in the Study Island pilot study. This data allowed the Primary Investigator to compare the pre- and post-assessment scores with one another and rank groups in order of achievement. These tables allowed the primary investigator to see descriptive statistical data, which noted the mean scores, standard error, sample variance, kurtosis, and Skewness for pre- and posttest data, which allowed for the creation of visual graphs noting changes between each mobility group. Table 35 represented Study Island assessment data collected from the second topic (retell and paraphrase), while Table 36 represented Study Island assessment data collected from topic 4-A (connect) and 4-B (visualize) of the Blitz sessions for the 2011-2012 school year. These two topics were randomly chosen for statistical analysis by the primary investigator.

Students participated in 10 Blitz sessions, which focused on 13 topics for the 2011-2012 school year, which began on September 6, 2011 (Appendix E).

Table 24

Study Island Assessment Descriptive Data: Topic 2

	Pretest	Posttest
Descriptive Statistics	Persistent Group-A	
Mean	58.76	57.5
Standard Error	2.737	3.148
Standard Deviation	17.09	19.66
Sample Variance	292.2	386.4
Kurtosis	4.831	3.414
Skewness	-0.996	-0.642
Descriptive Statistics	Transitional Group-B	
Mean	57.14	55.06
Standard Error	3.069	3.086
Standard Deviation	15.03	15.12
Sample Variance	226	228.6
Kurtosis	1.792	2.588
Skewness	-0.305	-0.330
Descriptive Statistics	Transient Group-C	
Mean	56.71	54.75
Standard Error	2.845	2.825
Standard Deviation	16.35	16.23
Sample Variance	267.2	263.4
Kurtosis	2.126	2.925
Skewness	-0.095	-0.543

Teachers instructed students on the topics retelling/paraphrasing for the second Blitz session, while the fourth topic had two strategies, connections and visualizing. The Lakeview Elementary school fifth grade students began the first session on September 26, 2011. Teachers implemented the pretest during the first week of the session and the posttest during the final week of the session, which lasted through October 14, 2011. Teachers provided all students the same test for the pre- and posttest.

Table 25

Study Island Assessment Descriptive Data Topic 4-A and 4-B Descriptive Statistics

	Pre-Connections	Post-Connections	Pre-Visualize	Post-Visualize
		Persistent		
Mean	62.63	65.65	71.08	78.42
Standard Error	4.532	4.585	4.412	4.136
Standard Deviation	26.04	26.34	25.73	24.12
Sample Variance	292.2	386.4	661.9	581.6
Kurtosis	1.857	2.313	2.876	2.255
Skewness	-0.08906	-0.4243	-0.6444	-0.8034
		Transitional		
Mean	48.66	55.34	64	65.34
Standard Error	4.4	5.064	6.137	6.228
Standard Deviation	22	25.32	30.68	31.14
Sample Variance	484.1	641	941.5	969.6
Kurtosis	2.667	1.648	1.938	1.747
Skewness	0.5808	-0.4046	-0.406	-0.4967
		Transient		
Mean	47.61	65.65	55.36	68.45
Standard Error	5.536	4.585	6.185	4.563
Standard Deviation	29.3	26.34	32.73	24.15
Sample Variance	858.3	693.6	1071	583
Kurtosis	2.358	2.313	1.745	2.036
Skewness	0.5042	-0.4243	-0.04073	-0.2592

Lakeview Elementary fifth grade students began the fourth session on November 7, 2011 and were given the pretest during the first week of the session. Teachers implemented the posttest during the final week of the session, which lasted through December 2, 2011. All students were given the same test for the pretest and posttest.

This descriptive data allowed the Primary Investigator to compare the pre- and post-assessment scores with one another and rank groups in order of achievement.

Normal distribution of data. The Primary Investigator analyzed all sets of data for normal distribution. Pearson's Index (Bluman, 2009, Table I) was considered, as well as quartiles and outliers (Appendix F). According to Bluman's (2009) index I, numbers that were not equal to, or greater than +1 or equal to or less than -1.00 were not significantly skewed. The Primary Investigator concluded that 37 out of 39 data sets in model 4 were not significantly skewed.

Quartiles and outliers. The Primary Investigator analyzed each data set for outliers by determining Quartiles and IQR (Inter-Quartile Range) against the Pearson's Index. This allowed the investigator to determine that each set of data for each testing model was normally distributed.

Testing models with skewed scores. The Primary Investigator determined that the PI values were not equal to, or greater than +1.00 or equal to or less than -1.00, with the exception of Persistent Group-A's pretest score for the DRA assessment scores used in model 1 and Transitional Group-B's posttest scores for topic 4-A. The Pearson's Index for the data model 1, Persistent Group-A's posttest data set was +1.24. This PI score suggested that this data set was skewed to the right, which indicated a weaker statistical test result for analysis. The other data set that was questioned regarding outliers and skewed results was data collected from model 4-Study Island posttest scores from topic 4-B. The Pearson's index for this data set was -1.35, which suggested that this data set was skewed to the left, which also indicated a weaker statistical test result for

analysis (Appendix F). It was concluded that all other data sets were distributed normally (Bluman, 2009).

Conclusion

The methods created for this study cross-referenced data available within the supplemental Blitz reading model at Lakeview Elementary. The Primary Investigator created categories of separated of data, within four data-set models. In order to analyze scores for students who had remained at Lakeview Elementary for specific amounts of time, data was separated by date according to when students began participation in the program. The investigator chose four separate data sets to evaluate outcomes in order to give a thorough analysis of differences in achievement growth, variance, and correlational values as it applied to SES and ethnicity and related to mobility status.

Chapter Four: Data Analysis

Lakeview Elementary struggled with problems of high mobility and low academic achievement levels in the areas of mathematics and communication arts. The high mobility rate and declining MAP (Missouri Assessment Program) test scores became the focus of the principal of Lakeview Elementary. Few programs addressed, and studied complications acquired due to transiency within schools that were useful to other school systems with similar variables. The Lakeview Elementary principal developed a research driven supplemental program, which focused on differentiated direct instruction in small, on-level groups. Prior to the study, the building-level supplemental Blitz program had not been formally evaluated as to how well it met students' continuously changing needs at Lakeview Elementary. The methodology of this study allowed the Primary Investigator to give an overall analysis of student growth as a result of student participation in the Blitz reading model, which allowed the administrator to determine how well the Blitz program model increased achievement for students in three mobility groups: Persistent, Transitional, and Transient. This study gave evidence that guided the principal at Lakeview Elementary in instructional decision making for the following years in this transient elementary school.

Chapter Four describes the hypothesis models and the results of each hypothesis test. The Primary Investigator chose a quantitative method that utilized *z*-tests for difference in means, which checked for significant achievement and academic growth. The Primary Investigator chose to utilize *F* tests for difference in variance of academic achievement scores. In order to determine potential relationships between independent

and dependent variables the investigator also applied the Pearson Product Moment Correlation Coefficient analysis (PPMCC).

Null Hypotheses Statements

Null hypothesis statement 1. Students attending Blitz sessions at Lakeview Elementary for a longer length of time, characterized by comparison of the Persistent Group-A population to the Transitional Group-B population and the Transient Group-C population, will not yield an increase in achievement in scores, as measured by Developmental Reading Assessment (DRA) assessment scores.

Null hypothesis statement 2. Students attending Blitz sessions at Lakeview Elementary for a longer length of time, characterized by comparison of the Persistent Group-A population to the Transitional Group-B population and the Transient Group-C population, will not yield a decrease in variance in scores, as measured by AIMSweb R-CBM assessment scores.

Null hypothesis statement 3. Students attending Lakeview Elementary's Blitz program for a longer length of time, characterized by comparison of the Persistent Group-A population to the Transitional Group-B population and the Transient Group-C population, will not yield a larger growth rate as measured by AIMSweb R-CBM scores.

Null hypothesis statement 4. For Free and Reduced Lunch Status (FRPL), there is no relationship between mobility statuses, characterized by samples of the Persistent Group-A population, the Transitional Group-B population, and the Transient Group-C population and achievement for the 2011-2012 fifth grade students at Lakeview Elementary, as measured by MAP scores.

Null hypothesis statement 5. For students of African American (AA) ethnicity, there is no relationship between mobility statuses, characterized by samples of the Persistent population to the Transitional Group-B population and the Transient Group-C population and achievement for the 2011-2012 fifth grade students at this elementary school, as measured by MAP (Missouri Assessment Program) assessment scores.

Null hypothesis statement 6. For students of Caucasian (C) ethnicity, there is no relationship between mobility statuses, characterized by samples of the Persistent Group-A population to the Transitional Group-B population and the Transient Group-C population, and achievement for the 2011-2012 fifth grade students at this elementary school, as measured by MAP assessment scores.

Null hypothesis statement 7. Students attending Blitz sessions at Lakeview Elementary for a longer length of time, characterized by comparison of the Persistent Group-A population to the Transitional Group-B population and the Transient Group-C population, will not yield an increase in achievement in scores, as measured by Study Island assessment scores.

Statistical Tests

The primary investigator analyzed data within four testing models. Model 1 included null hypothesis 1, which analyzed pre- and post-test DRA data with a *z*-test for difference in means. Model 2 included null hypotheses 2 and 3, which tested pre- and posttest AIMSweb R-CBM data for potential decreased variance utilizing the *F* test and for decreased averages utilizing the *z*-test for difference in means. Model 3 included null hypotheses 4, 5, and 6, which tested 2010 through 2012 Missouri Assessment Program (MAP) scores for potential relationships between Free and Reduced Lunch Status

(FRLS), African American (AA) ethnicity, and Caucasian (C) ethnicity utilizing the Pearson's Product Moment Correlation coefficient (PPMCC) analysis. Model 4 included null hypothesis 7, which tested pretest and posttest Study Island data with a *z*-test for difference in means.

Table 37 represents each data model chosen, the null hypothesis tested, the statistical test applied, and the student mobility group(s). This table also illustrates the independent and dependent variable for each statistical test. Each testing model represented is paired with the null hypothesis used for statistical testing.

Table 26

Hypothesis Independent and Dependent Variables and Statistical Tests

Hypothesis	Independent Variables	Dependent Variables	Statistical Test
1	Mobility Groups A, B, and C	DRA Scores	*z*-test
2	Mobility Groups A, B, and C	AIMSweb R-CBM Scores	*z*-test
3	Mobility Groups A, B, and C	AIMSweb R-CBM Scores	*F* test
4	Mobility Groups A, B, and C	MAP 2010-2012 Scores	PPMCC
4	Free and Reduced Lunch Status		
5	Mobility Groups A, B, and C	MAP 2010-2012 Scores	PPMCC
5	African American Ethnicity		
6	Mobility Groups A, B, and C	MAP 2010-2012 Scores	PPMCC
6	Caucasian Ethnicity		
7	Mobility Groups A, B, and C	Study Island Scores	*z*-test

Model 1 Hypothesis Testing Results

The first model focused on analysis of DRA (Developmental Reading Assessments) data collected during the 2011-2012 school year and null hypothesis statement 1. A *z*-test for difference in means of DRA scores was performed.

Analysis for hypothesis 1 tests for DRA. Three tests were performed on DRA assessment data of the sample populations of fifth graders for the school year 2012. Each Transient status group, A, B, and C was tested for mean score growth and compared to each other.

Null hypothesis 1. H_O: Students attending Blitz sessions at Lakeview Elementary for a longer length of time, characterized by the Persistent Group-A, will not yield an increase in achievement in scores, as measured by DRA scores.

Test one.

Table 27

z-test Two-Sample for Means: Persistent Group-A and Transitional Group-B

	A Growth	*B Growth*
Mean	4.256	8
Known Variance	181.511	39.636
Observations	39	23
Hypothesized Mean Difference	0	
z	-1.4823	
P (Z<=z) two-tail	0.1382	
z Critical two-tail	1.959	

Comparison of Persistent Group-A to Transitional Group-B yielded a *z*-test value of -1.48. Comparison to the critical value of ±1.96 does not allow rejection of the null hypothesis. Therefore, even though Transitional Group-B provided an observable larger growth between pretest and posttest, the amount of growth was not significantly larger

than that exhibited by Persistent Group-A. The null hypothesis was not rejected. Persistent Group-A did not yield a significant increase in achievement in scores, as measured by DRA scores when compared to Transitional Group-B.

Test two.

Table 28

z-test Two-Sample for Means: Transitional Group-B and Transient Group-C

	C Growth	*B Growth*
Mean	11.687	8
Known Variance	94.479	39.636
Observations	32	23
Hypothesized Mean Difference	0	
z	1.705	
P (Z<=z) two-tail	0.088	
z Critical two-tail	1.959	

Comparison of Transitional Group-B to Transient Group-C yielded a *z*-test value of 1.71. Comparison to the critical value of 1.96 does not allow rejection of the null hypothesis. Therefore, even though Transient Group-C provided an observable larger growth between pre- and posttests, the amount of growth was not significantly larger than that exhibited by Transitional Group-B. The null hypothesis was not rejected. Transitional Group-B did not yield a significant increase in achievement in scores, as measured by DRA scores when compared to Transient Group-C. This *z*-test compared the two more Transient groups (B and C) to provide additional perspective on student academic growth.

Test three.

