THE IMPACT OF A STRUCTURED ENGLISH IMMERSION MODEL ON ENGLISH LANGUAGE LEARNERS' READING ACHIEVEMENT

By

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Dedication

This dissertation is dedicated to my wife, Mary Jo, daughter, Elizabeth Liperote, her husband Johnny, and my grandchildren, Giuliana, John-John, and Dominic – I hope that I have portrayed this arduous journey as something worth striving for. Thank you for always supporting this journey.

To Grandma who passed away towards the end of this journey – she loved education and provided me with enduring words of inspiration. I only wish that she could have been at the finish line with me.

To my friends, co-workers, and colleagues – thank you for the continued support and kindness that you have given me over the years, my appreciation will never wane.

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Readily will I display the intestinal fortitude required to fight on to the Ranger objective and complete the mission though I be the lone survivor.

- The Ranger Creed

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Abstract

Researchers have estimated that by 2030, two of every five American public school students will be acquiring English as second language learners (Shah & Cavanagh, 2012). Providing adequate means by which ELLs can obtain both English language and academic proficiency will be paramount if they are to be successful, contributing members of their communities. Thus, this study was designed to explore the impact of Arizona's current instructional mandates (Ariz. H.R. 2064 and Ariz. Rev. Stat. § 15-751 – 15-756) on the academic progress of English Language Learners (ELLs) in reading. Two administrations (2012 and 2014) of the reading subtest of the Arizona's Instrument to Measure Standards (AIMS) annual assessment were used to compare the third and fifth grade reading achievement of ELLs to that of mainstream students. The sample was comprised of 322 fifth grade students from a southwest Arizona school district. The sample included 64 ELL students who were enrolled in the school district continuously from kindergarten through fifth grade and 258 mainstream students who were educated within the district for third through fifth grade. Results of the one-way Analyses of Variance (ANOVA) and subsequent post hoc analyses revealed statistically significant differences in student achievement. ELLs who participated in the Structured English Immersion (SEI) program for three years or more by grade 3 and four or more years by grade 5, respectively, scored significantly lower than mainstream students on both administrations. Thus, the current SEI model mandated by the state of Arizona is not sufficiently supporting all ELLs.

Keywords: English Language Learners, Bilingual Education, English Only Policies

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List of Abbreviations

AZELLA: Arizona's English Language Learner Assessment

AIMS: Arizona's Instrument to Measure Standards

ADE: Arizona Department of Education

DBE: Developmental Bilingual Education

DPA: Dual Purpose Assessment

DSI: Discrete Skills Inventory

ELA: English Language Arts

ELD: English Language Development

ELL: English Language Learner

ELP: English Language Proficient

ESL: English as a Second Language

FAPE: Free Appropriate Public Education

HI: High Intermediate

ILLP: Individual Language Learner Plan

LEA: Local Education Agency

LEP: Limited English Proficient

NEGD: Non-Equivalent Group Design

NAEP: National Assessment of Educational Progress

OELAS: Office of English Language Acquisition Services

PHLOTE: Primary Home Language Other Than English

SEI: Structured English Immersion

SES: Socio-Economic Status

TBE: Transitional Bilingual Education

USDOE: U.S. Department of Education

Chapter 1: Introduction

In 2006, the Arizona House of Representatives passed Arizona H.R. 2064 mandating that all public schools assess the English proficiency of all students whose primary or home language is not English (H.R. 2064, 47th Leg., Reg. Sess., Ariz., 2006). The Bill mandates that students who are not English language proficient be placed in structured immersion programs, which are, often, classrooms constructed solely of students with similar language proficiency. Ariz. Rev. Stat. § 15-752 (2006) states:

> All children in Arizona public schools shall be taught English by being taught in English and all children shall be placed in English language classrooms. Children who are English learners shall be educated through sheltered English immersion during a temporary transition period not normally intended to exceed one year.

Unfortunately, in the district of study, students typically remain in the structured English immersion (SEI) program for more than the one year intended by the law.

Overview

Arizona legislators proposed Proposition 203 (Arizona Secretary of State, 2000) which mandated English only instruction in 2000 (Arizona Association for Bilingual Education, 2000); it was subsequently approved by Arizona's voters. Proposition 203 was followed by Ariz. H.R. 2064 in 2006. These two actions were proposed to satisfy court rulings in the lawsuit *Flores v. Arizona*, which had been ongoing since 1992. In an effort to demonstrate compliance with the courts' rulings and commitment to the education of Arizona's English Language Learner (ELL) population, legislators included provisions such as funding and targeted English Language instruction. This funding to

Local Education Agencies (LEAs) was limited to two years for a student placed in the SEI setting, based on language proficiency as determined by Arizona's English Language Learner Assessment (AZELLA). Within Ariz. H.R. 2064, legislators also included a mandatory four-hour block of English Language-rich instruction (Arizona State Legislature, 2006). The four-hour block of intensive English language instruction was to take place in an English Language Development (ELD) classroom setting, thus essentially segregating ELLs from English-proficient students, as well as from the content-rich instruction received by their English-proficient peers.

The implementation of Proposition 203 and Ariz. H.R. 2064 raise a question: Were these two pieces of legislation in the best interest of Arizona's limited English proficient (LEP) population? After the implementation of Ariz. H.R. 2064 in 2006, the National Assessment of Educational Progress (NAEP) showed a widening achievement gap between the ELLs in Arizona and the national average. Data from the NAEP in 2010-2011 revealed that only 42% of the ELLs in Arizona were proficient in fourth grade basic math compared to 70% of mainstreamed Latino peers and 89% Caucasian peers (Jimenez-Castellanos, Combs, Martinez, & Gomez, 2013).

Students labeled ELLs are being separated from their mainstream classroom peers and placed into SEI classrooms. The ELD instruction within SEI classrooms includes four hours of rich language arts instruction including; reading, writing, listening, and speaking as per the Discrete Skills Inventory (DSI) which was derived from the Arizona K-12 ELL proficiency standards (Arizona Department of Education [ADE], 2008b). After students complete four hours of intense English language curriculum, explorations (physical education, art, music, and technology), lunch, transition time, and restroom

breaks, there is a total remaining instructional time of approximately 90 minutes for math, science, and social studies. In 2008, Arizona was in the bottom third of fourth grade math proficiency in the United States (United States Department of Education [USDOE], 2009) and, according to the Migration Policy Institute, had 166,000 ELLs in 2007-2008, 90% of whom spoke Spanish primarily (Jimenez-Castellanos, Combs, Martinez, & Gomez, 2013). While fourth and 8th grade ELLs s demonstrated small achievement gains in reading, student achievement was still low with only 26% of fourth graders reading at or above grade level proficiency (Arizona Indicators, n.d.).

Statement of the Problem

This research examines how the Language Arts rich environment of SEI classrooms affect the reading achievement of ELLs, based on the reading subtest of the Arizona's Instrument to Measure Standards (AIMS) annual assessment. ELLs are being segregated into SEI classrooms where most of their day focuses on English language skills: 30 minutes of oral English and conversation instruction, 60 minutes of grammar instruction, 60 minutes of reading instruction, 60 minutes of vocabulary instruction, and 30 minutes of writing instruction (ADE, 2008b).

The crafters of Proposition 203 stated:

> The government and the public schools of Arizona have a moral obligation and a constitutional duty to provide all of Arizona's children, regardless of their ethnicity or national origins, with the skills necessary to become productive members of our society. Of these skills, literacy in the English language is among the most important. (Proposition 203, 2000)

For students to actively participate in future global competition, they will need to receive a well-rounded education which includes the ability to work in multicultural environments and strong science and math knowledge (Clough, 2008, p. 59-60), all of which may be compromised when students are confined to SEI classrooms. Therefore, this study will identify whether there is a significant difference in reading achievement between students who received the required four hours of specific ELD instruction in the SEI classroom and students who were in mainstream classrooms receiving a balanced curricula of language arts, math, science, and social studies.

Purpose of the Study

Educators and legislators constantly provide personal opinions of the effectiveness of the SEI model on the reading and math achievement of ELLs. There are many opportunities within the SEI model for study; for example, the lack of time for science, social studies, and math, or how students may be grouped in up to three grade bands within a single classroom because of their English language proficiency. However, the emphasis of what is considered an abundance of instructional time for the specific language arts and math instruction are opinions that directly affect ELLs when it comes to standardized state assessments.

The purpose of this study was to determine how instructional mandates from Ariz. H.R. 2064 and Ariz. Rev. Stat. § 15-751 – 15-756 affect the academic progress of ELLs in reading. Quantitative analysis was used to determine ELLs' reading achievement based on the AIMS annual assessment.

Research Questions/Hypotheses

In this study, students were grouped based on their tenure in SEI programs. Table 1 lists all of the groups under study. Based on this grouping scheme, the research questions and hypotheses in this study were:

RQ1. Was there a statistically significant difference between the third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who did?

$H_0$1: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI.

H1: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI.

RQ1a. What was the difference between the third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for one year?

$H_0$1a: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for one year.

H1a: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for one year.

RQ1b. What was the difference between the third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for two years?

$H_0$1b: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for two years.

H1b: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for two years.

RQ1c. What was the difference between the third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for three or more years?

$H_0$1c: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for three or more years.

H1c: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for three or more years.

RQ2. Was there a statistically significant difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who did?

$H_0$2: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI.

H2: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI.

RQ2a. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for one year?

$H_0$2a: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for one year.

H2a: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for one year.

RQ2b. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for two years?

$H_0$2b: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for two years.

H2b: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for two years.

RQ2c. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for three years?

$H_0$2c: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for three years.

H2c: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for three years.

RQ2d. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for four or more years?

$H_0$2d: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for four or more years.

H2d: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for four or more years.

Table 1

Study Sample Grouping Scheme

SEI Program Tenure	3rd Grade	5th Grade
Never (Mainstream)	X	X
One Year	X	X
Two Years	X	X
Three or More Years	X	-
Three Years		X
Four or More Years		X

Definitions of Terms

Arizona's Instrument to Measure Standards (AIMS). A standardized assessment which was taken each spring in grades 3 through 8 and again in grade 10; reading and mathematics were assessed in each of the grades; writing was assessed in grades 5 through 7 and again in grade 10; Science was assessed in grades 4, 8 and 10 (ADE, n.d.a.).