Table 29.

z-test Two-Sample for Means: Persistent Group-A and Transient Group-C

	A Growth	*C growth*
Mean	4.256	11.687
Known Variance	181.511	94.479
Observations	39	32
Hypothesized Mean Difference	0	
z	-2.69	
P (Z<=z) two-tail	0.007	
z Critical two-tail	1.959	

Comparison of Persistent Group-A to Transient Group-C yielded a *z*-test value of -2.69. Comparison to the critical value of -1.959 does allow rejection of the null hypothesis. Therefore, the Transient Group-C growth of 11.68 points between pre- and posttests was significantly larger than the growth of 4.25 points exhibited by Persistent Group-A. The null hypothesis was rejected and the alternative hypothesis was supported. Transient Group-C did yield a significant increase in achievement in scores, as measured by DRA scores when compared to Persistent Group-A

Descriptive data hypothesis 1. Descriptive data included pre- and posttest mean scores for all three mobility groups. Persistent Group-A yielded the highest achievement scores in both pre- and posttests. Transitional Group-B and Transient Group-C yielded similar pretest results, however, Transient Group-C scored a higher posttest average than Transitional Group-B. Group C posttest scores were inferior to Persistent Group-A by 2.82%, while Transitional Group-B's average posttest scores were inferior by 10.09%.

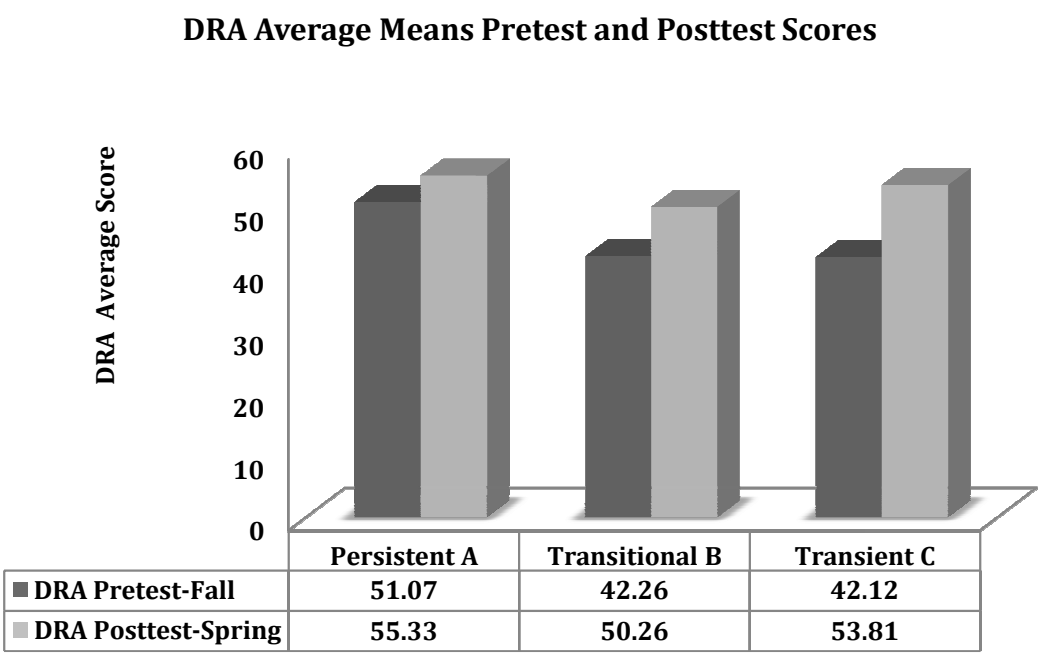


Figure 3. DRA Average Means Pre- and Posttest Scores

In this case, the most transient group achieved a higher growth rate and closed the gap to the most Persistent mobility group by -2.82%.

Model 2 Hypothesis Testing Results

The second model focused on analysis of AIMSweb R-CBM data collected during the 2011-2012 school year and analysis results of hypothesis statements 2 and 3.

Analysis for hypothesis 2 tests for AIMSweb R-CBM. Three tests were performed on R-CBM Fluency assessment data of the sample populations of fifth graders for the school year 2012. Each mobility group, A, B and C was tested for potential decrease in variance and compared to each other. These tests are represented in tables 41 through 43.

Null hypothesis 2. H_O: Students attending Blitz sessions at Lakeview Elementary for a longer length of time, characterized by the Persistent Group-A, will not yield a

significant decrease in variance of scores, when compared to Transitional Group-B, and Transient Group-C, as measured by R-CBM scores.

Test one.

Table 41

F test Two-Sample for Variance – Group-A and Group-B

	Persistent Group-A	*Transitional Group-B*
Mean	17.421	20.291
Variance	329.169	161.085
Observations	38	24
d.f.	37	23
F	2.043	
P (F<=f) one-tail	0.036	
F Critical one-tail	1.925	

Comparison of Persistent Group-A, AIMSweb R-CBM scores, to Transitional Group-B AIMSweb R-CBM scores, yielded an *F* test value of 2.04. Comparison to the critical value of 1.92 does allow rejection of the null hypothesis. Therefore, Transitional Group-B did provide a significant decrease in variance, at a 95% confidence level, when compared to Persistent Group-A, and therefore alternative hypothesis was supported.

Test two.

Table 42

F test Two-Sample for Variance Group-B and Group-C Test 2

	B Decrease	*C Decrease*
Mean	20.29166667	14.48485
Variance	161.0851449	145.4451
Observations	24	33
d.f.	23	32
F	1.107532476	
P (F<=f) one-tail	0.388342328	
F Critical one-tail	1.873476071	

Comparison of Transitional Group-B AIMSweb R-CBM scores, to Transient Group-C AIMSweb R-CBM scores, yielded an *F* test value of 1.10. Comparison to the critical value of 1.87 does not allow rejection of the null hypothesis. Transitional Group-B did not provide a significant decrease in variance of test scores at a 95% confidence level when compared to Transient Group-C, and therefore the alternate hypothesis was not supported.

Test three.

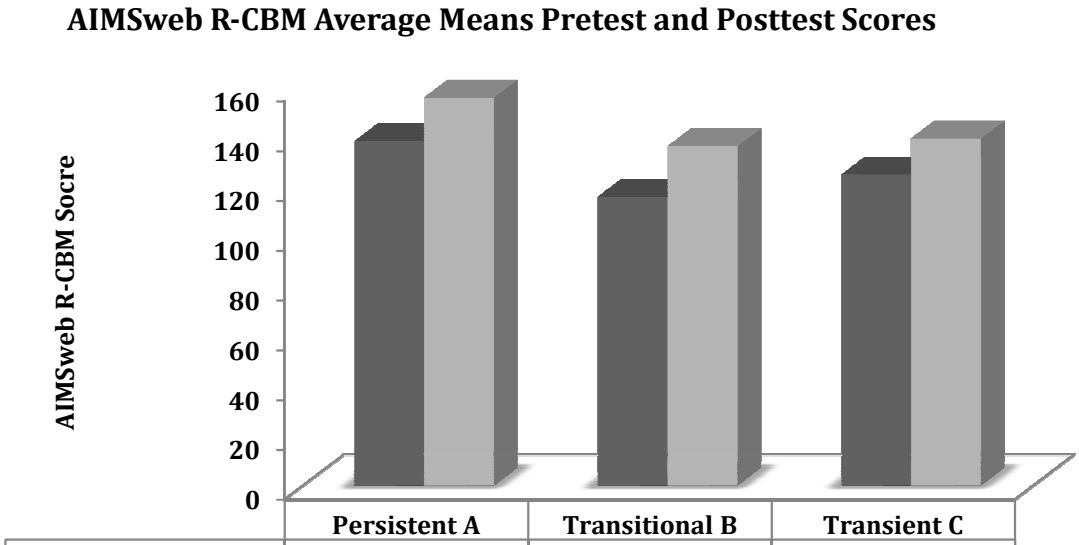
Table 43

F test Two-Sample for Variance Group-A and Group-C Test 3

	Persistent Group-A	*Transient Group-C*
Mean	17.42105263	14.48484848
Variance	329.1692745	145.4450758
Observations	38	33
d.f.	37	32
F	2.263186105	
P (F<=f) one-tail	0.010350302	
F Critical one-tail	1.779315496	

Comparison of Persistent Group-A, AIMSweb R-CBM scores, to Transient Group-C AIMSweb R-CBM scores, yielded an *F* test value of 2.26. Comparison to the critical value of 1.77 does allow rejection of the null hypothesis. Therefore, Transient Group-C did provide a significant decrease in variance, at a 95% confidence level, when compared to Persistent Group-A, and therefore the alternate hypothesis was supported.

Descriptive data and hypothesis 2 analysis. Descriptive data for decreases in variance is consistent with hypothesis testing. Persistent Group-A yielded variance of 329.16, while Transitional Group-B yielded a variance of 161.08, and Transient Group-C yielded a variance of 145.44.



	Persistent A	Transitional B	Transient C
RCBM Pretest-Fall	138.45	116.13	124.97
RCBM Posttest-Spring	155.87	136.42	139.45

Figure 4. AIMSweb R-CBM Average Means Pretest and Posttest Scores

Analysis of hypothesis 3. Three tests were performed on R-CBM Fluency assessment data of the sample populations of fifth graders for the school year 2012. Each mobility group, A, B and C was tested for mean score growth and compared to each other. These tests are represented in tables 44 through 46.

Null hypothesis 3. H_O: Students attending Blitz sessions at Lakeview Elementary for a longer length of time, characterized by the Persistent Group-A, will not yield an increase in achievement in scores, as measured by AIMSweb R-CBM scores.

Test one.

Comparison of Persistent Group-A, AIMSweb R-CBM scores, to Transitional Group-B AIMSweb R-CBM scores, yielded a z-test value of -0.73. Comparison to the critical value of 1.96 does not allow rejection of the null hypothesis**.**

Table 30

z-test Two-Sample for Means – Group-A and Group-B

	Persistent Group-A	*Transitional Group-B*
Mean	17.42105263	20.29166667
Known Variance	329.1693	161.0851
Observations	38	24
Hypothesized Mean Difference	0	
z	-0.732113017	
P (Z<=z) two-tail	0.464099589	
z Critical two-tail	1.959963985	

Therefore, Persistent Group-A did not provide a significant decrease in variance, at a 95% confidence level, when compared to Transitional Group-B, and therefore the alternate hypothesis was not supported.

Test two.

Table 31

z-test Two-Sample for Means Group-B and Group-C

	Transitional Group-B	*Transient Group-C*
Mean	20.29166667	14.48484848
Known Variance	161.0851	145.4451
Observations	24	33
Hypothesized Mean Difference	0	
z	1.741403361	
P (Z<=z) two-tail	0.081612899	
z Critical two-tail	1.959963985	

Comparison of Transitional Group-B, AIMSweb R-CBM scores, to Transient Group-C AIMSweb R-CBM scores, yielded a *z*-test value of 1.74. Comparison to the critical value of 1.96 does not allow rejection of the null hypothesis. Therefore, Transitional Group-B did not provide a significant decrease in variance, at a 95%

confidence level, when compared to Transient Group-C, and therefore the alternate hypothesis was not supported.

Test three

Table 32

z-test Two-Sample for Means Group–A and Group-C

	Persistent Group-A	*Transient Group-C*
Mean	17.42105263	14.48484848
Known Variance	329.1693	145.4451
Observations	38	33
Hypothesized Mean Difference	0	
z	0.812179745	
P (Z<=z) two-tail	0.4166885	
z Critical two-tail	1.959963985	

Comparison of Persistent Group-A, AIMSweb R-CBM scores, to Transient Group-C AIMSweb R-CBM scores, yielded a *z*-test value of .81. Comparison to the critical value of 1.96 does not allow rejection of the null hypothesis. Therefore, Persistent Group-A did not provide a significant decrease in variance, at a 95% confidence level, when compared to Transient Group-C, and therefore the alternate hypothesis was not supported.

Model 3 Hypothesis Testing Results

The Primary Investigator's third model focused on analysis of MAP data collected during the 2010-2012 school year and hypothesis statements 4, 5, and 6. The Primary Investigator created model 3, which focused on analysis of communication arts MAP data collected during the 2009-2010, 2010-2011, and 2011-2012 school years (while participants were in grades 3, 4, and 5).

Analysis for hypothesis 4. PPMCC tests were performed on MAP assessment data of the sample populations of fifth graders for the school years 2010 through 2012 to test for correlations to FRLS.

Null hypothesis 4. H_O: For FRPL status, there is no relationship between mobility status, characterized by samples of the Persistent Group-A to the Transitional Group-B and the Transient Group-C, and achievement in the 2011-2012 population at this elementary school, as measured by MAP scores.

Analysis for hypothesis 4 tests for MAP assessments 2010-2012. Three tests were performed on MAP assessment data for the school years 2010 through 2012. Each mobility group, A, B and C were compared to lunch status of free and reduced or pay and are represented in Tables 47 through 49.

Test one.

Table 33

PPMCC Lunch Status Persistent Group-A

Lunch status: FRPL & Pay	Correlation-r	PPMCC Critical Value	HO: P=0
2010	0.36	±.30	Reject
2011	0.46	±0.30	Reject
2012	0.37	±0.33	Reject

Students in Group-A yielded a significant mild to moderate positive correlation score of 0.36 in 2010, a higher, significant moderate positive correlation score of 0.46 in 2011, and then a lower, significant mild to moderate positive correlation score of 0.37 in 2012.

For these results to be considered representation of a relationship that is not due to chance, the PPMCC Index was referenced (Bluman, 2009, p. 791). MAP scores from

2010 from Group-A yielded an *R*-value of .36 with a critical *R*-value range of ±0.30. The null hypothesis, H_O: r=0, was rejected. MAP scores from 2011 from Group-A yielded an *R*-value of 0.46 with a PPMCC critical *R*-value range of ±0.30. The null hypothesis, H_O: r=0 was rejected. MAP scores from 2012 from Persistent Group-A yielded an *R*-value of 0.37 with a PPMCC critical *R*-value range of ±0.33. The null hypothesis, H_O: r=0 was rejected.

For FRPL status, while there not a significant relationship between mobility status and achievement in the fifth grade 2011-2012 population at Lakeview Elementary, as measured by MAP scores for Persistent Group-A, there was a significant mild to moderate correlation that was not due to chance, according to Pearson's Product Moment Coefficient Critical Value Index. Therefore the null hypothesis was not rejected for Persistent Group-A, hypothesis 4. There was a relationship between mobility status and FRLS, as measured by 2010 through 2012 MAP scores.

Test two.

Table 34

PPMCC Lunch Status Transitional Group-B

Lunch status: FRPL & Pay	Correlation-r	PPMCC Critical Value	HO: P=0
2010	0.18	±0.38	Do not reject
2011	0.22	±0.38	Do not reject
2012	0.19	±0.43	Do not reject

Students in Transitional Group-B yielded a correlation score of 0.18 in 2010 with a PPMCC critical *R*-value range of ±0.38, a correlation score of 0.22 in 2011, with a PPMCC critical *R*-value range of ±0.38, and a correlation score of 0.19 with a PPMCC

critical *R*-value range of ±-0.43. These correlation *R*-value scores do not fall outside the two-tailed critical ranges. For each case, the null hypothesis, HO: r=0 was not rejected. For FRPL status, Transitional Group-B, there is not a relationship between mobility status and FRLS, as measured by MAP scores and achievement. Therefore, the null hypothesis was rejected for Transitional Group-B, hypothesis 4.

Test three.

Table 35

PPMCC Lunch Status Transient Group-C

Lunch status: FRPL and Pay	Correlation-r	PPMCC Critical Value	HO: P=0
2011	0.30	±0.43	Do not reject
2012	0.38	±0.43	Do not reject

Students in Transient Group-C yielded a correlation score of 0.30 during 2011, with a PPMCC critical *R*-value range of ±0.43 and a higher correlation 0.38 in 2012, also with a critical *R*-value range of ±0.43. There were no scores for Transient Group-C during 2010 since they were not in attendance at Lakeview Elementary during this time.

These correlation *R*-value scores did not fall within the two-tailed critical ranges of ±0.43. For each case, the null hypothesis, HO: r=0 was not rejected. Therefore, for FRPL status, there is not a relationship between mobility status and FRLS, as measured by 2011 through 2012 MAP scores, in the fifth grade 2011-2012 Transient population at Lakeview Elementary that could be considered not due to chance. Therefore, the null hypothesis was rejected for Transient Group-C, hypothesis 4.

Descriptive data and hypothesis 4 analysis. According to statistical tests, Persistent Group-A did not reject the null hypothesis. Therefore the data suggested there

was a positive relationship with FRPL status to achievement scores for all three MAP years, 2010 through 2012.

Analysis for hypothesis 5. PPMCC tests were performed on MAP assessment data of the sample populations of fifth graders for the school years 2010 through 2012 to test for correlations to AA ethnicity.

Null hypothesis 5. HO: For AA, there is no relationship between mobility statuses characterized by samples of the Persistent population to the Transitional Group-B and the Transient Group-C, and achievement in the 2011-2012 population at this elementary school, as measured by MAP scores.

Analysis for hypothesis 5 tests for MAP (Missouri Assessment Program) 2010 through 2012. Three tests were performed on the MAP data for the school years 2010 through 2012. Each mobility group, A, B and C was compared to the ethnicity status of AA and are represented in tables 50 through 52.

Test one.

Table 50

PPMCC AA Ethnicity and Other Persistent Group-A

AA Ethnicity and other	Correlation-r	PPMCC Critical Value	HO: P=0
2010	0.23	±0.36	Do not reject
2011	-0.09	±0.46	Do not reject
2012	0.15	±0.37	Do not reject

Students in Persistent Group-A yielded a weak correlation score of 0.23 in 2010 with a PPMCC critical *R*-value range of ±0.36. The correlation score reduced to a slight correlation of -0.09 in 2011 with a PPMCC critical *R*-value range of ±0.46 and then increased to a weak correlation-r of 0.15 in 2012 with a PPMCC critical *R*-value range of

±0.37. All three sets of scores did not fall outside the critical range. Therefore, it could not be concluded that these scores were not due to chance. Any relationships are weak and observable only. There was no significant relationship between any ethnicity and mobility status.

Test two.

Table 51

PPMCC AA Ethnicity and Other Transitional Group-B

AA Ethnicity and other	Correlation-r	PPMCC Critical Value	HO: P=0
2010	0.36	±0.38	Do not reject
2011	0.29	±0.38	Do not reject
2012	0.44	±0.41	Reject

Students in Transitional Group-B yielded a mild to moderate correlation score of .36 in 2010 with a PPMCC critical *R*-value range of ±0.38. The correlation to free and reduced lunch status decreased to a mild correlation-r of 0.29 in 2011 with a PPMCC *R*-value range of ±0.38 and then increased to a moderate correlation of 0.44 in 2012 with a PPMCC *R*-value range of ±0.41. The 2010 and 2011 correlation scores did not fall within the critical value range and therefore could not be considered not due to chance. However, the 2012 correlation score did fall within the critical value range and that score was considered not due to chance at a 95% confidence level.

For AA subgroup status, there was not a significant relationship between mobility status and AA ethnicity, as measured by 2010 through 2011 MAP scores in fifth grade 2010 and the 2011 Transitional population at Lakeview Elementary. The null hypothesis was rejected for those two years. However, for the 2012 year, the *R*-value did fall within the critical value range, and therefore, those scores were considered not due to chance.

Therefore, for AA subgroups status, there was a significant mild relationship between mobility status and achievement in the fifth grade 2012 population at Lakeview Elementary, as measured by MAP scores for Transitional Group-B.

Test three.

Table 52

PPMCC AA Ethnicity and Other Transient Group-C

AA Ethnicity and other	Correlation-r	PPMCC Critical Value	HO: P=0
2011	0.48	±0.41	Reject
2012	0.35	±0.41	Do not reject

Students in Transient Group-C yielded a moderate correlation score of 0.48 in 2011 with a PPMCC *R*-value range of ±0.41. This score fell within the critical value range and therefore was considered not due to chance. The correlation to AA ethnicity and achievement, as measured by MAP scores decreased to a mild to moderate correlation of 0.35 in 2012 with a PPMCCC *R*-value range of ±0.41 which did not fall within the critical range and therefore could not be considered not due to chance.

For AA subgroup status, there was relationship between mobility status and achievement in the fifth grade 2011 Transient population at Lakeview Elementary, as measured by MAP scores for Transient Group-C. The relationship was a moderate average correlation of 0.42 to AA ethnicity status for Transient Group-C. Null hypothesis 5 was not rejected for Transient Group-C's 2011 MAP scores. For AA subgroup status, there was not a significant relationship between mobility status and achievement in the fifth grade Transient 2012 population at Lakeview Elementary, as measured by MAP scores for Transient Group-C. Null hypothesis 5 was rejected for Transient Group-C's 2012 MAP scores.

Descriptive data and hypothesis 5 analysis. According to statistical tests, Persistent Group-A did not have a statistical correlation to African American (AA) Ethnicity status and achievement for the 2010 through 2012 MAP, and therefore rejected null hypothesis 5. However, Transitional Group-B and Transient Group-C did not reject the null hypothesis, for at least one of the years during the three 2010 through 2012 MAP years examined.

Group-B (Transitional mobility population) scored a positive *r*-coefficient value of 0.44, for the 2012 MAP year, which fell within the PPMCC *R*-value critical range of ±0.41. This suggested a positive correlation that was not considered due to chance. Group-C (Transient mobility population) scored a positive *r*-coefficient value of 0.48, for the 2011 MAP year, which also fell within the PPMCC *R*-value critical range of ±0.41. This suggested moderate positive correlations that were not considered due to chance for those two mobility populations during those two MAP years.

Null hypothesis 6. HO: For Caucasian subgroup status, there is no relationship between mobility status, characterized by samples of the Persistent Group-A to the Transitional Group-B and the Transient Group-C, and achievement in the 2011-2012 population at this elementary school, as measured by MAP scores.

Analysis for hypothesis 6 tests for MAP (Missouri Assessment Program) 2010-2012. Three tests were performed on the MAP data for the school years 2010 through 2012. Each mobility group, Persistent Group-A, Transitional Group-B, and Transient Group-C were compared to the ethnicity status of C (Caucasian) and are represented in tables 53 through 55.

Test one.

Table 36

PPMCC Caucasian Ethnicity and Other Persistent Group-A

C Ethnicity and other	Correlation-r	PPMCC Critical Value	HO: P=0
2010	-0.20	±0.30	Do not reject
2011	0.06	±0.30	Do not reject
2012	0.00	±0.31	Do not reject

Students in Persistent Group-A yielded a mild correlation score of -0.20 in 2010 with a PPMCC critical *R*-value range of ±0.30, a higher mild correlation score of 0.05 in 2011 with a PPMCC critical *R*-value range of ±0.03, and then again a lower correlation score of 0.00 in 2012 with a PPMCC critical *R*-value range of ±0.31. All three sets of scores did not fall outside the critical range. The null hypothesis was not rejected, in each year. Therefore, it could not be concluded that these scores were not due to chance.

For C subgroup status, there was not a relationship between mobility status and C ethnicity, as measured by 2010 through 2012 MAP scores, in the fifth grade 2011-2012 Persistent population at Lakeview Elementary. Therefore the null hypothesis was rejected for Persistent Group-A, hypothesis 6.

Test two.

Table 37

PPMCC Caucasian Ethnicity and Other Transitional Group-B

C Ethnicity and other	Correlation-r	PPMCC Critical Value	HO: P=0
2010	-0.44	±0.38	Reject
2011	-0.55	±0.38	Reject
2012	-0.60	±0.41	Reject

Students in Transitional Group-B yielded a moderate correlation score of 0-.44 in 2010 with a PPMCC critical *R*-value range of ±0.38. The correlation to Caucasian ethnicity status decreased to a larger correlation of -0.55 in 2011 with a PPMCC critical *R*-value range of± 0.38 and then increased again to a larger correlation of -0.60 in 2012 with a PPMCC critical *R*-value range of ±0.41. Transitional Group-B had the highest correlation to scores when compared to Groups A, and C. This was considered a moderate correlation (Bluman, 2009, p. 539).

For C ethnicity status, while there not a significant relationship between mobility status and achievement in the fifth grade 2011-2012 population at Lakeview Elementary, as measured by MAP scores for Transitional Group-B, there was a moderate correlation that was not due to chance according to Pearson's Product Moment Coefficient Critical Value Index.

Therefore the null hypothesis was not rejected for Transitional Group-B, hypothesis 6. There was a relationship between mobility status and AA ethnicity status, as measured by 2010 through 2012 MAP scores for the Transitional population, Transitional Group-B. The relationship was moderate correlation of achievement to Caucasian ethnicity status for Transitional Group-B.

Test three.

Table 38

PPMCC Caucasian Ethnicity and Other Transient Group-C

C Ethnicity and other	Correlation-r	PPMCC Critical Value	HO: P=0
2011	-0.35	±0.41	Do not Reject
2012	-0.30	±0.41	Do not reject

Students in Transient Group-C yielded a moderate correlation score of -0.34 in 2011 with a PPMCC *R*-value range of ±0.41. The correlation to Caucasian ethnicity status increased slightly to a smaller moderate correlation of -.03 in 2012 with a PPMCC *R*-value range of ±0.41. Transient Group-C yielded an average moderate correlation of -0.33.

For Caucasian subgroup status, there was not a significant relationship between mobility status and achievement in the fifth grade 2011-2012 populations at Lakeview Elementary MAP scores for Transient Group-C, which can be considered not due to chance. For C subgroup status, there was not a relationship between mobility status and C ethnicity, as measured by 2010 through 2012 MAP scores, in the fifth grade 2011-2012 Persistent population at Lakeview Elementary. Therefore the null hypothesis was rejected for Transient Group-C, hypothesis 6.

Descriptive data and hypothesis 4, 5, and 6 analysis. Descriptive statistics for each MAP year for all three groups ranked in order of the time they entered Lakeview Elementary. Overall mean scores ranked in order of lowest to highest, with the Persistent group who scored the highest, the Transitional group who scored in the mid-line, and the Transient group who scored the lowest.