Arizona's English Language Learner Assessment (AZELLA). Assesses the English proficiency of K-12 students. Students are assessed in oral language (includes listening and speaking), reading and writing. A composite score is used to identify students as pre-emergent, emergent, basic, intermediate, or proficient (ADE, n.d.b.).

Bilingual education. Also known as Dual Language education, bilingual education is an umbrella term for many types of programs in which two languages are used for instruction. Bilingual and Dual Language programs encourage bilingualism and

biliteracy, allowing students to maintain their native language while acquiring another language (Center for Applied Linguistics, 2017).

Criterion-referenced test. Tests designed to measure test-takers' performance against predetermined criteria. Students taking a criterion-referenced test are measured against learning standards (Criterion-Referenced Test, n.d.).

Discrete Skills Inventory (DSI*).* A list of specific teaching and learning objectives derived from the Arizona K-12 English language learner proficiency standards, which are approved by the Arizona State Board of Education (ADE, 2008b).

English language development (ELD) instruction. Instruction that focuses on English language acquisition. ELD instruction includes phonology, morphology, syntax, lexicon, and semantics (ADE, 2008b).

Free appropriate public education (FAPE). Section 504 of the Rehabilitation Act of 1973 requires a school district to provide a "free appropriate public education" to each qualified person with a disability who is in the school district's jurisdiction, regardless of the nature or severity of the person's disability (USDOE, 2010).

Hispanic. A member of an ethnic group that traces its roots to 20 Spanish-speaking nations from Latin America and Spain, but not Portugal or Portuguese-speaking nations (Passel & Taylor, 2009).

Individual language learner plan (ILLP). Provides specific instructions for how ELLs will be provided specialized English language support within mainstream classrooms in Arizona (ADE, 2011b).

Latino. A member of an ethnic group that traces its roots to 20 Spanish-speaking nations from Latin America and Spain, but not Portugal or Portuguese-speaking nations (Passel & Taylor, 2009).

Norm-referenced test. A standardized test designed to compare and rank test-takers against one another (Norm-Referenced Test, n.d.).

Office of English Language Acquisition Services (OELAS*).* Provides guidance, assistance, and support to all of Arizona's schools in service to Arizona's English language learner population (Ariz. Rev. Stat. § 15-756.07, n.d.).

Primary home language other than English (PHLOTE). Determined by a survey that the parents or guardian complete for a student upon school enrollment (ADE, 2008b).

Proficiency level. Refers to the level of English language proficiency of a student as determined by the AZELLA (ADE, 2008b).

Strand. Structural curriculum elements that specify the organization of content for the purpose of planning for student learning. The term 'strands' is used to indicate: (a) the disciplines within a learning area. Each discipline has unique associated goals for learning. (b) Domains that group related general and specific learning outcomes or achievement aims and objectives within a particular learning area or discipline (Curriculum Strands, n.d.).

Structured English immersion (SEI) classroom. A classroom in which all students are of limited English language proficiency as measured by the AZELLA (ADE, 2008b).

Structured English immersion (SEI) models. Models for instructing ELLs that have been approved by Arizona's OELAS (ADE, 2008b).

Structured English immersion (SEI) program. An intensive English language teaching program designed to accelerate the learning of the English language for non-proficient English speakers, as designated by the AZELLA (ADE, 2008b).

Assumptions

Assumptions of this study were:

1. Academic instruction to ELLs was provided in accordance with Arizona's mandates and learning standards.
2. All six participating schools had access to the same curriculum and curricular support for all ELLs enrolled in SEI classrooms and mainstream classroom peer groups.

Limitations

Limitations of this study include:

1. The results from the students in one elementary school district in southwest Arizona may not be generalizable to students in other locations or contextual circumstances, including those form a different socioeconomic status (SES).
2. Classroom configurations at each of the six elementary schools varied and some ELLs may have been in combined grade level classrooms (e.g. third/fourth grade combinations) or placed on an ILLP for English language instruction. Thus, the results from these students may not generalize to students in a different classroom configuration.

3. The sample size of the ELLs waned over time as the students either exited from the SEI program or departed the district. Thus, it is difficult to draw conclusions about longitudinal effects of SEI programs.

Delimitations

Delimitations of this study were:

1. The data analysis was limited to a cohort of students who were continuously enrolled in one of six elementary schools in one elementary school district in southwest Arizona from kindergarten through fifth grades.
2. Data were limited to one standardized assessment, the AIMS.
3. Analysis was only used to compare the third and fifth grade AIMS reading achievement results of mainstream fifth grade students who have never received SEI instruction with students who have been in SEI classrooms.

Significance of the study

This study was used to develop recommendations that will help decision makers decide to maintain current practices, expand existing programs, and/or completely change current methods of supporting ELLs. According to the 9th Circuit Court of Appeals in June of 2015, "The four-hour model was a relatively recent program and there was not a lot of evidence on ELL performance" (Flores v. Arizona, 2015, slip op. at 1). The analyzed data will help determine the effectiveness of the SEI model with respect to reading proficiency of ELLs assigned to SEI classrooms. Currently, there are only two options available for providing ELL support;

1. enrollment in SEI classrooms, or

2. parents of ELLs may opt students out of the ELL program, and the student receive only general curriculum instruction in mainstream classrooms (ADE, 2008b).

Results of data collected from this causal-comparative, ex post-facto, quantitative study examined the impact of instruction in SEI classrooms on reading achievement for ELLs relative to their mainstream peers who never received SEI instruction. The findings from this study will benefit key stakeholders including policy makers, administrators, teachers, and parents as they make decisions about adopting the best instructional models for educating the ELLs.

Summary

Chapter 1 described Arizona's mandates from Proposition 203 and Ariz. H.R. 2064 and the relevance of this legislation to ELLs and ELD instruction. The passage of both pieces of legislation begs the question: Were these two pieces of legislation in the best interest of Arizona's LEP population? The purpose of this study was to determine whether Arizona's legislation has had an effect on reading outcomes of Arizona's ELL population. The next chapter will include a review of the relevant literature.

Chapter 2: Review of Literature

In 2000, Arizona legislators proposed, and voters approved, Proposition 203 which mandated English only instruction. Six years later, Ariz. H.R. 2064 was passed. These decisions were made to partially satisfy court rulings in the lawsuit *Flores v. Arizona*, which had been ongoing since 1992. The *Flores v. Arizona* court case increased the nation's attention on the learning needs of ELLs. According to Susan Carroll (2006), the lawsuit was originally filed in 1992 by the lawyers of the Arizona Center for Law in the Public Interest on behalf of a Nogales parent; however, upon realizing the original case may not be successful, they named Miriam Flores as the main plaintiff. In 2000, U.S. District Court judge Alfredo Marquez ruled that the state provided a funding level for English learners that was "arbitrary and capricious" and failed to provide enough teachers, teachers' aides, classrooms, materials and tutoring for these students (Flores v. Arizona, 2015, slip op. at 1). On 1 September 2006, after years of debates, rebuttals, and appeals Arizona established the Structured English Immersion Task Force to construct a viable plan to teach ELLs. Their task, according to the ADE, was to develop and adopt research-based models of SEI programs for use in public and charter schools in Arizona.

The outcome of the task force, Proposition 203, and Ariz. H.R. 2064 was the creation of SEI classrooms in which Arizona's ELLs (students who do not demonstrate proficiency on AZELLA) spend most of their instructional time focused on the development of English language skills, particularly reading, writing, listening, and speaking, via "English only" instruction. In 2015 plaintiffs challenged the four-hour model of SEI classroom and argued that it was a form of segregation due to the isolation

of ELLs into SEI classrooms for the majority of the school day. The 9th Circuit Court of Appeals ruled that ELLs were appropriately exposed to academic content at some time during their education and the four-hour model was a relatively recent program, so there was not enough evidence to support the claims of segregation (Flores v. Arizona, 2015, slip op. at 1).

Only Arizona and three other states (California, Massachusetts, and New Hampshire) have laws constraining the use of bilingual education programs ("United States," 2015). By comparison, five states (Connecticut, Illinois, New Jersey, New York, and Texas) mandate that school districts provide bilingual education programs to students when there are 20 or more ELLs in the same grade level, who have the same home language (p. 88). The U.S. Department of Education also lists seven other states (Delaware, Georgia, New Mexico, North Carolina, Rhode Island, Utah, and Washington) that value and promote the use of dual language or bilingual education programs (p. 89). A key feature of Arizona's H.R. 2064 is that students are to stay in the SEI program for one year only (Ariz. H.R. 2064). However, Arizona's Department of Education has shown some apprehension about the timeline. ADE's A-F Letter Grade Accountability System Technical Manual (A-F Letter, 2011) specifies that bonus points are awarded to schools with 16 or more ELL students when:

- ELL students are enrolled continuously in the ELL program within the school for at least 150 calendar days
- 30% of their ELL students reclassify to proficient according to the Arizona English Language Learner Assessment (AZELLA). (p14)

This bonus structure begs the question: If Arizona legislators believe that students will be be proficient in English language after one year of SEI then why is 30% proficiency reclassification considered acceptable? Additionally, why do they fund the program for 2 years per student?

Research shows that language acquisition takes longer than one or two years. Demie (2013) found that students require five to seven years to become fully confident in their use of the English language. Moreover, Demie found that acquiring English takes approximately 6.8 years for Spanish-speaking students (see Table 2). This is 4.8 years longer than SEI is funded in Arizona, which has a large Spanish-speaking ELL population.

Table 2

Average Number of Years Spent in Each Stage of English Fluency for Spanish-Speaking Pupils Ages 6–11

Stage	Years in Stage
1: Beginners & New to English	1.5
2: Becoming Familiar with English	2.6
3: Becoming Confident as user of English	2.7

Note. Adapted from "English as an additional language pupils: How long does it take to acquire English fluency?" by F. Demie, 2013, *Language & Education: An International Journal*, *27*(1), p. 66. Copyright 2013 by Taylor & Francis Ltd.