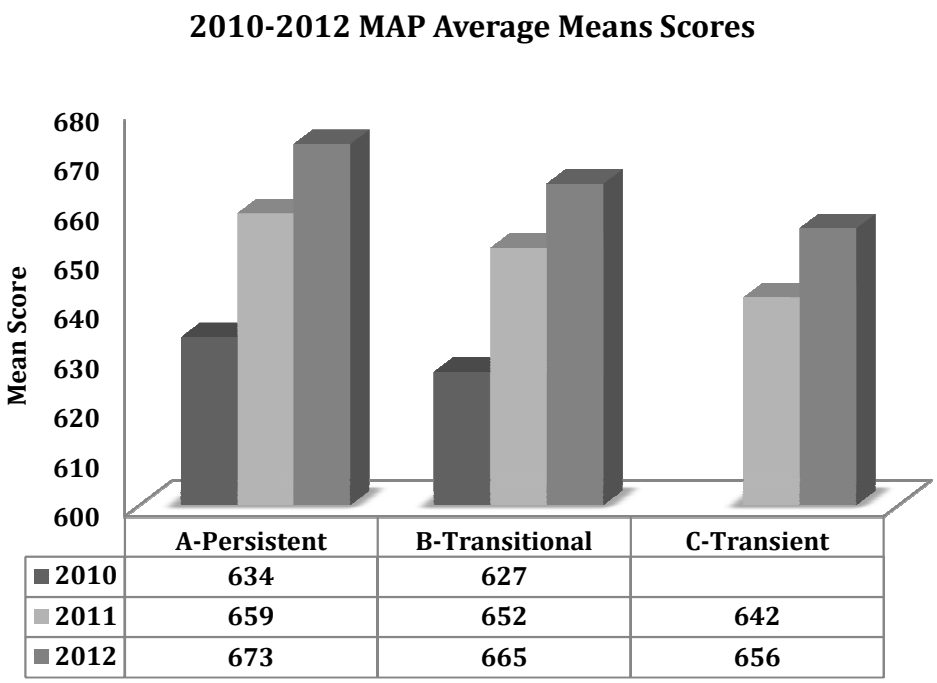


Figure 5. 2010 - 2012 MAP Average Mean Scores

Model 4 Hypothesis Testing Results

The fourth model focused on analysis of Study Island assessment data collected during the 2011-2012 school year and analyzed hypothesis 7.

Analysis for hypothesis 7. This assessment was given to all students in who were in grade 5, during the 2011-2012 school year. *Z*-tests for difference in means of Study Island scores were performed, which tested hypothesis 7.

Null hypothesis 7.

Students attending Lakeview Elementary's Blitz program for a longer length of time, characterized by comparison of the Persistent Group-A to the Transitional Group-B, and the Transient Group-C, will not yield a larger growth rate as measured by Study Island test scores topic two (retell/paraphrase) and topic 4-A (connections) and 4-B (visualizing).

Test results topic Two: retelling/paraphrasing.

Test one.

Table 56

Blitz Topic 2 Retelling/Paraphrasing z-test for Differences in Means Test 1

z-test: Two-Sample for Means

	Persistent Group-A Growth	Transitional Group-B Growth
Mean	-1.264102564	-1.957575758
Known Variance	373.482888	144.7547645
Observations	39	33
Hypothesized Mean Difference	0	
z	0.185583956	
P (Z<=z) two-tail	0.852771036	
z Critical two-tail	1.959963985	

Comparison of Persistent Group-A to Transient Group-C yielded a *z*-test value of 0.18. Comparison to the critical value of 1.96 does not allow rejection of the null hypothesis. Therefore, even though Persistent Group-A provided an observable larger growth between pretest and posttest, the amount of growth was not significantly larger than that exhibited by Transitional Group-B.

Test two.

Table 39.

Blitz Topic 2 Retelling/Paraphrasing z-test for Differences in Means Test 2

z-test: Two-Sample for Means

Table	Transitional Group-B Growth	Transient Group-C Growth
Mean	-1.957	-2.079
Known Variance	198.383	144.754
Observations	33	24
Hypothesized Mean Difference	0	
z	0.035	
P (Z<=z) two-tail	0.972	
z Critical two-tail	1.959	

Comparison of Transitional Group-B to Transient Group-C yielded a *z*-test value of 0.04. Comparison to the critical value of 1.96 does not allow rejection of the null hypothesis. Therefore, even though Transitional Group-B provided an observable larger growth between pretest and posttest, the amount of growth was not significantly larger than that exhibited by Transient Group-C.

Test three.

Table 40

Blitz Topic 2-Test 3-z-test for Difference in Means Test 3

z-test: Two-Sample for Means

	Persistent Group-A Growth	*Transient Group-C Growth*
Mean	-1.264	-1.957
Known Variance	373.482	198.383
Observations	39	33
Hypothesized Mean Difference	0	
z	0.175	
P (Z<=z) two-tail	0.860	
z Critical two-tail	1.959	

Comparison of Persistent Group-A to Transient Group-C yielded a *z*-test value of .18. Comparison to the critical value of 1.96 does not allow rejection of the null hypothesis. Therefore, even though Persistent Group-A provided an observable larger growth between pretest and posttest, the amount of growth was not significantly larger than that exhibited by Transient Group-C.

Test results topic 4-A: connections.

Test one.

Table 41

Blitz Topic 4-A-Test 1-z-test for Difference in Means Test 1

z-test: Two-Sample for Means

	Transitional Group-B Growth	Persistent Group-A Growth
Mean	6.676	3.021
Known Variance	693.505	563.505
Observations	25	33
Hypothesized Mean Difference	0	
z	0.545	
P (Z<=z) two-tail	0.585	
z Critical two-tail	1.959	

Comparison of Transitional Group-B to Persistent Group-A yielded a *z*-test value of 0.54. Comparison to the critical value of 1.96 does not allow rejection of the null hypothesis. Therefore, even though Transitional Group-B provided an observable larger growth between pretest and posttest, the amount of growth was not significantly larger than that exhibited by Persistent Group-A.

Test two.

Comparison of Transitional Group-B to Transient Group-C yielded a *z*-test value of .53 (Table 60). Comparison to the critical value of 1.96 does not allow rejection of the null hypothesis. Therefore, even though Transitional Group-B provided an observable larger growth between pretest and posttest, the amount of growth was not significantly larger than that exhibited by Transient Group-C.

Table 60

Blitz Topic 4-A-Test 2-z-test for Difference in Means Test 2

z-test: Two-Sample for Means		
	Transitional Group-B Growth	Transient Group-C Growth
Mean	6.676	2.982
Known Variance	693.505	576.951
Observations	25	28
Hypothesized Mean Difference	0	
z	0.531	
P (Z<=z) two-tail	0.595	
z Critical two-tail	1.959	

Test three.

Table 61

Blitz Topic 4-A-Test 3-z-Test for Difference in Means Test 3

z-test: Two-Sample for Means		
	Transient Group-C	*Persistent Group-A*
Mean	2.982	3.021
Known Variance	576.951	563.505
Observations	28	33
Hypothesized Mean Difference	0	
z	-0.006	
P (Z<=z) two-tail	0.994	
z Critical two-tail	1.959	

Comparison of Persistent Group-A to Transient Group-C yielded a *z*-test value of -0. Comparison to the critical value of 1.96 does not allow rejection of the null hypothesis. Therefore, even though Persistent Group-A provided an observable larger growth between pretest and posttest, the amount of growth was not significantly larger than that exhibited by Transient Group-C.

Test results topic Four-B: visualizing.

Test one.

Table 62

Blitz Topic 4-B-Test 1-z-test for Difference in Means Test 1

z-test: Two-Sample for Means

	Transitional Group-B Growth	*Persistent Group-A Growth*
Mean	1.34	7.344
Known Variance	414.795	373.622
Observations	25	34
Hypothesized Mean Difference	0	
z	-1.143	
P (Z<=z) one-tail	0.126	
z Critical one-tail	1.644	
P (Z<=z) two-tail	0.252	
z Critical two-tail	1.959	

Comparison of Persistent Group-A to Transitional Group-B yielded a *z*-test value of -1.14. Comparison to the critical value of 1.96 does not allow rejection of the null hypothesis. Therefore, even though Persistent Group-A provided an observable larger growth between pretest and posttest, the amount of growth was not significantly larger than that exhibited by Transitional Group-B.

Test two.

Comparison of Persistent Group-A to Transient Group-C yielded a *z*-test value of 1.97 (Table 63). Comparison to the critical value of 1.96 does allow rejection of the null hypothesis. Therefore, the Transient Group-C growth of 13.08 between pretests and posttests was significantly larger than the growth of 1.34 exhibited by Transitional Group-B.

Table 42

Blitz Topic 4-B-Test 2-z-test for Difference in Means Test 2

z-test: Two-Sample for Means

	Transient Group-C Growth	*Transitional Group-B Growth*
Mean	13.089	1.34
Known Variance	521.997	414.797
Observations	28	25
Hypothesized Mean Difference	0	
z	1.979	
P (Z<=z) one-tail	0.023	
z Critical one-tail	1.644	
P (Z<=z) two-tail	0.047	
Z Critical two-tail	1.959	

Test three.

Table 43

Blitz Topic 4-B-Test 3-z-test for Difference in Means Test 3

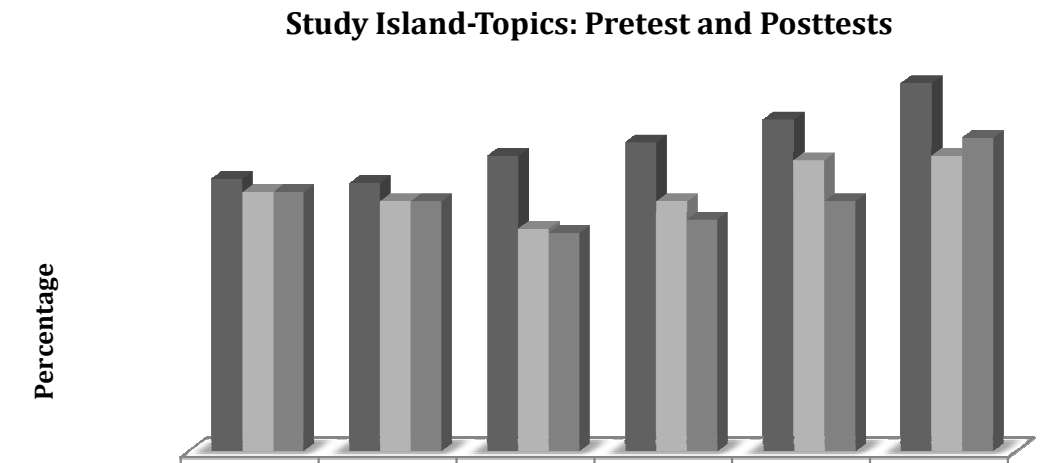
z-test: Two-Sample for Means

	Transient Group-C Growth	*Persistent Group-A Growth*
Mean	13.089	7.344
Known Variance	521.997	373.622
Observations	28	34
Hypothesized Mean Difference	0	
z	1.055	
P (Z<=z) one-tail	0.145	
z Critical one-tail	1.644	
P (Z<=z) two-tail	0.291	
z Critical two-tail	1.959	

Comparison of Persistent Group-A to Transient Group-C yielded a *z*-test value of 1.06. Comparison to the critical value of 1.96 does not allow rejection of the null

hypothesis. Therefore, even though Transient Group-C provided an observable larger growth between pretest and posttest, the amount of growth was not significantly larger than that exhibited by Persistent Group-A.

Descriptive data and hypothesis 7 analysis. Descriptive statistics consistently displayed the Persistent group of students as the students who scored the highest on all pretests and posttests. However, Group B and C scored similar in pretests and posttests except for topic 4-B, visualize. Students in the Transient mobility group scored higher on their posttest than the Transitional mobility group.



	Retell-Pre	Retell-Post	Connect-Pre	Connect-Post	Visualize-Pre	Visualize-Post
A-Persistent	60	59	65	68	73	81
B-Transitional	57	55	49	55	64	65
C-Transient	57	55	48	51	55	69

Figure 6. Study Island-Topics Pretest and Posttest

There were two separate topics tested within this data model. The first model tested pre- and posttest scores on story retell and paraphrasing. This assessment was one assessment with 14 questions. The second topic was Blitz topics 4-A, which was

connections and 4-B, which was visualizing. The two topics in session four were taught during the same rotation but had two separate sets of pre- and posttest for analysis. The first test in this Blitz model had six questions and the second test had six questions.

Hypothesis 7 did not allow for rejection of the null hypothesis in eight out of nine *z*-tests looking for significant growth for students who were in Groups B and C and compared against Persistent Group-A. Topic 4-B (visualizing) did allow for the null hypothesis to be rejected. In this particular test, Transient Group-C did show a significant growth when compared to Persistent Group-A, allowing for the alternative hypothesis to be accepted in this particular test. Overall, the Study Island assessment did not show growth as it did in the other data models.

Conclusion Statement

Chapter 4 briefly explained the investigator's problem statement and re-stated null hypotheses 1 through 7. The investigator discussed the results of hypothesis test results for data models 1 through 4, which included hypothesis 1 through 7. Statistical and descriptive statistic results were explained and illustrated in Tables 37 through 64 and Figures 3 through 6, followed by a conclusion statement, which summarized Chapter 4.