Cook, Boals, and Lunberg's (2011) research also shows that language acquisition requires more time than Ariz. H.R. 2064 stipulates. The researchers found that ELL students achieved proficiency at different rates based on the students' initial language proficiency, home environment, and culture. For example, they found that, "Two-thirds of students starting at an [English Language Proficiency] level of 4 attained proficiency in five years" (p. 68), while only 10% of those who started at minimally proficient levels gained proficiency in the same five-year span. Thus, initial proficiency levels affect proficiency rates over time.

Historical Account of ELL Funding — State and Federal Perspectives

Beginning in 1967, the federal government enacted Title VII funding of bilingual programs to meet the educational needs of the nation's growing population of ELLs. Initially, funds were obtained by districts that went through the proposal process. Yet, although funds were available starting in 1967, it was not until 10 years later, after the 1974 Supreme Court case of Lau v. Nichols, that bilingual education services became widespread in schools across the country.

Between 1990 and 1998, federal funding for LEP students increased from approximately $189 to $204 million. At the same time, the LEP population increased to more than 5.3 million by 2008-09, with most of the LEP population residing in California, Texas, Illinois, Florida, and New York (Odden & Picus, 2014, p. 135). Thus, the per student funding was approximately $38 – hardly an adequate amount to ensure access to equal and equitable educational opportunities.

In 2002, the original Title VII was absorbed into the No Child Left Behind Act (NCLB) and given the new name of Title III. Under Title III, funding was offered through two grants; one provided for English language acquisition programs and the other for the improvement of those programs. Calculation of grant money follows an 80/20 split, with 80% of the funding based on LEP student headcount and the remaining portion dependent on the number of immigrant students enrolled within a local education agency (LEA). According to Odden and Picus (2014), estimates for Title III funding exceeded $730 million for the 2011-12 academic year. Given the growing population of LEPs, LEAs only receive a minimal amount of the $730 million; for example, a district in the west valley of Phoenix with an ELL enrollment of 284 students only received $84,000 which is used to compensate one full-time teacher with benefits (ADE, 2012b).

English Language Instruction in the United States

Prior to Arizona's Proposition 203, which introduced English only instruction, bilingual and dual language programs were used to support ELLs. During the 1960s Mexican Americans and Puerto Ricans had also initiated movements to have their home language and cultures incorporated into public education. In Los Angeles, Mexican American students began a movement to increase bilingual teachers and resources in public schools; they boycotted four Los Angeles high schools demanding that the schools hire more Spanish speaking teachers, provide Mexican food in cafeterias, and fire teachers who "appeared" prejudiced against Mexican Americans. During this time, Native Americans were also pursuing bilingual and bicultural education (Spring, 2008). In 1968 the federal government passed the Bilingual Education Act, also known as Title

VII of the Elementary and Secondary Education Act (ESEA). All of the efforts made by Latino and Native American groups to increase cultural resources and bilingual education were erased in 2001 by the reauthorization of Title I of the 1965 Elementary and Secondary Education Act (ESEA) called No Child Left Behind (NCLB). Title I mandated that public schools teach English without support for minority languages; therefore, federal resources were redirected toward English acquisition and away from bilingual education (Spring, 2008).

Research has emphasized the importance of incorporating culture and home language into curriculum for ELLs. Specifically, Haas and Gort (2009) suggested three principles of quality education for ELLs.

- Principle 1: Build on children's home language to develop English, and if possible,
- Principle 2: Foster the preservation of the home language and encourage bilingualism and outcomes for ELLs (p. 124).
- Principle 3: Quality instruction for ELLs requires the continued successful integration of language and content teaching (p. 126).

Currently, Arizona's monolingual "English only" model does not embrace these three principles; Arizona does not permit utilization students' non-English native languages in public school classroom instruction. This, in essence, denies students their cultural identity.

Haas and Gort maintain that home language integration is a key component for ELL success; however, Pacheco's (2010) year-long study of a bilingual school, demonstrates that teachers' failure to properly interact with students and families can be

more detrimental than not having the use of ELLs native language. Good, Masewicz, and Vogel (2010) drew a similar conclusion. Their qualitative study explored barriers to academic achievement for Latino ELLs. The authors claimed that traditional Hispanic family cultural values and beliefs focus on relationships and not on competitive factors such as academic achievement. Five themes emerged from their study:

1. communication gaps,
2. lack of support,
3. lack of teacher preparation,
4. lack of a systemic, articulated district ELL plan, and
5. cultural clashes.

Cultural clashes occurred because families who emigrated from Mexico perceived teachers as extensions of their own families and expected the teachers to be as committed to the students as they would be to their own children. The parents' perspectives on communication were cultural concern due to their emphasis on relationships over simple language. A primary concern by parents and ELL teachers was the lack of multicultural preparation of the teachers. The findings of Good et al. (2010) were similar to those of Pacheco which included:

1. Teachers held low expectations of ELL and devalued the students' native culture and language, and
2. Students were blamed for their own low academic achievement.

The research in English learner education demonstrates that academic vocabulary and ideology is affecting ELLs' overall achievement in all subjects. To support the theory, Ernst-Slavit and Mason (2001) examined oral academic language used by

teachers during mathematics, social studies, and language arts instruction in mainstream classrooms. They found that ELLs had limited understanding of the academic language; however, the authors argued that ELLs can be successful if the teachers utilize specialized content language. The researchers also argued that ELLs had few opportunities to hear specialized language from their teachers during content instruction, which hindered their ability to fully understand the content.

Math experts have provided strategies to support and improve ELLs' math achievement (Willig, Bresser, Melanese, Sphar, & Felux, 2010). Some strategies include providing extended time for students to develop responses and providing students with cues instead of giving them the answer. The following is an example of how to prevent mimicry by students.

Teacher: How do you solve the problem?

Student: Shrugs his shoulders.

Teacher: What would you do first?

The successful use of the strategy depends on the students responding cognitively, therefore allowing the teacher to assess student understanding. To further reduce mimicry, the math experts also recommended relating key concepts to personal experiences. One expert, Pat Roth, provided an example of asking a student from Holland to recite a term in Dutch before saying it in English (Willig et al., 2010). This type of recommendation is not endorsed in English only instruction, and thus illustrates how ELLs are denied access to their culture in the classroom. Another support strategy is to use Socratic or open-ended questions, such as "Why would you say that?" This type of questioning may help identify and properly support LEP students' language and

academic needs. When using this technique, teachers must be cognizant of the additional time ELLs need to craft a thoughtful response.

Bilingual Education

Ariz. H.R. 2064 states that students should remain in the Structured English Immersion (SEI) program for only one school year. There is evidence that models similar to the SEI program could be successful. One such example is a six-year longitudinal study of 11,000 students from several New York City public elementary schools in first through sixth grades (Conger, 2010, pp. 1108-1112). The study included English speaking, Spanish speaking, and Chinese speaking students. Upon surveying the 69 English-language instruction teachers, the researchers found that the Spanish bilingual program was supported with both Spanish and English teacher resources, including textbooks and additional student material, whereas the Chinese bilingual program was limited to English language teacher resources, including textbooks and additional student resources. In both situations the teachers spoke English and the students' native languages to support instruction. Conger (2010) found that students who were well supported with their native language in the classrooms had better academic outcomes than students who were minimally supported with their native languages. Conger further compared the Bilingual program to an English as a Second Language (ESL) program in the New York City school district. The ESL program allowed the English Learners (EL) to receive instruction in mainstream classrooms for much of the day, but they they were pulled out of the classroom for small group instruction which included English grammar, vocabulary and communication which was taught entirely in the English language. Results were that 66% of the ESL students were still classified as ELs after one year

while 90% of students in the bilingual education programs were still considered ELs. Yet, despite this seemingly negative impact of bilingual education, the longitudinal data revealed that the gap narrowed over several years and fewer bilingual program students remained ELs than ESL program students.

Moreno (2012) found similar outcomes in bilingual programs that focus on replacing students' native language instead of using students' native language to scaffold support for teaching academic content in English. Specifically, Moreno found that not attending to learning content first resulted in failure to promote English proficiency, which in turn produced low academic achievement results. Thus, it stands to reason that people who learn second languages do not have to relearn basic facts such as math algorithms, just translated words. Providing various examples in students' native language may support their higher-level thinking skills.

Hellekjaer (1999) also suggests that teaching content should be the highest priority and learning a second language should be a lower priority. Students who struggle with comprehension of a second language are usually struggling to make inferences because they lack cultural or factual content knowledge. Similar to a highly proficient math teacher's ability to use inquiry-based math instructional methods rather than algorithms to build a strong base knowledge for the students, teachers who are highly proficient in their students' native language can bridge the gap between mere definition and true understanding.

Language research shows that children with strong academic backgrounds in their heritage language will be able to build upon that strong educational foundation when acquiring a second language (Hellekjaer, 1999). In their extensive review of language

acquisition, Faulkner-Bond, Waring, Crenshaw, Tindle, and Belknap (2012) identified two types of bilingual programs. The first was transitional bilingual education (TBE), also known as early-exit bilingual education. Typically beginning in grades K or 1, TBE students receive most of their academic instruction in their native language and transition to English over time until the instruction is presented primarily in English, which typically occurs in middle school. The second program type was developmental bilingual education (DBE), also known as late-exit bilingual or maintenance bilingual education. Like TBE, DBE also begins in grades K or 1 and students initially receive most of their academic instruction in their native language then transition to English over time. However, the native language and English language are used equally through completion of elementary school, even if the students attain full English language proficiency. Faulkner-Bond et al. suggest that bilingual programs can and should employ English as a Second Language (ESL) best practices and at least four of the studies they reviewed found that bilingual programs that utilize students' native language to support instruction over time appear to have better outcomes than using only ESL methods.

All of the bilingual programs and associated research studies mentioned in this subsection suggest that more time is needed for ELLs to 1) become English Language proficient, and 2) become academically proficient. It is probable that the recommended amount of time for bilingual education success and the need for teachers who are fluent in foreign languages have influenced policy makers to move to English-only Immersion programs.