Chapter Five: Discussion, Implications, and Recommendations

The research rationale that guided the work of this dissertation was that transiency became a prominent and noticeable trend in this large elementary school. This trend created an achievement gap for mobile students when compared to the Persistent educational population. Declining scores created a need for change in classroom instruction, which included teacher practice and parental involvement. Research suggested that student mobility adversely affected student achievement.

The purpose of this study was to determine outcomes of student school success resulting from implementation of a supplemental reading program in a large Midwestern Elementary school. Data sources for measurement of student school success included four secondary sources related to achievement, as well as research-based measures of use of best practices. The research purpose was to determine whether the efforts put forth in the implementation of the supplementary Blitz model developed positively affected student achievement. The Blitz program, which focused on differentiated direct instruction in small, on-level groups had not been formally evaluated as to how well it met students' continuously changing needs at Lakeview Elementary. Few research studies addressed issues that affected transient populations in schools that are transferrable to other transient populations for school administrators to evaluate. Therefore, this study gave evidence that guided Lakeview Elementary administrators in instructional decision making for the following years in their transient elementary school. Administrators could then determine how well the Blitz program model increased achievement for students in three mobility groups: Persistent, Transitional, and Transient,

then make informed decisions that allowed for adjustments and enhancements for their future instructional practice.

Review of Methodology

In order to determine the effects of student school success, the first step in data analysis was to determine if students who attended the Blitz program longer increased achievement more than students who attended the program less. After establishing specific mobility groups based on the length of time students participated in the program, data was compared through descriptive statistics, followed by quantitative statistics, which tested seven hypothesis statements. In order to offer a methodology that measures growth from pre- to posttests through comparisons of change from differing mobility group's *z*-tests for difference in means, *F* tests for decreases in variance, and Pearson's Product Moment Correlation Coefficient studies were utilized. A combination of data, which included four different data sets Developmental Reading Assessments (DRA), AIMSweb R-CBM fluency, and Study Island assessment data were measured for decreases in variance and increases in achievement between mobility groups to determine if students who attended the program longer were closing the achievement gap through narrowing their achievement score ranges. Correlation studies regarding achievement and its correlation to low socio-economic status and ethnic status had a positive or negative relationship with achievement, as measured by three years of Missouri Assessment Scores. Data used in the methodology was consistent with assessments used district-wide.

In order to determine differences and likeness of the case study school and with a school in the Department of Defense, another diverse high mobility school, the primary

investigator compared nationally normed data, TerraNova, which yielded descriptive data.

Additionally, historical data were collected for descriptive purposes. In order to determine if the Blitz program's use of best practices according to research the Primary Investigator described the development and implementation of the supplemental reading model and compared this data to research. This data was also collected to add to the literature foundation.

Model 1 Analysis

Table 44

Hypothesis 1 Analysis

Hypothesis 1		
Students attending Blitz sessions at this elementary school for a longer length of time, characterized by comparison of the Persistent Group-A to the Transitional Group-B and the Transient Group-C, will yield an increase in achievement in scores, as measured by DRA scores.		
Group/Population		Results
A to B	Persistent	Do not reject
B to C	Transitional	Do not reject
C to A	Transient	Reject

Students in Groups A, B, and C began with mean scores that were not reflective of the amount of time they have participated in the Blitz model at Lakeview Elementary. Descriptive data showed that Persistent Group-A did have the highest mean on both pre- and posttests, however, Transitional Group-B had the lowest mean scores, while

Transient Group-C scores were in-between A and B. The same was true for the pre- and posttest variances in scores. Both Groups B and C, when compared to Persistent Group-A, showed a decrease in variance at a 95 % confidence level. Students in both transiency groups decreased their variance in order of the amount of time they were participants in the Blitz reading comprehension model. Students in Transitional Group-B rejected the null hypothesis with an *F* score of 2.04 and a critical value of 1.92, while Transient Group-C rejected the null hypothesis when compared to Persistent Group-A with a higher *F* score of 2.26 and a lower critical value of 1.78. Transient Group-C decreased more in variance, than the Transitional Group-B, however both significant and therefore the needs of each group were met. Furthermore, Lakeview Elementary placed students into groups based on the same data analyzed in this study. The analyzed data suggested students in the least transient mobility group (Persistent Group-A) had appropriate Blitz group placement, which addressed their individual needs by the time they were in grade 4 or 5. By the time these students were in grades 4 and 5, Special School District service needs were already addressed and the appropriate English Language Learner programs were offered to those students requiring these services. The variance of Persistent Group-indicated consistent group scores and therefore needed fewer adjustments in their Blitz group placement. Hypothesis 2 concluded that all population groups' (A, B, and C) needs were met.

All three Transiency Groups, A, B, and C increased mean scores from their pretests to their posttests, although only Transient Group-C showed a statistically significant growth at a 95% confidence level. Descriptive data showed that each groups' pre- and posttest scores went from lowest scores to highest scores dependent upon who

had been a participant in the Blitz program the longest. Those who were in attendance the longest had the highest scores and those who were a participant the least amount of time had the lowest scores, yet increased the most. Accordingly, those who were participants in the middle participant group scored comparatively in the middle of the two groups in accordance to achievement. These results were consistent of five regional studies across five central region states: Louisiana (Engec, 2006), Illinois (Beck & Shoffstall, 2005), the Pacific Northwest (Gruman et al., 2008), rural Pennsylvania (Lesisko & Wright, 2009), and North Carolina (Xu et al., 2009). These studies reported that student-level data scored lower on assessments as their mobility increased.

Model 1 discussion. The DRA scores resulted in an overall averaged increase of 17.67% for the entire group of fifth grade participants. In regards to mobility groups there was a 3.63% increase for the Persistent population an 18.93 % increase for the Transitional population, and a 27.75% for the Transient population. All three population groups increased achievement, while the Transient group's increase was considered significant when compared to the Persistent population. Those in the Persistent group began with the highest scores and the Transient group with the lowest scores, which accounted for realistic growth gains with respect to where each group began. The most Transient group closed the reading level achievement gap by a close deficit of only -2.82%.

Although all students yielded growth on all assessments, the most transient students at Lakeview Elementary showed significant growth when compared to the Persistent population. These students had the lowest scores on average with a DRA score of 4.2 and grew the most. The Persistent population had the highest scores on average

with a DRA of 5.2. While these pretest scores differ in grade level equivalency by one full school year, the posttest scores differed by approximately two months. This is important to note, since DRA scores do not have the same range of scores that represent one full year of growth. For example, first grade students have levels three to 16, second grade has levels 18 to 28, third grade has levels 30 to 38, grade 4 only has level 40, and grade 5 only has level 50.

Data from the case study noted that Transient Group-C had the largest need for growth. According to the tested data, it was concluded that the needs of the most Transient groups were definitely met during their instruction time at Lakeview Elementary. This group had the lowest scores and the furthest to go to meet their individual needs. Those who scored higher than this group, Groups A and B, also had their needs met, because they too showed an increase in achievement, although not considered statistically significant. This may be due to the smaller range of scores that represent one full year of growth or it could be because they did not have as far to go to show improvement toward proficiency. The data also suggested that measuring students according to Transiency status will give better insight as to how students are improving, with respect to growth gains. To only note that the most transient students started with and ended with the lowest achievement scores was misleading. It is also important to note the increase in achievement, to measure the growth factor of each child, or group of children, not holistically across the entire grade level when they have not attended a specific school as long as other children.

Model 2 Analysis

Table 45

Hypothesis 2 Analysis

Hypothesis 2
Students attending Blitz sessions at this elementary school for a longer length of time, characterized by comparison of the Persistent Group-A to the Transitional Group-B and the Transient Group-C, will yield a decrease in variance in scores, as measured by AIMSweb R-CBM scores.

	Group/Population	Results
A to B	Persistent	Reject
B to C	Transitional	Do not reject
C to A	Transient	Reject

Students in Groups A, B, and C began with mean scores that were not reflective of the amount of time they have participated in the Blitz model at Lakeview Elementary. Descriptive data shows that Persistent Group-A did have the highest mean on both pre- and posttests, however, Transitional Group-B had the lowest mean scores, while Transient Group-C scores were in-between A and B. The same was true for the pre- and posttest variances in scores. Both Groups B and C, when compared to Persistent Group-A, showed a significant decrease in variance at a 95 % confidence level. Students in both Transiency groups decreased their variance in order of the amount of time they were participants in the Blitz reading comprehension model. Students in Transitional Group-B rejected the null hypothesis with an *F* score of 2.04 and a critical value of 1.92, while Transient Group-C rejected the null hypothesis when compared to Persistent Group-A

with a higher *F* score of 2.26 and a lower critical value of 1.78. The Transient Group C- decreased more significantly in variance, than the Transitional Group-B, however both were significant and therefore the needs of each group were met. Furthermore, data also suggested that since the least transient students who attended the Blitz reading model program, they were already in appropriate programs that have addressed their needs by the time they were in grade 4 or 5. The variance of this group was more consistent and fewer changes were needed and noted statistically. Hypothesis 2 also concluded that all population Groups' A, B, and C needs were met.

When Transitional Group-B, the Transitional population was compared to Transient Group-C, the Transient population, they did not differ in a decrease variance of R-CBM test scores, whereas, Transitional Group-B and Transient Group-C both yielded a significant decrease in variance, when compared to Persistent Group-A.

Students attending Blitz sessions at Lakeview Elementary for a longer length of time, characterized by the Persistent Group-A, did not yield a significant decrease in variance of scores, when compared to Transitional Group-B, and Transient Group-C, as measured by R-CBM scores, therefore the alternative hypothesis is not rejected, students who attend Blitz sessions for Groups B and C yielded a significant decrease in scores when compared to the Persistent Group-A.

Table 46

Hypothesis 3 Analysis

Hypothesis 3		
Students attending Blitz sessions at this elementary school for a longer length of time, characterized by comparison of the Persistent Group-A to the Transitional Group-B, and the Transient Group-C, will yield a larger growth rate as measured by AIMSweb R-CBM scores.		
	Group/Population	Results
A to B	Persistent	Do not reject
B to C	Transitional	Do not reject
C to A	Transient	Do not reject

All students in mobility Groups A, B, and C resulted in growth rates as measured by AIMSweb R-CBM scores to be considered statistically the same. Each group fell within the critical values for all statistical *z*-tests, therefore it was concluded that were no differences in achievement between each group. No one group had a higher achievement rate than the other. Therefore it was concluded that students in all three Transiency groups improved at similar rates as a result of the program once again meeting the needs of all students in attendance of the Blitz reading comprehension model. It was also concluded that all students are in the appropriate reading level to meet them where they are and continue to show a growth rate similar to others who actually have higher mean scores. Students are compared against themselves from pretest to posttest, as they should be, but also compared by growth rate across the grade level with other students who are performing at a higher level.

Model 2 discussion. AIMSweb R-CBM scores yielded significant decrease in variance when compared to the Persistent group, while also increasing achievement. Fluency scores resulted in a 12.58% increase for the Persistent population, a 17.47 % increase for the Transitional population, and an 11.58% increase for the Transient population. Each mobility group increased their reading fluency rates consistently when compared to one another yielding an overall 13.51% growth for the grade level. This is the hoped for result of most educators. All students continued to increase their fluency, which according to previously cited research correlates to improved comprehension.

When students in the two more Transient mobility groups were compared to the students who have been at Lakeview since preschool through grade 1, they closed their variance of scores gaps significantly. This was a success. Students in these two groups had more room to progress than the Persistent students. When the two most Transient groups' growth differences were compared to one another, they did not differ significantly. However, all student mobility groups increased their fluency rates. When compared statistically there was no significant variance in their amount of increase. This was the hoped for result of most educators. All students continued to increase their fluency, which according to previously cited research correlates to improved comprehension.

Model 3 Analysis

Table 47

Hypothesis 4 Analysis

Hypothesis 4		
	Group/Population	Null Hypothesis Results
A	Persistent Entered K-1	Do not Reject (2010 – 2012)
B	Transitional Entered 2-3	Reject
C	Transient Entered 4-5	Reject

For FRPL (Free and Reduced Lunch Status), there was a relationship between mobility statuses, characterized by samples of the Persistent Group-A to the Transitional Group-B and the Transient Group-C, and achievement in the 2011-2012 population at this elementary school, as measured by MAP scores.

According to statistical tests, Group-A did not reject the null hypothesis. Therefore the data suggested there was a positive relationship with FRPL status and Pay status to achievement scores for all three MAP years, 2010 through 2012. Seventy-two percent of students in Group-A were on FRPL status, while 28% were on pay status. Persistent Group-A also had the highest overall mean score for MAP. Since data suggests that this highest scoring group was moderately related to its lunch status, then free and reduced lunch status in this group does not affect the average scores of this group in a negative way. This must be true because they have the highest mean scores. This goes against researched data. It is noted that poverty has a high negative correlation to achievement scores. Rumberger (2003) stated that one must consider other alternative

reasons for declining achievement as well, such as poverty and family problems. Rumberger continued to share, “In other words, mobile students came from poorer families and had lower academic performance before they were mobile, a finding supported by other studies” (p.3; Nelson et al., 1996). According to data for this hypothesis test, low socio-economic status did not affect Persistent Group-A. This statistical finding for Persistent Group-A, also supported the findings of hypothesis 1, 2, 3, and 4; we are meeting the needs of our lower income students, at least for the students who have participated in the program since grade kindergarten through grade 1. This was supported by a Harvard Educational Review article (McCarthy, 1988), which explained some schools were successful, therefore it was important to note, that not all low-income and poor children were performing poorly. Some poor children performed well in a low-performing school. There were many variables they may or may not apply when evaluating a correlation between academic success and failure.