Arizona's English Language Learners

Ariz. Rev. Stat. § 15-752 (2006) mandates all students in Arizona shall be taught in English, and students who are identified as ELLs will be educated in sheltered English classrooms. Schools are encouraged to place ELLs of similar English language proficiency regardless of age or foreign language into the same classrooms to learn English (Arizona State Legislature, n.d.). Identification of ELLs is directed by Ariz. Rev. Stat. § 15-756 (n.d.) which mandates that all public and charter schools identify the home language for all new students at the time of enrollment. Parents are required to complete a PHLOTE survey indicating if English or another language other than English is spoken at home. Students who have a home language other than English spoken at home will take the AZELLA to determine their English language proficiency (ADE, 2013b; Ariz. Rev. Stat. § 15-756, n.d.) The AZELLA results determine students' English language proficiency of pre-emergent, emergent, basic, intermediate, or proficient; any student with an overall composite score below proficiency are classified as an ELL and enrolled into an English language program.

English Language Instruction in Arizona

For fiscal year 2014, ADE reported that 77% of the 85,000 identified ELLs in Arizona were in grades K-5, 13% were in grades 6-8, and the remaining 10% were in grades 9-12 (Koenig, 2015). Also, English language instruction in Arizona occurred predominately in the SEI Classroom during 2014. Finally, ADE (as cited in Koenig, 2015) reported that 72% of ELL students received ELL services in the SEI classroom and 27% were served on an Individual Language Learner Plan (ILLP) in 2014; the remaining

1% received services via a bilingual waiver. ADE requirements for the SEI classroom include a minimum of four hours of ELD instruction daily that focuses on Arizona's English Language Proficiency (ELP) standards. The daily four-hour block must be constructed with targeted instruction in the five areas of reading (60 minutes), writing (60 minutes), grammar (60 minutes), and oral language and vocabulary (60 minutes). The Office of English Language Acquisition Services (OELAS) of ADE differentiates SEI instruction from general education instruction as follows:

> ELD is a type of instruction that has as its orientation the teaching of English language skills to student who are in the process of learning English. It is distinguished from other types of instruction, e.g. math, science, or social science, in that the content of ELD emphasizes the English language itself. ELD instruction focuses on phonology (pronunciation – the sound system of a language), morphology (the internal structure and forms of words), syntax (English word order rules), lexicon (vocabulary), and semantics (how to use English in different situations and contexts). While there are some obvious connections to English language arts instruction, ELD is foundational for English language acquisition work, since listening, speaking, reading, and writing tasks conducted in English are considerably more difficult in the absence of knowledge about how English operates. Reading and writing, aligned to the Arizona K-12 English Language Learner Proficiency Standards, are also considered content in SEI classrooms (ADE, 2008a, p.3).

The English Language Proficiency (ELP) Standards include a strong grammatical foundation that is very important to language acquisition process. The ELPs have been

created to incorporate Common Core language skills (ADE, 2012a). In 2012 an "all inclusive" ELP Standards document was created to help teachers plan and prepare for instruction delivery. Features of the 2012 "all inclusive" document include:

1. The integration of the Discrete Skills Inventory (DSI)
2. Standard English conventions were added to the language strand to teach the grammar component of the SEI model, and
3. The language strand now includes vocabulary standards.

ADE has also advised SEI classroom teachers to teach to the high intermediate (HI) level and not rush to provide scaffold support to the students (ADE, 2012a). ADE has provided this guidance because the HI performance indicators are closest to the expectations of non-ELL students. Thus, if ELL students can perform at the HI level, they should be able to pass AZELLA and be on par with their English-speaking peers in the area of English Language Arts (ELA) as shown in Table 3.

Table 3

Example of the 2012 ELP Standards — ELL Stage II, Listening and Speaking: Grades 1-2

	Level of Proficiency				
Standard	Pre-Emergent	Emergent	Basic	Low Intermediate	High Intermediate
	The student will demonstrate understanding of oral communications by:				
Std 1: The student will listen actively to the ideas of others in order to acquire new knowledge	identifying phonemes in the initial and/or final positions of words.	distinguishing between phonemes in the initial, medial, and final positions of words.	distinguishing between phonemes in the initial, medial, and final positions of words and phrases (minimal pairs, minimal phrases).	distinguishing between phonemes in the initial, medial, and final positions of words, phrases and sentences with instructional support (minimal phrases, minimal sentences).	distinguishing between phonemes in the initial, medial, and final positions of words, phrases and sentences.

Note. Adapted from "English Language Proficiency Standards" by Arizona Department of Education. Copyright 2012 by Author.

Once the students are initially enrolled in the SEI program they may exit the program (ADE, 2014a) if they are:

1. Reclassified as Fluent English Proficient (FEP) through reassessment

2. Withdrawn by parent request
3. Withdrawn due to SPED criteria.

ELLs who are reclassified after a single year in an SEI classroom may have the best opportunity to benefit from the full curriculum that their mainstream peers receive; however, many ELLs are enrolled in the SEI classrooms for multiple school years.

Arizona English Language Learner Assessment (AZELLA)

The AZELLA was developed to assess student proficiency in accordance with Ariz. Rev. Stat. § 15-756 (2006) which mandates that all students' English language proficiency be assessed. The AZELLA is a criterion-referenced test designed to measure students' English language proficiency, based on the Arizona English Language Proficiency Standards (ELPS; ADE, 2014a, p. 26). There are four domains tested in the AZELLA, they include:

1. Listening – Students listen to an audio recording of selected passages and respond to multiple choice questions on paper.
2. Reading – The students read passages and answer two to four multiple choice questions per passage.
3. Writing – The writing sub-test includes both multiple choice and open-ended questions. Students are able to provide extended writing responses for open-ended questions. The items in this sub-test include narrative, expository, persuasive, and functional types of text. Students are provided blank paper to use for prewriting and thought organization. The written sub-test is hand graded based on a rubric.

4. Speaking – The speaking portion includes the use of a telephone. Testers accompany students to a telephone and dial a number which connects to a state AZELLA site which provides automated questions to students. Students have to respond by speaking into the phone. Responses are recorded and scored electronically.

Each AZELLA domain has a scale score which ranges from 100 to 400 (ADE, 2014a). There are five proficiency levels identified from the AZELLA:

1. Pre-Emergent – Lowest proficiency level that will have a score of less than 230
2. Emergent – This level will have a score of less than 230
3. Basic – The basic level also has a score of less than 230
4. Intermediate – Intermediate level includes students who score 230-249
5. Proficient – Students are considered proficient in English language scoring 250 or greater.

The test creator, Harcourt Assessment, a division of Pearson, has demonstrated that the test is has strong internal consistency and inter-rater reliability and is therefore reliable (ADE, 2007a; ADE, 2013b). The validity of the AZELLA was ensured by:

> involving Arizona educators, ADE, and Pearson (vendor/test creator) in the development process, the test construction which included field test items, operational test items and item content and bias review, and processes, procedures, and policies for test administration (ADE, 2013b, pp. 298, 299).

The AZELLA is administered to students at least once per year until they achieve a composite score of proficient. Once students obtain a composite score of proficient,

they are considered English proficient and are transferred into mainstream general education classrooms (OELAS, n.d.). Once ELLs have tested proficient on the AZELLA, they will be assessed again at the end of each year, for two years after they received the proficient classification. If a student who was previously in a SEI classroom fails to test proficient on the AZELLA for two years following his or her exit from the SEI classroom, the student will be reenrolled in the SEI classroom with parental consent (Arizona State Legislature, n.d.).

Arizona's Instrument to Measure Standards (AIMS)

No Child Left Behind (NCLB) required states to develop challenging academic standards and create assessments that were aligned with the NCLB achievement standards (USDOE, 2007). Arizona's standards-aligned assessment, Arizona's Instrument to Measure Standards (AIMS), was first administered to Arizona students in grades 3, 5, and 8 in 2000. At that time, it was a criterion-referenced assessment based on the 1996 Arizona State Standards. In 2005, the AIMS was administered to grades 3 through 8 and was constructed using Arizona's 2003 reading and math standards as well as the 2004 writing standards. The 2005 administration of AIMS also included norm-referenced items alongside the criterion referenced items, making it a dual-purpose assessment (DPA; ADE, 2013a). The addition of norm-referenced items allowed for comparison and evaluation of Arizona's student outcomes on a national level. All students, regardless of special education or limited English proficient (LEP) status, were required to take the AIMS annually until the final administration in 2014. Students' test

scores were used to assign a proficiency label of Exceeds (I), Meets (M), Approaches (A), or Falls Far Below (FFB) the standards.

NCLB, also set the following guidelines for assessments administered to LEP students were addressed with the following instructions:

- "The assessment system must be designed to be valid and accessible for use by the widest possible range of students, including students with disabilities and students with limited English proficiency" (USDOE, 2007, p. 4).
- The assessment system must ensure that LEP students are assessed without sacrificing validity and reliability and, at the same time, provide accommodations which may include, "…to the extent practicable, assessments in the language and form most likely to yield accurate and reliable information on what they know and can do in academic content areas, until such students have achieved English language proficiency" (USDOE, 2007, p. 4).
- Disaggregation of assessment results must include English proficiency status as its own category within each school and district (USDOE, 2007).

The U.S. Department of Education approved Arizona's reading and math assessments in June 2006. They received full approval with recommendations, which included providing additional support for English language learners. Recommendations to accommodate ELLs included linguistic accommodations, such as simplifying the English translations for math and science and including a CD with standardized translations. The accommodations recommended in the letter stated, "These accommodations are not in

conflict with Arizona's English-only statutes and have proven to be effective and valid in other states" (Johnson, 2006). The recommendation of providing standardized translations of the AIMS for ELLs was never implemented.

Challenges Faced by English Language Learners

In 2007-2008, Arizona was in the bottom third of fourth grade reading proficiency in the United States with only 25% of students reading at or above proficient levels (USDOE, 2009). According to statistics from the Migration Policy Institute, Arizona had 166,000 ELLs students at that time, 90% of whom spoke Spanish (Jimenez-Castellanos, Combs, Martinez, & Gomez, 2013). While Arizona legislatures want the public to believe that the state is doing what is best for ELLs, the NAEP showed a widening achievement gap between Arizona's ELLs and those in the rest of the nation. Results from 2010-2011 found that only 42% of the ELLs in Arizona were proficient in fourth grade basic math compared to their mainstreamed Latino peers (70%) and Caucasian peers (89%) (Jimenez-Castellanos et al., 2013). Unfortunately, the ELLs may never catch up.