Transitional Group-B’s averaged scores fell in-between Group-A with the greatest mean and Group-C with the lowest mean, which remains consistent with the statistical test. However, statistically it was difficult to conclude, since this group had a mild positive correlation average of 0.19, which could not be considered due to chance, according to the PPMCC *R*-value critical ranges. Transient Group-C’s averaged scores were the lowest scores of all three groups and statistical tests suggested a mild to moderate positive average correlation of 0.34, however this *r*-coefficient also did not score within the PPMCC *R*-value critical ranges, and therefore these values cannot be concluded that it was not due to chance.

Data suggested that Group-B, the transitional Persistent Group-A and Group-C, the Transient group did not have a relationship with FRLS and achievement scores, as measured by 2010 through 2012 MAP scores. However, Group-A produced a positive *R*-value score of 0.36 for 2010, 0.46 for 2011, and 0.47 for 2012, suggesting a positive relationship to FRLS and achievement, as measured by 2010 through 2012 MAP scores. Null hypothesis 4 was not rejected for Group-A, the Persistent Group-And was rejected for Group-B and Group-C, the Transitional and Transient groups.

Table 48

Hypothesis 5 Analysis

Hypothesis 5
For AA, there was a relationship between mobility statuses characterized by samples of the persistent population to the Transitional Group-B and the Transient Group-C, and achievement in the 2011-2012 population at this elementary school, as measured by MAP scores. Analysis of this model will answer hypothesis question 4, 5, and 6.

	Group/Population	Null Hypothesis Results
A	Persistent Entered K-1	Reject
B	Transitional Entered 2-3	Do not reject (2011)
C	Transient Entered 4-5	Do not reject (2012)

Research suggested that AA subgroups are scoring statistically lower than other subgroups. However, when examining the persistent transient group within this Blitz reading comprehension model at Lakeview Elementary, this was not true. According to research conducted by Wright (1999), published in the *Journal of Educational Research,*

the effect of student mobility on achievement test scores was related to ethnic minority status. However, the Persistent AA students at Lakeview Elementary, did not have a negative effect on scores, as research has previously suggested (Wright, 1999).

Table 49

Hypothesis 6 Analysis

Hypothesis 6		
For Caucasian subgroup status, there was a relationship between mobility statuses, characterized by samples of the Persistent Group-A to the Transitional Group-B and the Transient Group-C, and achievement in the 2011-2012 population at this elementary school, as measured by MAP scores.		
	Group/Population	Null Hypothesis Results
A	Persistent Entered K-1	Reject
B	Transitional Entered 2-3	Do not reject (2010 – 2012)
C	Transient Entered 4-5	Reject

Persistent Group-A has 54% of its population as C (Caucasian) and 46% other ethnicities. Transitional Group-B has 25% of its population and 76 % other ethnicities, and Transient Group-C has 22% of its population as C and 78% other. Both Groups B and Transient Group-C have similar demographic comparisons, while Persistent Group-A does not. Persistent Group-A was more evenly dispersed when comparing Caucasian scores against other ethnicities. Since these tests compare the ethnicities to the scores that they are connected with, that was a non-issue for the persistent mobility population, as to whether their ethnicity was Caucasian, African American, or other.

What was apparent here is that not being Caucasian in Group B had an impact on MAP scores when compared against each other's and how much they correlate to their scores. This is reflective of research and should continue to be carefully examined and researched further.

Table 71

Communication Arts MAP Percentage Proficient or Advanced (3-5 Averages)

2006	2007	2008	2009	2010	2011	2012
53%	44%	44%	41%	44%	40%	38%
Percentage Increase or Decrease (3-5 Averages of Proficient or Advanced)						
N/A	-17%	0%	-7%	7%	-9%	-7%
Net % Difference from 2006						-15%
Net % Change from 2006						-28%
Net % Change from 2009 through 2012 (Blitz years)						-7%
Overall % Improvement in the decreased percentage with Blitz						75%

The Blitz program began 2008 and continued through 2012, at the time of this case study. Since the Blitz program began, the yearly decrease in scores decreased much less than the previous 2007 average decrease of 17%. The average decrease since Blitz began was -7%. This was an overall improvement of 75% (Table 71). This was interesting when there was ± 0% increase in poverty, according to FRLS, from 2006-2007 (prior to Blitz), yet there was a 26%, from 2008 through 2012 (during Blitz). Even though poverty levels continued to increase dramatically, the average decrease in scores improved dramatically.

This goes against what research had previously suggested regarding correlations in scores. The statistical tests in this case study suggested that students who were on FRLS were not correlated to their scores from Persistent Group-A, the students who have been in attendance since kindergarten and/or grade 1.

According to the analysis of all seven hypotheses, regarding testing of achievement scores, decreases in variances, and correlations to ethnicity status as it related to the success and validity of the Blitz reading model program at Lakeview Elementary, the program was successful. The data represented in this case study suggests that students on all learning levels are achieving according to their learning level needs. Even when compared against other statistically proven reasons for statistically lower achievement, such as ethnicity and lower SES (socio-economic status), this program demonstrated successful. When tests are comparative among student learning levels, such as DRA and R-CBM scores, all students are showing an increase in overall mean scores.

Model 3 discussion. Seventy-two percent of students in the Persistent population were on FRLS status, while 28% were on pay status. Map scores correlated to FRLS when applied to the Persistent group only. Persistent students also had the highest overall mean score for MAP. Since data suggested that this highest scoring group was related to its lunch status, then free and reduced lunch status in this group did not affect the average scores of this group in a negative way. The longer students were enrolled in the case study school the less correlation their scores had to their SES status, which happened to be the highest scoring mobility group. Research suggested that AA subgroups scored statistically lower than other subgroups. However, when examining the Persistent group

within this Blitz reading comprehension model at Lakeview Elementary, this was not true. For Caucasian students in the Transitional groups there was a strong negative correlation to their Caucasian ethnicity for all three MAP years analyzed. What was apparent here is that non-Caucasian students in the Transitional group had a negative impact on MAP scores. This was reflective of research and should continue to be carefully examined and researched further.

According to research conducted by Wright (1999), published in the *Journal of Educational Research*, the effect of student mobility on achievement test scores was related to ethnic minority status. However, the ethnicity of the Persistent AA students at Lakeview Elementary did not have a negative effect on scores as research has previously suggested it would (Wright, 1999).

Model 4 Discussion

Table 72

Hypothesis 7 Analysis

Hypothesis 7				
Students attending Lakeview Elementary for a longer length of time will yield a larger growth rate as measured by Study Island scores.				
Group/Population		Topic 2 (retell/paraphrase) Null Hypothesis results	Topic 4A (connections) Null Hypothesis results	Topic 4B (visualizing) Null Hypothesis results
Persistent	Persistent Entered K-1 Transitional	Do not reject	Do not reject	Do not reject
Transitional	Entered 2-3 Transient	Do not reject	Do not reject	Reject
Transient	Entered 4-5	Do not reject	Do not reject	Do not reject

The Study Island testing model tested students on grade level material; however, Blitz sessions were for meeting students on their independent reading level. There were no students from any of the mobility groups who scored above 81%. The topic on story retell and paraphrasing yielded a posttest score that was lower than the pretest score in each mobility group. The Study Island model did not appear as valid a measure of achievement as other testing models in the case study program. Overall, the Study Island assessment did not show growth as it did in the other data models. There are several reasons this may have occurred. One reason was that students in each level of instruction are all tested on a proficient level across the board and not necessarily on the level they are being instructed. This was found to be a consistent concern across the nation as well as with Lakeview's standardized scores. While the Study Island tests did compare students across their grade level according the proficient learning levels for the grade level, the testing model did not allow students to be tested on their learning level. This yielded flat scores that did not show growth for students in any of the three mobility groups. While these scores do consistently show increased achievement scores for students who have attended Lakeview Elementary for the longest amount of time, it did not reflect that students who are learning at a lower level are learning less because they did not show significant growth on a standardized grade level assessment. Perhaps if the methodology had measured students' activity time on the study island program and then measured according to the instruction received in the program, the instruction would have matched the testing model. The students who participated in the Study Island pilot assessment program were not tested on what they were specifically taught, which did not allow for accurate data collection and analysis as it applied to growth. This makes it even

clearer that testing students against a national norm may reflect proficiency, or lack thereof, using a one size fits all category

Overall Results

Table 50

All Hypothesis Test Results Table

Hypotheses Results			
Null hypothesis 1: Students attending Blitz sessions at this elementary school for a longer length of time, characterized by the Persistent population will increase achievement.			
2012 DRA Data			
(A) Persistent compared to (B) Transitional	Do not reject		
(B) Transitional compared to (C) Transient	Do not reject		
(A) Persistent compared to (C) Transient	**Reject**		
Null hypothesis 2: Students attending Blitz sessions at this elementary school for a longer length of time, characterized by the Persistent population will decrease variance.			
2012 AIMSWEB Data			
(A) Persistent compared to (B) Transitional	**Reject**		
(B) Transitional compared to (C) Transient	Do not reject		
(A) Persistent compared to (C) Transient	**Reject**		
Null hypothesis 3: Students attending Blitz sessions at this elementary school for a longer length of time, characterized by the Persistent population will increase achievement.			
2012 AIMSWEB Data			
(A) Persistent compared to (B) Transitional	Do not reject		
(B) Transitional compared to (C) Transient	Do not reject		
(A) Persistent compared to (C) Transient	Do not reject		
Null hypothesis 4: There is a relationship between mobility statuses and FRLS			
MAP Data	2010	2011	2012
(A) Persistent compared to (B) Transitional	Do not reject	Do not reject	Do not reject
(B) Transitional compared to (C) Transient	**Reject**	**Reject**	**Reject**
(A) Persistent compared to (C) Transient	N/A	**Reject**	**Reject**

Null hypothesis 5: There is a relationship between mobility statuses and AA Ethnicity			
(A) Persistent compared to (B) Transitional	**Reject**	**Reject**	**Reject**
(B) Transitional compared to (C) Transient	**Reject**	Do not reject	**Reject**
(A) Persistent compared to (C) Transient	**Reject**	**Reject**	Do not reject
Null hypothesis 6: There is a relationship between mobility statuses and AA Ethnicity			
(A) Persistent compared to (B) Transitional	**Reject**	**Reject**	**Reject**
(B) Transitional compared to (C) Transient	Do not reject	Do not reject	Do not reject
(A) Persistent compared to (C) Transient	**Reject**	**Reject**	**Reject**
Null hypothesis 7: Students attending Blitz sessions at this elementary school for a longer length of time, characterized by the Persistent population will increase achievement.			
	Study Island Data Topic 2 and 4		
	Topic 2: Retell/paraphrase	Topic 4A: Visualize	Topic 4B: Connections
(A) Persistent compared to (B) Transitional	Do not reject	Do not reject	Do not reject
(B) Transitional compared to (C) Transient	Do not reject	Do not reject	**Reject**
(A) Persistent compared to (C) Transient	Do not reject	Do not reject	Do not reject

. However, it was apparent that growth was not taken into consideration on such standardized measures. This further proved that on-level instruction coupled with on-level assessments, clearly determined growth and competency levels. This pointed out the problem of how teachers can really determine their students' gaps in knowledge when they are not evaluated according to their current reading level. A summary of overall results from the study is presented in Table 73.

Unexpected Results

Unexpected results included discovering that Transitional Group-B had higher negative correlations to Caucasian, and they also had higher average means than the most

Transient group. The 2011 and 2012 average mean scores for MAP were actually higher for Transitional Group-B than Transient Group-C.

There were higher scores in Transient Group-C's pretest than Transitional Group-B's pretest, although growth mimicked each other.

Table 51

Average Mean Scores of Pre- and Posttests Hypothesis 2: AIMSweb R-CBM

Persistent Group-A		Transitional Group-B		Transient Group-C	
		Pretest-Fall			
Mean	138.4473684	Mean	116.125	Mean	124.969697
		Posttest Winter			
Mean	155.8684211	Mean	136.4166667	Mean	139.4545455

Perhaps this was aligned to research that suggests programs that are in practice longer yield stronger positive results. Teachers had opportunities to help the program evolve over time, which allowed for achieving efficient results for students who were the most transient.

Another unexpected result was the overall low-test averages in testing model 4, Study Island. The highest score result was only 81%, which was a B average; however, once the data was analyzed it became apparent that the Study Island program was not used properly for the Blitz setting. Students may have shown higher overall averages if they were working at the learning level and being tested on material from the program, not from the differentiated-on level Blitz lessons.

Synthesis of Results

When compared to data that was intended to measure achievement levels for a specific grade level such as the MAP assessment and Study Island assessments did,

students tend to fall within the statistical norms. The exception was the Persistent Group-A students who were categorized as African American ethnicity as well as students considered a low SES. These students did show an improved achievement score, or decrease in variance and less of a correlation to ethnicity status when compared to other students groups. The students at the case study school consistently yielded growth from a range of 6% from the highest achievers and the Persistent group to 28% from the lowest achievers and the Transient group. African American students in Persistent Group-A and of low socio-economic status (SES), actually performed better than previous statistical studies had suggested they would, as noted in Chapter Two and Four. However their proficiency scores, as measured by the MAP assessment still lacked the desired increase in student proficiency. Although students from pretest to posttest appropriately, their pretest scores as unit began lower than standardized proficiency norms to begin with. This data helped to conclude that the Blitz reading comprehension model was successful regarding growth measurement with students within all mobility groups.

Table 52

Increasing Free and Reduced Lunch Status

Increasing Free and Reduced Lunch Status							
Year	2006	2007	2008	2009	2010	2011	2012
Percent Increase	57%	57%	61%	61%	65%	69%	72%

What does this conclude about the newest, more transient students? It is the primary investigator's claim that this program worked well with transient students because it met students where they were and filled in achievement gaps. At the same time these types of Blitz groups also allowed for the proficient and advanced students to continue where they had needs of their own. Everyone showed growth, and filled their

individual gaps in knowledge, thereby increasing achievement. Also, the Transient group yielded a decreased variance in achievement because this group had more knowledge to gain and learning gaps to overcome. While at the same time, students who have attended Lakeview longer, and had participated in the supplemental Blitz reading program longer, were placed in the appropriate learning situations, which allowed students' needs to be met. Learning disabilities, ELL concerns, behavior concerns, community stability, and social concerns were addressed. These students continued to achieve closest to their potential as learners.

Program Recommendations

Adoption of an expanded higher reading-level evaluation tool. In order to establish enhanced reading level determinates, it is the Primary Investigator's recommendation to evaluate including different, or additional reading level assessments for students in reading levels 38 and higher. Students who were on lower reading levels, as measured by DRA, appeared to show more improvement than students who were on level. This was because DRA levels in the upper elementary grades do not have a large range to determine growth measures. This program makes it difficult to determine changes within the learning levels of grades 3 through 5 or older. This was consistent with researcher Rathoven's (2006) conclusions. Rathoven claimed the DRA was ambiguous because it relied on teacher judgment. Rathoven also argued that DRA was not an effective measurement tool for older students in the elementary school setting. The Primary Investigator agrees with this researcher's discovery that there was very little evidence of criterion related fidelity for the higher leveled readers. Data suggests that DRA was a successful model for determining growth for lower leveled reading students,

since the kindergarten through second graded range was from levels 1 through 28, which actually includes 16 levels; however utilizing DRA for growth measurement for the upper elementary students does not allow growth for as many levels. Levels for upper elementary students, grades 3 through 5, have only five levels from 30 through 50. This does not allow teachers and students to determine growth goals or increments that guide students toward the next level. The next level for a student performing proficient at 40 is a 50, which theoretically allows for one full school year to grow one level. Previous lower reading level measurement allowed for several levels to master within their own level reading program. Therefore, it is recommended to research additional measurement tools for students who are DRA levels 30, 34, 38, 40, and 50 to allow for use of a stronger on-level placement tool. Students who have newly achieved a level 40 on a DRA assessment, have one level to reach to get to their next level of 50. In other words, it is important to determine growth measurement (data collections) that allow for specific increased accomplishment within the levels 30, 40, and 50, if it is used as a placement tool for leveled learning. For example, answering the question, "What are the strategies required to move from level 30 to 34, 34 to 38, 38 to 40, and 40 to 50, etc.?" would allow teachers to create a clearer focus as to how to get students from one level to the next, as the lower DRA levels allow.

Expectations of parental involvement initiatives. The successful practices at Lakeview Elementary mimicked the practices of the highly mobile Department of Defense Schools, with two exceptions, parent involvement requirements and small schools. Suggested successful interventions in DoDEA schools included:

1. "Sufficient staffing,

2. Individual attention,
3. Expectations of parental involvement in school,
4. Experienced and stable teaching force,
5. High expectations, use of standardized test scores,
6. Small schools, a robust sense of community,
7. Social capital, and
8. Racial diversity and integration" (Smrekar & Owens, 2003, p. 28, para. 2)

Students in the large elementary school felt the sense of strong school community even through the school was large through daily participation in quiet small group participating in the small group setting. However, in order to remain diligent regarding exploring improvement options to include expectations for parent involvement and participation, the Primary Investigator recommends placing focus on how to increase parental involvement within the leveled learning environment. High mobility creates the necessity to re-evaluate the parental school community to inform and educate them regarding the importance of their continued school involvement and how those efforts effect their children's' achievement.

In order to determine how involved parents could be in the case study school setting, it is important to define their views. According to data collected, the student transiency rate was 47% over the previous five years at the time of this study. Therefore, it is important to make continuous attempts throughout the school year to involve new parents in the school mission. Fifteen to 17% of the new students' parents arriving each year would need to understand how participation and involvement in the school setting is

imperative to their children's success or lack of success, or growth. According to research, parental involvement would be beneficial to the case study school.

Program expansion. Analysis of the case study data suggested the supplemental Blitz reading program model was successful and would warrant a continuation of its existence. The analysis of data suggests that this large near urban elementary school would continue to benefit from a model such as this in other academic areas. Students' needs are being met when they are instructed on the level; they are increasing achievement and decreasing variances according to their learning levels. It is recommended that data collections continue to guide instruction for the students and staff at Lakeview Elementary. Staff at Lakeview Elementary should continue to allow the program to evolve through staff collaboration and data analysis. Perhaps other areas of instruction should be investigated to allow for an expansion to the program.

It is recommended that new data be collected in additional academic areas so they may be placed into fluid learning groups, as the Blitz model data suggests growth was successful. It is important to note the flexibility that took place from year to year which allowed for the program to evolve meeting students' needs as they changed from year to year. It is also important to note the collaboration and analysis procedures that took place a grade levels teams who worked with the instructional specialist and the administration.

It is also the Primary Investigator's recommendation to continue professional development in the area of data analysis. Students would benefit from teachers' careful collaborative analysis of achievement levels and student placement decisions.

Re-evaluate the use of Study Island in the small group. Data analysis outcomes regarding the Study Island assessment pilot for the Blitz program suggested it

to be not as successful as other initiatives within the Blitz model. If teachers were to continue to use the Study Island program as an assessment pilot, teachers would need to include the Study Island program tool in their instruction for on-level learning. However, this might go against the underlying purpose of the supplemental Blitz program model. Further discussion, professional development and training, and a change to the methodology was warranted for on-level learning and assessing when using the Study Island program as an assessment tool within the on-level learning environment. By the time this dissertation was complete, the Study Island program was discontinued within the school district therefore, this recommendation no longer appropriate.

School district initiatives. It is important to persuade district policy makers that a "one-size fits all model" does not align with educational research. Therefore, the same is true when evaluating schools within the school district. Research has provided ample conclusions that have suggested high correlations to achievement in the areas of low SES, high mobility, and minorities who are both, low-SES and highly mobile. The school district in which these schools reside should consider alternative measurements for making conclusions as to how well the staff and students performed for each school year. Relying only on standardized tests, such as the Missouri Assessment Program to make those determinations do not provide data which allows for growth determinate upon students' individual learning levels, or where they grew from. It is recommended to allow for additional measures to be considered to analyze achievement when schools have high mobility and high poverty coupled with low achievement. If schools with high turnover rates have the same measurement as schools that do not, it is difficult to determine actual growth and measure accountability. Therefore, the recommendation is

to discuss the use of measurement tools, which allow for growth determinates that include mobility factors, with district decision makers to perhaps allow the use of such tools to become district practice when reviewing achievement results.

Implications Regarding Student Success

Implications of this study for school leaders' efforts to improve student school success suggest that the small group supplementary Blitz reading program is one to be examined. Data from this dissertation suggest that the schools on level learning initiatives led to improvement in student reading comprehension and fluency at the case study school.

Data suggests that the Blitz program has different positive effects overall for each transiency group with Group-A, the Persistent population, Transitional Group-B the Transitional population, and Transient Group-C, the Transient population. Each data set, DRA, R-CBM, MAP, and Study Island suggests that students' scores are reflective of their transiency status as it relates to their scores, yet all three mobility populations yielded increases in achievement. Therefore it is concluded that the program is successful and would warrant a continuation of its existence on an expanded level.

Schools that have students who are highly mobile, of low SES, and have increasing numbers of African American students who are both low-SES and do not own their own homes (as the literature research had determined to be the lowest achieving student group) need to have a measurement methodology that allows for separation of scores for accountability. Growth is the primary focus for all students. It does not matter where a student begins, but where they end. Competency-based curriculum that measures growth and celebrates success when variance decreases and formative and

summative achievement increases allows for higher accountability for all students and schools.

Discussion

The Primary Investigator's inferences were that students benefitted from small group instruction based on research (Lou et al., 2001; Hattie, 2009, p. 94, 185). The Primary Investigator also concluded that when using teaching methods that rely on best practices based on research that learners would benefit. Research suggested that teachers who have worked together to create their focus as a grade a level team would work hard to implement their program effectively (Schmoker, 2006; Dufour et al., 2006). Teachers want to reach all students and often do not feel they can reach the students who "come and go" in and out of schools from all over. The Blitz program allowed for shortened focused study sessions that grouped and regrouped often, based on specific skill needs and ability level. Other deductions were that programs that were implemented throughout a building for four years or more will have enough data to analyze to determine positive results (Walker, Greenwood, Hart, & Carta, 1994; Lewis & Samuels, 2003; Donovan & Radosevich, 1998; Hattie, 2009, pp. 185-186). It was also assumed those results would be most favorable for students who have attended Lakeview Elementary the longest. On the other hand, students that were the newest, benefited from the intricate design level of the evolved program. Students in the most Transient Group-C outperformed the Transitional Group-B on two occasions. According to the analysis of all seven hypotheses, regarding testing of achievement scores, decreases in variances, and correlations to ethnicity status as it related to the success and validity of the Blitz reading model program at Lakeview Elementary, the program is successful. The data represented

in this case study suggests that students on all learning levels are achieving according to their learning level needs. Even when compared against other statistically proven reasons for statistically lower achievement, such as ethnicity and lower SES (socio-economic status), this program has proven successful. When tests are comparative among student learning levels, such as DRA and R-CBM scores, all students are showing an increase in overall mean scores.

The program data suggested that the less transient a student is in a school district, the higher their achievement will be (Jones, 1989; Hattie, 2009, p. 82). Students who newly arrive to Lakeview Elementary School were measured right away and placed into these small group settings with on-going remediation, as needed and determined, through continued benchmark testing.

Many goals emerged each year the Blitz program continued, which became important to mention to add to the fidelity of this research. One important change important to note was the goals of the collection of data for the pretest and posttest for the 2011-2012 school year. These pretests and posttests were instrumental in providing the fifth grade teachers important formative information to guide their instruction within their differentiated groups.

Recommendations for Future Research

Further research in the areas of behavior trends and transiency status to determine if there is a correlation between other variables, such as these, that can be addressed within the program, as well. It would be interesting to run a regression study to cross-reference each correlation variable to see how the independent variable measured as related to one another, if in fact, they did. It is also recommended that the implementation

process of such a large school leveled learning program have models from other schools with like demographics to study for implementation.

Looking to the future, the Pew Hispanic Center projects that the number of school-age children will increase by 5.4 million from 2005 to 2020 (Passel, 2008). Their research suggested that 13% of students would be English Language Learners or students who speak two languages. It is recommended to keep track of the increase of the ELL population with reference to immigration demographic studies.

Additionally, policy makers have begun to take interest in mobility issues that affect achievement. It is recommended to determine the views of policy makers within the county, city and state the case study school resides. This suggestion aligns with current research regarding the need for schools to have a universal reporting system that would allow student data to transfer rapidly, which would allow for quicker student placement decisions.

Further research regarding leveled learning for reading achievement in the upper elementary grades is warranted for reading levels, according to DRA that have limited ranges for growth measurement. Are there specific strategies tied to development of students who are advancing slower because the change in levels have one additional DRA level as students become more advanced? It is misleading to make an assumption that growth from levels 30 to 34, or 34 to 38, is equivalent to growth from 18 to 20, or 20 to 24. What are the skills required for growth in higher levels in a DRA model or its equivalent? Deeper analysis is warranted for growth determination.

Due to the nature of student transiency, there is a limitation of data that was collected due to lack of availability of complete sets of data. For example, several

students entered the school year late and had no pretest data, while others left the school year early yielding no posttest assessment data. This school was the only school in the district that implemented a program model, such as this. Therefore, there were no data to collect from similar schools to compare with and therefore the study findings could not be generalized as comparative to other schools with like demographics and transiency status. Students were placed in small groups on their individual levels, with many different teachers, therefore different materials were used to meet students where they were at the discretion of each individual teacher. As Common Core State Standards become more consistent throughout the nation, perhaps student data can be collected across district lines within the state, as well as throughout the nation. Data collection is the biggest limitation when it comes to analyzing student achievement, if we can gather data on students that are entering the school systems, we can quickly place them into learning levels that are appropriate for them as individual learners. Furthermore, data from other cohort groups could have been analyzed and cross-referenced, against the data sets in this case study. If those data collections and their analysis yielded similar results, the dissertation study would have had stronger fidelity for students who are still in the case study school. This perhaps could have noted that one could assume was based on previous research from students in the same setting and program.