> Today is your first day of second grade in the United States and you do not speak a word of English. You are in rural Georgia, and neither your classmates nor your teacher speak a word of Spanish, your primary language. You have arrived in the middle of the year, and the other students are fully competent in the routines of the classroom. The desks are arranged in groups of four, coats and backpacks hung along the wall. Some students sit in a reading corner, paging through books. You are

> ushered to a seat. As the day proceeds you carefully mirror the actions of your classmates. And you smile a lot. The teacher smiles back at you. You seem to be doing well. And as the days go on, you will do better and better. You will know when to go to the door, when to raise your hand (so as not to be called on), when to smile, when to stand and sit, when to sharpen your pencil, when to go to the restroom, and what to bring for lunch. You are learning how to be a student in this classroom, and you will polish these routines for years. You will learn them so well that you will not need to learn other important elements of student achievement. You will not learn how to read in English. You will not learn how to write. And gradually, you will not care about learning these things anymore. You will drop out. (Rymes & Pash, 2001)

Rymes and Pash (2001) describe the act of "being a student" as adapting to social routines a school setting to be perceived as ordinary and pass from grade to grade. Non-English speakers who have attended school anywhere, understand there are norms which all students learn and to which everyone in the system responds. In Rymes and Pash's study, ELL students who engaged in the "being a student" performance adapted to various teacher questioning strategies by mimicking other students or waiting for the teacher to give in and provide support. These strategies are called word games. For example:

Teacher: What is your favorite part of the story?

Student: [Shrugs his shoulders]

Teacher: Did you like it when Joey played with his dog BowWow?

Student: Yes, I have a dog too.

In the word game example, the student never demonstrates their knowledge of the story's content. One possible strategy ELL teachers could utilize to counter their students' word game playing strategies is the Socratic questioning technique.

Some of the perceived word games may represent a deficit in an ELLs working memory. Bumgarner, Martin and Brooks-Gunn (2013) studied the association between approaches to learning and math achievement in Hispanic immigrant students. The researchers concluded that ELLs had to retain greater amounts of information in their working memory to solve problems. When teachers attempt to scaffold learning for students, the wait time provided may not be sufficient to allow ELLs to recover background knowledge and/or translate information from their primary language into English, and then respond. The Arizona ELL stage III language standards rubric shows a distinct difference in proficiency and pre-emergent levels. The following example demonstrates the wide difference between pre-emergent and proficient third to fifth grade ELLs' vocabulary requirements for

1. pre-emergent—repeating common contractions and identifying the words that comprise them,
2. proficient—determining the meaning of compound words using knowledge of individual words (ADE, n.d.b.).

Some students who have acquired effective methods of performing the "being a student" routines have, unfortunately, been labeled as a special education student. When ELL students are able to convince teachers that their oral discourse is correlated to their

cognitive ability, teachers may be inclined to refer them for special education because their academic achievement is not aligned with their oral display of knowledge.

Student perceptions of what their teachers expect from them also play a role in student achievement (Bae, Holloway, Li, & Bempechat, 2008). If students believe that their teachers are pleased with their behavior, then they will continue to perform the same behaviors. Therefore, the SEI classroom teacher must be responsible for challenging the ELL students to become English language proficient as soon as possible.

A common assumption among Americans is that immigrants do not want to learn English; however, research demonstrates the opposite. In a two-year study by Warriner (2007), she recounts the plights of three women who emigrated from Sudan and believed that their abilities to succeed in America would be strongly influenced by their proficiency in the English language. Although they were adult learners who were able to select their program of study, two of three participants were unable to find well-paying jobs when they obtained English language proficiency. Warriner also highlighted a negative attitude towards language diversity in the United States and explained that bilingualism could contribute to threatening national unity. What is interesting about the attitude is that most of America's early immigrants were also Limited English Proficient.

Ideology plays an important role in the treatment of ELLs in and out of education. Children are more focused on social success with their peers than considering adulthood and future livelihood responsibilities. Their parents however, do understand the importance of their children's success, however their own limited English proficiency limits their ability to do more than agree with local educators about the importance of education. The second-grade student observed by Rymes and Pash (2001) was very

amiable and able to play the role of "being a student" well. However, Rymes noted that every time she visited the student's home, the mother would scurry the student into his room to do his homework and tell Rymes that she believed in the importance of education. What Rymes observed was that the student appeared to have another routine of going outside to play immediately upon arriving home from school and that there was little printed literature or material for learning in the home. Many Hispanic parents hold high hopes for their children's academic success; however, they struggle to support them with their homework and class projects due to their own limited English language skills (Bumgarner, Martin, & Brooks-Gunn, 2013).

Legislative Acts that Impact English Language Learners in Arizona

Fine, Jaffe-Walter, and Pedraza (2007) argue that if educators perceive LEP as an internal border that stands between students and academic success, they must also realize that people will attempt to cross the borders either as prescribed by laws, policies, and procedures, or through unauthorized means. In the case of elementary students, this may mean behaving in ways that they have learned will allow them to pass from grade to grade, with little English proficiency. This is where the debate of ideology continues. If the families who are new to communities are undocumented and not registered to vote, the decisions are still being made by the older members who no longer have children in schools. How are U.S. citizens, who wish to preserve traditions, going to influence illegal immigrants without violating their right to due process under the Fifth and Fourteenth Amendments? One measure used by legislators in Arizona was the introduction of Proposition 203, which repealed the former bilingual education laws.

Proposition 203 required all classes be taught in English and students who were classified as ELLs be placed into SEI classrooms (Arizona Secretary of State, 2000).

There are various models of ELL education throughout the country, including bilingual education, which many educators believe is more effective than English only instruction. In fact, when Proposition 203 was introduced in Arizona, educators primarily argued against the measure. According to the text of the proposed amendments to Proposition 203, Margaret Garcia Dugan of English for the Children of Arizona, Ron Unz of English for the Children of California, Congressman Matt Salmon, and Joel Harnett of Valley Citizens League argued in support of Proposition 203. In contrast, Penny Kotterman of the Arizona Education Association, Mary Setliff-Hodge of the Arizona English Teachers Association, Delight Diehn of the Arizona Teachers of English to Speakers of Other Languages organization, Kelsey Begaye of the Navajo Nation, Esther Furan Lumm of Arizona Hispanic Community Forum, and Lorraine Lee of English Plus More argued against Proposition 203. Additionally, the Arizona School Boards Association opposed Proposition 203 for "two reasons: it eliminates the authority of schools in offering programs based on the needs of their individual students, and it eliminates the choices of parents in selecting programs that best suit their children" (Arizona Secretary of State, 2000).

Proposition 203 was designed to assign ELLs to English immersion classrooms for one year; however, many students do not test as English language proficient after one year and have to remain in the segregated classrooms for several years (Jimenez-Castellanos et al., 2013). The passing of propositions to regulate or deny the use of any language other than English is, in effect, building borders to limit ELLs' academic

success, which could be considered denying them FAPE. It appears that the internal education borders are specifically constructed. According to Fine, Jaffe-Walter, and Pedraza (2007), states with a Hispanic population above the national average, 67% are required to take high school exit exams, with the number rising to 89% by 2008; in contrast, only 13% of states with above-average populations of white students require high school exit exams (p. 78).

California passed similar measures (Proposition 227) requiring English only instruction for all students (Crawford, 1998). In 1997, California used bilingual programs to instruct approximately 30% of their English Language Learners (ELLs). Once Proposition 227 was enacted the percentage of ELLs being taught using bilingual instruction dropped to a mere 5% (Izumi, 2008). However, ten years after the passing of California's Prop 227, the effectiveness of the proposition at a state level remained unknown due to the state's less advanced student database system (Izumi, 2008). According to the Pacific Research Institute, ELs in some California school districts demonstrated significant improvement in academic achievement, however, the causes for this achievement were difficult to determine. One explanation Izumi (2008) offered was that specifically identifying ELs led to increased English language acquisition instruction. Other possible explanations offered by Izumi included: 1) teachers were not providing English-only instruction with fidelity and allowed students' native languages to be spoken in classrooms during instruction, and 2) administrators were slow to implement the provisions of the proposition.

The true impact of California's Prop 227 may never be truly known due to the introduction of Proposition 58: English language education, which repealed Proposition

227 in 2016. The three main provisions of Prop 58 include 1) the removal of restrictions to Bilingual programs, 2) a requirement for districts to respond to some parental demands for intensive English instruction, and 3) a requirement for school districts to communicate with community members about the English language learner programs available (California Legislative Analyst's Office, 2016). Such responsiveness to student needs becomes even more imperative in light of the changing demographics of the United States.

Researchers estimate that by 2030, two of every five American public school students will be learning English as a second language, and many of them will have been born in other countries (Shah & Cavanagh, 2012). The United States Census Bureau estimates there were 11.4 to 13.9 million foreign-born immigrants who entered the U.S. from 2000-2009 (Bhaskar, Arenas-Germosen, & Dick, 2013). Many of the immigrants are concentrated specifically in California, Florida, Hawaii, New York, Texas, Arizona, Colorado, Illinois, New Jersey, and New Mexico, which provide additional challenges for educators (Albo Carabelli, 2009, p. 117). With all indicators pointing toward significant growth in non-English and limited English speaking populations, one would assume that Arizona would find ways to embrace newcomers, along with plans to integrate their home cultures and languages, rather than attempting to sabotage true promises for success. Businesses have already embraced the entrance of newcomers. For example, education resource companies such as Pearson Education, McGraw-Hill, and Houghton Mifflin, are taking the opportunity to develop curriculum for teaching ELLs. Given Arizona's current ELL population and expected of growth within that demographic, it is

important to ensure that educators have the professional development and resources needed to tackle the unique challenges inherent to teaching this specialized population.

Ariz. H.R. 2064 required the state board of education to identify, for teachers, the qualifications for obtaining Structured English Immersion (SEI) endorsements. Although the provisions of the bill permitted alternate forms of training for teachers, the alternative training was required to be comparable in amount, scope, and quality, to courses offered by a university or college (H.R. 2064, 47th Leg., Reg. Sess., Ariz., 2006). Requiring teachers to take additional college courses to obtain the Structured English Immersion (SEI) endorsements required to become a fully certificated teacher in Arizona essentially placed the burden of funding the training on the teachers.

Ariz. H.R. 2064 was approved by Arizona's House of Representatives on February 27, 2006 with a vote of 31 Yeas and 27 Nays. All of the Yea votes were from Republicans. The Nay votes were divided; 20 Democrats and seven Republicans. After passing the House of Representatives, Ariz. H.R. 2064 moved to the Senate where it passed on March 2,2006 with a vote of 16 yeas and 13 nays. All of the Democratic senators and one Republican, Senator Thayer Verschoor, voted nay (Vote Smart, 2006). All sponsors of Arizona H.R. 2064 have left office since its passage. Ariz. H.R. 2064 was sponsored by Senator Chuck Gray (AZ - R). Co-sponsors included:

- Representative Judy Burges (AZ - R)
- Representative Pamela Gorman (AZ - R)
- Senator Karen S. Johnson (AZ - R)
- Representative Rick Murphy (AZ - R)
- Representative Russell K. Pearce (AZ - R)

Law makers are adding capricious guidance to schools to appear sympathetic to student cultures. For example, Ariz. H.R. 2728 (H.R. 2728, 48th Leg., Reg. Sess., Ariz., 2007) was developed in 2007 to ensure that a student's cultural background was considered when 8th grade promotion criteria are being applied. This legislation is written to convey that the state is working in the best interest of these students' education, however, the bill fails to mention fiscal support for school districts as they implement the mandate.

Policy makers have a civic duty to be fiscally responsible, but have they gone too far with decisions in education? According to the Center for Student Achievement, Arizona's per-pupil spending in 1987 was slightly above the national average ($3,941 vs. $3,839, respectively). Unfortunately, by 2013 Arizona was ranked of 49th in the nation for spending per pupil for spending $8,616 compared to the national average of $12,552 (Center for Student Achievement, 2017). In addition to spending well below the national average per-pupil, student-teacher ratios in Arizona are very high compared to neighboring states, which means that schools in Arizona are placing more students in classrooms to maximize their resources (Center for Student Achievement, 2017). Thus, fiscal considerations appear to have more influence on Education spending than on students' needs. A key provision of Proposition 203 was that school districts would have to reallocate their normal funds to make up for any additional costs incurred by SEI programming. Additionally, proponents of the measure argued that the state would save a maximum of $20.3 million from passage of the measure (Proposition 203, 2000). This information, may seem to indicate that saving money was a higher priority for the legislature than for ensuring equitable and appropriate education for Arizona's ELLs.

Interestingly, provisions for adequate fiscal resources to support the mandate were not included in the proposition.

To assist school districts in the implementation of Arizona's ELL mandates an ELL Task Force was created as a provision in Ariz. H.R. 2064 in 2006, after decades of court battles (Jimenez-Castellanos et al., 2013). The ELL task force was created to address English language education for children in public schools. Ariz. Rev. Stat. § 15-756.01 (2013) specified that the ELL task force (nine total) should be comprised of three members appointed by the superintendent of public instruction, two members appointed by the governor, two members appointed by the president of the senate, and two members appointed by the speaker of the house of representatives. The members of the task force were required to 1) serve four-year terms, and 2) elect a chairperson from among the members of the task force. Additionally, the ADE was required to provide staff support for the task force (H.R. 2064, 47th Leg., Reg. Sess., Ariz., 2006). The task force was responsible for developing research-based models of SEI programs for public and charter schools. They were also given parameters, including that ELL students must spend a minimum of four hours per day in English language development classrooms, and that the program should not exceed one year (Arizona State Legislature, 2006). Yet, many students remain in ELD classrooms for more than one year although state mandates will only allow school districts to calculate ELL funding for the first two years. The mandates do not incorporate student cultures or home languages into supports or resources for ELLs' academic needs or English language proficiency.

Wightman (2010) has identified many shortcomings in Arizona's model for educating ELLs. First, isolation of students into a classroom based on primary language

and proficiency levels is problematic, but legal since it is considered to be akin to ability grouping. Since ability grouping is legal, use of SEI classrooms is not considered a form of segregation. Yet, there is pending litigation to determine whether Ariz. H.R. 2064 is constitutional. It is unlikely the bill would pass the three-prong test of sound educational theory, effective program implementation, and program effectiveness. Also, of concern is the method for determining proficiency. The validity and reliability of the current test is in question. Additional, points of concern are the lack of general education opportunities for ELLs, the lack of a research foundation for the model being used, and the unrealistic expectation that students will test "proficient" in one year despite research that shows it may take up to seven years for a student to obtain full academic language proficiency (Rymes & Pash, 2001). Nonetheless, it seems that Arizona legislators are beginning to realize that educators should be in control of educating students. Governor Brewer signed Ariz. H.R. 2425 on March 28, 2013 which replaces the ELL task force with the State Board of Education (H.R. 2425, 51st Leg., Reg. Sess., Ariz., 2013).

Summary

Chapter two provided a historical and legislative overview of ELL instruction in the United States and Arizona. The use of bilingual instruction provided support for ELLs by allowing teachers to use home language to create meaning and definition of academic content to limited language proficient students. In spite of the wealth of research that supports the benefits of bilingual education, the mandated English only instruction legislation in Arizona has made it illegal for public schools to provide the bilingual support to ELLs. Once students are identified as ELLs the methods of reading

instruction become different from the education received by their mainstream peers, which may significantly impact their ability to obtain similar proficiency levels in reading. The one to two years of SEI instruction recommended and funded by the state of Arizona does not meet the widely recognized timeframe for attaining a level of language proficiency that would allow students to compete academically with their English-only peers. Research stipulates that students need an average of five to seven years to become fluent in English – enough that their level of proficiency no longer impedes their ability to gain academic knowledge at a level commensurate with their English-only peers. Arizona's current requirements for the instruction of ELLs do not fully support those students' academic needs.

Chapter 3: Research Methodology

Chapter 3 reiterates the research problem and describes the following: research design and methodology, population and sample, instrumentation, validity and reliability of instrumentation, data collection, and data analysis.

Restatement of the Problem

This researcher examined how the Language Arts rich environment of SEI classrooms affects ELLs' reading achievement on the AIMS annual assessment. ELLs are segregated into SEI classrooms where most of their day revolves around English language skills: 30 minutes of oral English and conversation instruction, 60 minutes of grammar instruction, 60 minutes of reading instruction, 60 minutes of vocabulary instruction, and 30 minutes of writing instruction (ADE, 2008b).

For students to actively participate in future global competition, they will need to receive a well-rounded education which includes the ability to work in multicultural environments and strengthen their science and math knowledge (Clough, 2008, p. 59-60), all of which may be jeopardized when ELLs are confined to SEI classrooms. Therefore, this study identified whether there was a significant difference in the reading achievement of ELLs in SEI classrooms and students in mainstream classrooms who received a balanced curriculum of language arts, math, science, and social studies.

Restatement of Research Questions and Hypotheses

RQ1. Was there a statistically significant difference between the third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who did?

> ***$H_0$1:*** Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI.
>
> ***H1:*** Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI.

RQ1a. What was the difference between the third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for one year?

> ***$H_0$1a:*** Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for one year.
>
> ***H1a:*** Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for one year.

RQ1b. What was the difference between the third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for two years?

$H_0$1b: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for two years.

H1b: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for two years.

RQ1c. What was the difference between the third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for three or more years?

$H_0$1c: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for three or more years.

H1c: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for three or more years.

RQ2. Was there a statistically significant difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who did?

$H_0$2: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI.

H2: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI.

RQ2a. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for one year?

$H_0$2a: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for one year.

H2a: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for one year.

RQ2b. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for two years?

$H_0$2b: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for two years.

H2b: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for two years.

RQ2c. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for three years?

$H_0$2c: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for three years.

H2c: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for three years.

RQ2d. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for four or more years?

$H_0$2d: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for four or more years.

H2d: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for four or more years.

Research Design

This is a causal-comparative, ex post facto, quantitative research study. This researcher examined reading outcomes of a sample grouped by tenure in SEI classrooms. The study is non-experimental because the researcher was not able to assign students to

groups and there was no manipulation of variables. The goal of this study was to test the impact of the Structured English Immersion instruction on reading achievement; hence, the quantitative design allowed for analysis of the numeric data.

The study population was already separated into SEI classrooms and mainstream classrooms; therefore, the study is a Nonequivalent Groups Design (NEGD; Trochim, 2006). Assessment results from state standardized tests administered to both the students in SEI classrooms and those in mainstream classrooms was used, therefore making the study an ex post facto (after the action) design. Also referred to as causal-comparative, this after-the-fact analysis established whether there were between-group differences in pre-formed groups to determine whether the independent variable (type of instruction: SEI vs. mainstream) affected overall student outcomes on the AIMS assessment (dependent variable).

Population and Sampling

The target population for this study was fifth grade students from the 2013-2014 school year cohort who have been enrolled in the school district continuously since their kindergarten school year (2008-2009). The sample was selected from one school district of approximately 4,500 pupils, using a combination of convenience and purposive methods. The total sample included all fifth grade students who have been continuously enrolled in the district since kindergarten. Data from the cohort included third and fifth grade AIMS results.

Sampling Procedures

Only ELL students who were enrolled in the school district continuously from their kindergarten through fifth grade school years are eligible for participation in this study as part of the SEI program. Students who never participated in the SEI program were identified for the sample by matching their assigned Student Accountability Information System (SAIS) numbers for Full Academic Year (FAY) third grade and FAY fifth grade. A total of 322 fifth grade students were identified for the sample. Of the total sample, 258 fifth grade students never participated in SEI classrooms and were therefore, part of the mainstream classrooms in the general education setting peer group. The ELLs were identified as non-ELP solely by the AZELLA (ADE, 2008b). Table 4 below provides details of the sample based on tenure in the SEI program.