Further research is also warranted regarding parental involvement. There were no data points to consider regarding to what extent parents were involved in the educational setting at Lakeview Elementary. As research suggested by Smrekar and Owens (2003) stated, parental involvement was a key factor in the success of DOD schools.

Conclusion

The significance of the study was to examine the growth in achievement of Persistent, Transitional, and Transient students in a large elementary school in the Midwest. Scores examined included scores used to measure and group students into a supplemental Blitz reading program, which focused on the use of intentional strategies to improve reading ability levels in a small group setting.

The intentional, multi-faceted, and differentiated approach to reading improvement implemented in this study included an intensified reading comprehension focus, small group settings, adjustable grouping, and use of best practices to increase the reading achievement within the studied school. Results of the study conclusively determined that within this school, during the time of the study, strategies to improve reading levels had a statistically significant and positive effect on decreasing variance and increasing growth for transient students, as compared to non-transient students. All students in each mobility group resulted in growth as determined by descriptive statistics. The supplemental Blitz reading program clearly aligned with research-based methods that supported instruction that was considered best practice, which allowed the program to be considered solid and researched based.

The analyzed data provided in the case study suggested that students who were categorized in the Persistent population and were FRLS did not share the same achievement scores as the more mobile students in the case study according to standardized test scores (2010 through 2012 Missouri Assessment Program scores), which allowed the Primary Investigator to conclude the longer students participated in the Blitz model and or the school itself, the higher achievement results students

accomplished. However, it was also determined that students in all mobility populations yielded growth in reading levels, as measured by DRA (Developmental Reading Assessment), while the most transient group showed significant growth when compared to the Persistent mobility group. Perhaps, this was because they began with the lowest scores and had the furthest to grow. It is also important to note that the analysis of the DRA assessment used to determine growth in reading levels included a larger range of levels for lower leveled readers than there are for higher leveled readers, which made it difficult to determine growth within specific grade level equivalencies for grades 3, 4, and 5.

Although all three mobility populations consistently yielded growth within each testing model, only the two Transient groups significant decreased variance when compared to the Persistent population, as measured by AIMSweb R-CBM scores. This result is likely due to having more levels of growth in the lower reading levels yielding growth, versus a higher score that has a longer span for suggested growth patterns. The Transient Group-C yielded significant growth when compared to the Persistent population, while the Transitional group did not, although they still yielded a higher growth percentage than the Persistent population, just not considered statistically significant.

Furthermore, the Blitz program began in 2008 and continued through 2013. During this time there was a 26% increase in poverty, according to (FRLS) levels, from 2006-2007 (prior to Blitz). Even though poverty level continued to increase dramatically, the average decrease in scores improved dramatically. This goes against what research has suggested would occur regarding correlations to poverty and low achievement scores.

For example, 2011 and 2012 yielded an increase in scores when poverty levels increased from 69% then 72%. Students continued to show increases in achievement, as measured by DRA, AIMSweb R-CBM, and MAP scores.

The longer students participated in the Blitz reading comprehension model, the higher their scores became. The non-transient, poverty stricken, African American students correlated to high scores, not low, therefore staff at Lakeview is doing very well meeting students on their instructional levels, which yielded growth for students of low SES, regardless of their ethnicity.

Students who have attended Lakeview longer, and had participated in the supplemental Blitz reading program longer, were placed in the appropriate learning situations, which allowed students' needs to be met. Learning disabilities, ELL concerns, behavior concerns, community stability and social concerns were also addressed with the passage of time. These students continued to achieve closest to their potential as learners.

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Appendices

Appendix A: Blitz Topics Pacing Guide-Grade 2 Through Grade 5-2008-2009

Blitz Topics Pacing Guide (Grade 2 Through Grade 5) 2008-2009	
Grade 2 Through Grade 5	
August-September	Fluency/First 30 days
October-November	Non-Fiction: Main Idea
December-January	Comprehension Strategies
February-March	MAP Skills
April-May	Newspapers

Appendix B: ***Blitz Topic Pacing Guide-Grade 1 Through Grade 5-2009-2010***

Blitz Topic Pacing Guide (Grade 1 through Grade 5) 2009-2010	
Grade 1	
Characters Story Elements Retelling Predicting Making Connections Visualizing Questioning Inferring	
Grade 2	
Trimester 1 August-September-October	First 24 days Fix-up strategies/Unknown words Retelling with story elements Predicting
Trimester 2 November, December, January, Mid-February	Making Connections Determining Importance Retelling/Summarizing Visualizing Questioning **Continue Trimester 1 strategies*
Trimester 3 Mid-February, March, April, May	Comparing Inferring Synthesizing
Grades 3-5	
Trimester 1 August-September-October	First 20 days Monitor for Meaning Retelling/Paraphrasing Making Connections Questioning Predicting
Trimester 2 November, December, January, Mid-February	Inferring Visualizing Summarizing Determining Importance Comparing **Continue Trimester 1 strategies*
Trimester 3 Mid-February, March, April, May	Synthesizing Evaluating **Continue Trimester 1 and 2 strategies*

Appendix C: ***Blitz Topic Pacing Guide-Grade K Through Grade 5-2010-2011***

Blitz Topics Pacing Guide (Kindergarten through Grade 5) 2010-2011

Kindergarten – Grade 1	
Trimester 1 August-September-October	First 24 days Fix-up strategies/Unknown words Retelling with story elements Predicting
Trimester 2 November, December, January, Mid-February	Making Connections Determining Importance Retelling/Summarizing Visualizing Questioning **Continue Trimester 1 strategies*
Trimester 3 Mid-February, March, April, May	Comparing Inferring
Grades 3-5	
Trimester 1 August-September-October	First 20 days Monitor for Meaning Retelling/Paraphrasing Making Connections Questioning Predicting
Trimester 2 November, December, January, Mid-February	Inferring Visualizing Determining Importance Comparing Summarizing **Continue Trimester 1 strategies*
Trimester 3 Mid-February, March, April, May	Synthesizing Evaluating **Continue Trimester 1 and 2 strategies*

Appendix C: ***Blitz Topic Pacing Guide-Kindergarten-2011-2012***

Blitz Topic Pacing Guide (Kindergarten) 2011-2012

Dates and Topics for: Kindergarten	
Month	Topics (Focus Skills)
September Skills:	Alphabet Identify most (20 or more) of the capital letters
November Skills:	Identify most (20 or more) of the capital letters Identify most (20 or more) of the lower case letters Count to 50 starting at any number Identify numbers 1-20 Write numbers 1-20
December Skills:	Master September's focus skills Master November's focus skills Identify and give 11 or more rhyming words Read ten or more high frequency words Write five or more high frequency words
January/February Skills:	Mastered all previous focus skills Identify two object patterns Create two object patterns Count backwards from 12 Count to 70 by 10s Count to 70 by 5s
March Skills:	Mastered all previous focus skills Read 20 or more high frequency words Write 18 or more high frequency words Write words using beginning and ending sounds

Appendix D: O*ne Through Five Grade Level Reading Blitz Pacing Guide*

Grade Level Reading Blitz Pacing Guide 2011-2012					
Grades 1 - 5					
Dates	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
9/6-9/23	Characters	Story Elements	QAR	QAR	QAR
9/26-10/14	Story Elements	Retelling with story elements	Making Connections	Retelling, Paraphrasing, Summary	Retelling/ Paraphrasing
10/17-11/4	Predicting	Predicting	Story Elements, Retelling	Connections	Monitoring Meaning
11/7-12/2	Connections	Connections	Predicting	Predicting	Connections, Visualizing
12/5-12/22	Visualizing	Visualizing	Visualizing	Questioning	Questioning, Predicting
1/3-1/27	Questioning	Comparing	Monitoring Meaning, Questioning	Visualizing	Inferring
1/30-2/24	Inferring	Determine Importance	Inferring	Inferring	Summarizing
2/27-3/16	Characters	QAR	Determine Importance, Summarizing	Determine Importance	Determine Importance
3/26-3/30	Story Elements	QAR	Comparing	Comparing	Comparing
4/2-4/20	Non-Fiction	MAP Testing	MAP Testing	MAP Testing	MAP Testing
4/23-5/4	QAR	Inferring	Synthesizing	Comparing	Synthesizing
5/7-5/18	Synthesizing	Synthesizing	Evaluating	Evaluating, Synthesizing	Evaluating

Appendix E: ***Normality Table of Data for All Testing Models***

Normality Table of Data for All Testing Models			
Test Model	Statistical Data	Group	PI
Model 1: DRA	Persistent Group-A	Pretest	*1.24
		Posttest	0.73
	Transitional Group-B	Pretest	0.56
		Posttest	0.05
	Transient Group-C	Pretest	0.49
		Posttest	0.76
Model 2: R-CBM	Persistent Group-A	Pretest	-0.4
		Posttest	-0.46
	Transitional Group-B	Pretest	0.49
		Posttest	-0.09
	Transient Group-C	Pretest	0.45
		Posttest	-0.7
Model 3: MAP	2010: Data	Persistent Group-A	-0.87
		Transitional Group-B	0.24
		Transient Group-C	N/A
	2011: Data	Persistent Group-A	-0.42
		Transitional Group-B	0.29
		Transient Group-C	-0.03
	2012: Data	Persistent Group-A	0.1
		Transitional Group-B	0.24
		Transient Group-C	0.11
Model 4: Study Island	Topic 2: Persistent Group-A	Pretest	-0.97
		Posttest	0.06
	Topic 2: Transitional Group-B	Pretest	0.01
		Posttest	-0.38
	Topic 2: Transient Group-C	Pretest	-0.07
		Posttest	-0.43
	Topic 4A: Persistent Group-A	Pretest	-0.12
		Posttest	-0.12
	Topic 4A: Transitional Group-B	Pretest	-0.59
		Posttest	*-1.35
	Topic 4A: Transient Group-C	Pretest	0.61
		Posttest	-0.12
	Topic 4B: Persistent Group-A	Pretest	0.51
		Posttest	-0.6
	Topic 4B: Transitional Group-B	Pretest	-0.26
		Posttest	0.15
	Topic 4B: Transient Group-C	Pretest	-0.27
		Posttest	0.22

LINDENWOOD

LINDENWOOD UNIVERSITY ST. CHARLES, MISSOURI

DATE:	January 16, 2013
TO:	Jackie Ramey
FROM:	Lindenwood University Institutional Review Board
STUDY TITLE:	[388515-1] A Case Study: Achievement studies of persistent, transitional, and transient populations at a suburban elementary school.
IRB REFERENCE #:	
SUBMISSION TYPE:	New Project
ACTION:	APPROVED
APPROVAL DATE:	January 16, 2013
EXPIRATION DATE:	January 16, 2014
REVIEW TYPE:	Expedited Review

Thank you for your submission of New Project materials for this research project. Lindenwood University Institutional Review Board has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the study and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All SERIOUS and UNEXPECTED adverse events must be reported to this office. Please use the appropriate adverse event forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to the IRB.

This project has been determined to be a Minimal Risk project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the completion/amendment form for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of January 16, 2014.

Please note that all research records must be retained for a minimum of three years.

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Appendix F: *IRB Approval Letter Page 1*

If you have any questions, please contact Beth Kania-Gosche at (636) 949-4576 or bkania-gosche@lindenwood.edu. Please include your study title and reference number in all correspondence with this office.

If you have any questions, please send them to IRB@lindenwood.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Lindenwood University Institutional Review Board's records.

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Vitae

EMPLOYMENT

District Technology Specialist (2012-Present)
Pattonville School District

First and Third Grade Teacher (2003-2012)
Drummond Elementary, Pattonville School District

Administration of Education Intern (Summer, 2011)
Pattonville School District

Ed.D. Educational Administration Intern (Winter, 2010-Spring, 2011)
Central Office, Pattonville School District

St. Louis Area Coordinator (2006-2008)
Mindshapers Tutoring

First Grade Teacher (1995-2003)
Carrollton Oaks Elementary, Pattonville School District

EDUCATION, HONORS, AND CERTIFICATES

Masters of Arts, Administration of Education (2011)
Lindenwood University, St. Charles, MO, Summa Cum Laude

Masters of Arts, Elementary Education (2000)
Lindenwood University, St. Charles, MO, Summa Cum Laude

Bachelor of Science Elementary Education (1995)
University of Missouri St. Louis, MO, Cum Laude

Awarded Sales Representative of the Year (2006)
Mindshapers Tutoring

CERTIFICATIONS

The National Institutes of Health (NIH) Certificate (2011)
Missouri: K-12 Initial Principal (2015)
Missouri: Elementary Education, 1-8 (Lifetime)
Missouri: Middle School Social Studies, 4-8 (Lifetime)
Colorado: Professional Teacher License, Elementary Education (2011-2015)

PROFESSIONAL AFFILIATIONS

Missouri National Education Association
Pattonville National Education Association
International Reading Association