Table 4

Study Sample, by SEI Program Tenure

SEI Program Tenure	N
Fifth grade students who	
Have never participated in the SEI program	258
Participated in the SEI program for one year	29
Participated in the SEI program for two years	12
Participated in the SEI program for three years	11
Participated in the SEI program for four years	5
Participated in the SEI program for five years	5
Participated in the SEI program for six years	2

Student ex post-facto data was analyzed to compare third and fifth grade AIMS reading achievement results. The results of the fifth grade students who were in the SEI program through fourth and fifth grades may be less conclusive due to the small sample size.

Sources of Information

Data for the study consisted of third and fifth grades AIMS reading data, provided by the state of Arizona. Arizona began administering the AIMS to third, fifth, and eighth grade students in the spring of 2000 and expanded the state assessment to all third through eighth grade students in 2005 (ADE, 2011a). The AIMS assessment was administered under similar conditions to students in grades 3 and 5 from 2005 – 2014 (ADE, 2014b).

Reliability and Validity

The consistency of the repeated testing provided reliability for the spring 2014 AIMS assessment (ADE, 2014b, p. 265). The validity of the AIMS assessment was measured over the course of a decade on students throughout the state in grades 3-12. The AIMS third grade and fifth grade reading assessments were constructed of both criterion-referenced test (CRT) questions and norm-referenced test (NRT) questions (ADE, 2014b). Both the third and fifth grade AIMS reading tests contained 39 CRT questions selected by teachers to measure levels of students' mastery and achievement relative to the state standards, and 15 NRT questions embedded by the Stanford 10 which were aligned to Arizona's content standards. The reliability of the AIMS was determined by assessing the internal consistency of the multiple-choice items and the inter-rater reliability of the hand scored written tests (Arizona's Instrument, 2014). Cronbach's

alpha formula was used to measure internal consistency for multiple-choice items and a stratified alpha (weighted average of Cronbach's alpha) was used for test items of different types and different maximum points (p. 254).

Data Collection

Permission to use district data for analyses was obtained from the district superintendent (see Appendix A). The AZELLA proficiency levels and third and fifth grades AIMS reading data, for the district under study, were provided by the state of Arizona.

Data Analysis Procedures

Data for the study consists of the third and fifth grade AIMS reading data provided by the state of Arizona. The AZELLA results were used to determine proficiency levels of ELLs. An overall score of proficient caused the student to be exited from the SEI program, all students scoring below an overall score of proficient remained in the SEI program. Exited SEI students were monitored and tested using AZELLA annually, for two years after exiting to mainstream classrooms; if a student tested below an overall score of proficient within the two years they were placed back into the SEI program.

Data used to assess the research questions regarding the third grade AIMS reading scores came from the 2012 administration of the AIMS reading subtest. The data used to assess the research questions regarding the fifth grade AIMS reading scores came from the 2014 administration of the AIMS reading subtest. Missing data was replaced with the overall group means from that administration of the AIMS assessment within the district.

Specifically, missing data from mainstream students was replaced with the overall mainstream group mean and missing data from an SEI student was replaced with the overall group mean for all SEI students.

All of the research questions were assessed using a between-subjects one-way ANOVA. A one-way ANOVA was selected as the most appropriate test because it draws comparisons across more than two groups at one time, reducing the risk of Type I errors associated with running multiple T-tests to receive the same information. Moreover, the between-subjects ANOVA was selected because the research questions and hypothesis required assessing comparisons of SEI & mainstream group scores within the same administration, rather than across the two administrations which would have necessitated use of a repeated measures ANOVA.

G*Power analysis. Prior to analyzing the data, a G* Power analysis was conducted to ensure valid results could be obtained from the study district's sample size. Though the initial goal of the study was to compare students who never received SEI instruction to students who were in the SEI program for one, two, three, four, five or six years, the groups were reconfigured (Table 5), after conducting the G* Power analysis, to maximize the possibility of achieving at least a medium effect. The analysis revealed that total sample size of 10 was needed to achieve a medium effect size and obtain a 99% chance of correctly rejecting the null hypothesis, indicating there was no statistically significant difference between the AIMS reading scores of students who never received SEI instruction than those who were in the SEI program.

Table 5 shows the new group configuration for ELLs. Specifically, for analyses using the third grade AIMS as a dependent variable, students who received SEI instruction for 3, 4, 5, or 6 years were combined into a group labeled 3 or more years. For the analysis using the fifth grade AIMS as a dependent variable, students who received SEI instruction for 4, 5, or 6 years were combined into a group labeled 4 or more years. The combined groups were created to account for the decreasing number of students who remained in the SEI program in grades 4 and 5. By grade 5 there were only two ELLs in the SEI program. Table 6 depicts the flow of students in and out of the SEI program across all six years of the students' formal primary education.

Table 5

Study Sample Grouping Scheme

SEI Program Tenure	3rd Grade	5th Grade
Never (Mainstream)	X	X
One Year	X	X
Two Years	X	X
Three or More Years	X	-
Three Years		X
Four or More Years		X

Table 6

Number of ELLs Per Grade Level and Academic Year

Grade (Academic Year)	*N*
Kindergarten (2008 - 2009)	64
1st (2009 – 2010)	35
2nd (2010 – 2011)	23
3rd (2011 – 2012)	12
4th (2012 – 2013)	7
5th (2013– 2014)	2

Summary

Chapter 3 reviewed the problem and described the research design and methodology, population and sample, validity and reliability of instrumentation, data collection, and data analysis procedures. Arizona's Instrumentation to Measure Standards (AIMS) was identified as the dependent variable and the two methods of reading instruction, Structured English Immersion program and mainstream reading instruction, were identified as the independent variables for this causal-comparative ex post facto study. Only the students who were in the school district for the entire six years were included in the study. Chapter 4 includes an overview of the descriptive statistics for both AIMS administration and the detailed data analysis.

Chapter 4: Findings and Results

The purpose of this study was to determine how instructional mandates from Ariz. H.R. 2064 and Ariz. Rev. Stat. § 15-751 – 15-756 affected the academic progress of ELLs in reading. Testing data were retrieved according to the procedures outlined in Chapter 3. A descriptive analysis of the dependent variables is provided first, followed by an overview of the findings and a detailed analysis of the hypothesis tests.

Descriptive Analysis

The 64 ELLs who received instruction in the state mandated SEI program in the study district were divided into three groups for analysis of the grade 3 AIMS reading administration and four groups for analysis of the grade 5 AIMS reading administration. For both sets of analyses, the comparative group was 258 mainstream students who received their education in the general education setting.

The descriptive statistics for both dependent variables, across all groups are provided in Table 7. The overall mean for the third grade AIMS reading administration was 454.14 (*SD* = 43.42), while the overall mean for the fifth grade AIMS administration was 493.54 (*SD* = 36.40) indicating that there was a net increase in reading achievement between the two administrations. Closer inspection shows that the net increase in reading scores from third grade to fifth grade was true for all groups. Notably, all groups had similar minimum scores, but the mainstream students had a higher maximum score and a larger standard deviation at both administrations, indicating greater variation in their scores relative to the other groups.

Table 7

Descriptive Analysis of the Third and Fifth Grade AIMS Reading Scores

	SEI Program Tenure					
AIMS Administration	Never	1 Year	2 Years	3+ Years	3 Years	4 + Years
Third Grade Reading						
N	258	29	14	21		
M	455.04	463.45	456.07	428.86		
SD	44.97	33.53	35.69	32.50		
Min	344	391	375	361		
Max	597	536	509	490		
Fifth Grade Reading						
N	258	29	12	-	11	12
M	493.76	499.31	519.92	-	475.82	464.58
SD	36.97	29.26	28.11	-	32.63	26.80
Min	395	458	486	-	435	431
Max	602	562	570	-	524	524

Overview of the Findings

Table 8 provides an overview of all the hypothesis tests that were conducted, by research question.

Table 8

Overview of All Findings

Research Question	Analysis	Null Hypothesis
1. Was there a statistically significant difference between the 3rd grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who did?	One-way ANOVA to compare all group means	Rejected
1a. What was the difference between the third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for one year?	Tukey's HSD test to compare mainstream students to one year only SEI students.	Retained
1b. What was the difference between the third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for two years?	Tukey's HSD test to compare mainstream students to two year only SEI students.	Retained
1c. What was the difference between the third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for three or more years?	Tukey's HSD test to compare mainstream students to 3+ year SEI students.	Rejected
2. Was there a statistically significant difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who did?	One-way ANOVA to compare all group means.	Rejected
2a. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for one year?	Tukey's HSD test to compare mainstream students to one year only SEI students.	Retained
2b. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for two years?	Tukey's HSD test to compare mainstream students to two year only SEI students.	Retained
2c. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for three years?	Tukey's HSD test to compare mainstream students to three year only SEI students.	Retained
2d. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for four or more years?	Tukey's HSD test to compare mainstream students to 4+ year SEI students.	Rejected

Note. Significance level was .05 for all analyses

Analysis of Third Grade AIMS Reading Scores

RQ1. Was there a statistically significant difference between the third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who did?

$H_0$1: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI.

H1: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI.

To test the first hypothesis of research question 1, a one-way ANOVA was used to compare the third grade AIMS reading scores of mainstream students and ELL students. The omnibus test revealed that scores differed across the four groups $F(3, 318) = 2.92$, $p = .03$. Thus, the null hypothesis must be rejected, and the alternative hypothesis accepted.

Post hoc analyses were run to assess the remaining hypotheses regarding the third grade AIMS reading scores. Specifically, Tukey's Honestly Significant Differences (HSD) were used to compare the mean reading scores of the mainstream students to the mean reading scores of each ELL groups. The results of the post-hoc analyses are presented, by research question and hypothesis, below.

RQ1a. What was the difference between the third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for one year?

$H_0$1a: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for one year.

H1a: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for one year.

Tukey's HSD revealed that there was no significant difference in reading scores for mainstream students (M = 455.04, SD = 44.97) and ELLs who received SEI programming for one year only (M = 463.45, SD = 33.53), p = .75. Therefore, the null hypothesis must be retained.

RQ1b. What was the difference between the third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for two years?

$H_0$1b: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for two years.

H1b: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for two years.

Tukey's HSD revealed that there was no significant difference in reading scores for mainstream students (M = 455.04, SD = 44.97) and ELLs who received SEI programming for two years only (M = 456.07, SD = 33.69), p = 1.00. Therefore, the null hypothesis must be retained.

RQ1c. What was the difference between the third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for three or more years?

$H_0$1c: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for three or more years.

H1c: Third grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for three or more years.

Tukey's HSD revealed that mainstream students (M = 455.04, SD = 44.97) scored significantly higher on the AIMS reading test than ELLs who received SEI programming for three or more years (M = 428.86, SD = 32.50), p = .04. Therefore, the null hypothesis must be rejected, and the alternative hypothesis is accepted.

Analysis of Fifth Grade AIMS Reading Scores

RQ2. Was there a statistically significant difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who did?

$H_0$2: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI.

H2: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI.

To test the first hypothesis of research question 2, a one-way ANOVA was used to compare the fifth grade AIMS reading scores of mainstream students and ELL students. The omnibus test revealed that scores differed across the four groups $F(4, 317) = 4.50$, $p = .002$. Thus, the null hypothesis must be rejected, and the alternative hypothesis accepted.

As with the third grade AIMS readings scores, Tukey's HSD post hoc analyses were run to assess the remaining hypotheses regarding the fifth grade AIMS reading scores. The mean reading score of all ELL groups were compared to those of the mainstream students. The results of the post-hoc analyses are presented, by research question and hypothesis, below.

RQ2a. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for one year?

$H_0$2a: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for one year.

H2a: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for one year.

Tukey's HSD revealed that there was no significant difference in reading scores for mainstream students (M = 493.76, SD = 36.97) and ELLs who received SEI programming for one year only (M = 499.31, SD = 29.26), p = .93. Therefore, the null hypothesis must be retained.

RQ2b. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for two years?

$H_0$2b: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for two years.

H2b: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for two years.

Tukey's HSD revealed that there was no significant difference in reading scores for mainstream students (M = 493.76, SD = 36.97) and ELLs who received SEI programming for two years only (M = 519.92, SD = 28.11), p = .10. Therefore, the null hypothesis must be retained.

RQ2c. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for three years?

$H_0$2c: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for three years.

H2c: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for three years.

Tukey's HSD revealed that there was no significant difference in reading scores for mainstream students (M = 493.76, SD = 36.97) and ELLs who received SEI programming for three years only (M = 475.82, SD = 32.63), p = .48. Therefore, the null hypothesis must be retained.

RQ2d. What was the difference between the fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction and those who were in SEI for four or more years?

$H_0$2d: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were not statistically significantly better than those who were in SEI for four or more years.

H2d: Fifth grade AIMS reading scores of mainstream fifth grade students who never received SEI instruction were statistically significantly better than those who were in SEI for four or more years.

Tukey's HSD revealed that mainstream students (M = 493.76, SD = 36.97) scored significantly higher on the AIMS reading test than ELLs who received SEI programming for three or more years (M = 464.58, SD = 26.80), p = .046. Therefore, the null hypothesis must be rejected, and the alternative hypothesis is accepted.

Summary

The analysis presented in Chapter 4 provided answers to the study's research questions. The analysis of research question one determined whether there was a statistically significant difference in third grade AIMS reading scale scores of students who participated in the SEI model and those who did not. Outcomes from the one-way ANOVA revealed that scores differed across the four groups. Thus, the alternative hypothesis was accepted. Post hoc analyses using Tukey's HSD provided further insight about the differences between groups. Interestingly, third grade students who were educated in the SEI environment for no more than two years did not score statistically significantly differently than their mainstream peers, resulting in the retention of the null hypotheses for the one- and two-year groups (RQs 1a. and 1b.). However, there were statistically significant differences in scale scores between students educated three or more years within the SEI environment and those who were educated in the mainstream, thus the null hypothesis was rejected for RQ 1c.

The analysis of research question two determined whether there was a statistically significant difference in fifth grade AIMS reading scale scores of students who participated in the SEI model and those who did not. Outcomes from the one-way ANOVA revealed that scores differed across the five groups. Thus, the alternative hypothesis was accepted. Post hoc analyses using Tukey's HSD provided further insight about the differences between groups. The scores of fifth grade students who were educated in the SEI environment for three years or less were not significantly different from those of their mainstream peers. Thus, the null hypotheses were retained for the one-, two-, and three-year groups (RQs 2a., 2b., and 2c.). However, there were

statistically significant differences in scale scores between students educated within the SEI environment for four or more years and those who were educated in the mainstream environment. Thus, the null hypothesis was rejected for RQ 2d.

In sum, analysis of the data resulted in the null hypothesis being rejected for four of the nine research questions — RQ1, RQ1c, RQ2, RQ2d. The null hypothesis was retained for the remaining five research questions. Chapter 5 includes the interpretation of the findings, the implications of these findings for both the academic literature and public policy on ELL education, and recommendations for future directions.

Chapter 5: Summary, Conclusions, Implications, Recommendations, and Concluding Remarks

In 2000, the voters of Arizona elected to have all public school academic instruction taught only in English, thus removing the support English language learners were receiving in their native language through bilingual instruction. This causal-comparative, ex post facto, quantitative research study compared the reading outcomes of a sample grouped by tenure in SEI classrooms to the reading outcomes of their peers in mainstream classrooms. Chapter 2 included a review of relevant information to the topic of this study. Chapter 3 included the details of the research methodology and data collection procedures for this study, while chapter 4 included the outcomes of the data analyses. This chapter includes conclusions from the data analyses as well as implications for practice, and recommendations for both future study and state-level entities.

Summary of the Study

The purpose of this study was to determine how the legislative mandates from Proposition 203 and the instructional mandates from Ariz. H.R. 2064 and Ariz. Rev. Stat. §15-751 – 15-756 affected the academic progress of ELLs in reading, as measured by AIMS reading scores. Arizona's current SEI model requires four hours of language-rich instruction based on the English language proficiency standards, not the state's academic standards. Meeting the four-hour mandate frequently comes at the expense of math, science, and social studies instruction. The mandated isolation into ELL only classrooms

also denies ELLs the opportunity to learn from peer modeling that would be provided by their English proficient peers in mainstream classrooms.

The study compared ELLs' reading achievement on two administrations of the AIMS annual assessment to that of their mainstream peers. The study included full academic year students from the general education (mainstream) and SEI program classrooms. Students from the general education classrooms were exposed to a varied curriculum based on Arizona's academic content standards which include 330 minutes of instruction as follows: reading (90 minutes), writing (30 minutes), math (90 minutes), science (60 minutes), and social studies (60 minutes). Meanwhile ELLs receive 240 minutes of instruction based on the English language proficiency standards in the areas of grammar (60 minutes), reading (60 minutes), oral English (30 minutes), vocabulary (60 minutes), and writing (30 minutes). This ELA-heavy curriculum leaves only a mere 90 minutes for math, science, and social studies, combined, making it nearly impossible for ELLs to maintain academic pace with their mainstream peers in those subjects. Further, the language arts standards required by the state are different for the two groups of students; general education students receive their instruction based on Arizona's academic standards, while ELLs receive their instruction based on Arizona's English Language Proficiency standards. Yet, academic progress for both groups is assessed against the content standards only, using the same assessment exam. It is likely that all of these factors contributed to the statistically higher achievement outcomes of the general education students, relative to their limited English proficient (LEP) peers in the SEI program.

Conclusions

The literature tells us that two of every five American public school students will be acquiring English as a second language learners by 2030 (Shah & Cavanagh, 2012). Providing adequate means by which ELLs can obtain both English language and academic proficiency will be paramount if they are to be successful and contributing members of their communities. The background research supporting this study begs the question – do Arizona's English instruction mandates ensure that ELL students are receiving an equitable education? This study has provided statistical evidence that the current SEI model mandated by the state is not sufficiently supporting all ELLs. Results from the one-way ANOVAs and Tukey's HSD post hoc tests revealed statistically significant differences in student achievement. In both the grade 3 and grade 5 analyses, AIMS reading scores were substantially higher for mainstream students than they were for ELLs who had not tested out of the SEI program by the two years preceding the AIMS administration. ELLs who spent three to four years within the SEI program by grade 3, were not exposed to Arizona's academic standards for 75% - 100% of their formal education because those standards are prioritized second to the LEP standards. Similarly, ELLs who spent four or more years in SEI classrooms by grade 5 focused on LEP standards for 66% to 100% of their formal education. Since all of Arizona's students are assessed against the state academic standards, it is troubling that ELLs are denied reasonable exposure to those standards within the SEI model. In fact, it is reasonable to argue that ELLs are being set up to fail because, as this study shows, the system makes it increasingly difficult for these students to catch up to Arizona's academic standards as their time in SEI programs increase. Thus, the results of this study

indicate that there is still work to be done before Arizona's educational system can claim that every child has access to equitable educational opportunities.

Implications for Practice

Outcomes from this study are significant to educators, the Arizona Department of Education, and state legislators. Though the sample size analyzed was small, statistically significant differences between mainstream students and ELLs who participated in the SEI program for more than 2 years during their first four years of formal education were evident. A similar difference was found between mainstream students and ELLs who participated in the SEI program for four or more of their first six years of formal schooling. The state recommends that tenure in the SEI program should be limited to one year and limits funding for the program to two years per student although research indicates that it takes five to seven years for primary school students to acquire a second language at a "totally proficient" level (Demie, 2013). Thus, the current SEI model is unrealistic and provides limited support to many ELLs. Consistent with the research, 35% of ELLs in this sample were unable to pass the AZELLA at the "proficient" level during the two-year timeframe. Many of those students are destined to remain in the SEI program and separated from their English-proficient peers, despite research that shows integration in mainstream classrooms are beneficial to students when acquiring a second language.

Prior to this study, there was little evidence of how the model affected academic performance of ELLs. The results of this study indicate that there is reason to question the effectiveness of the current SEI model. The findings from this study can be used to

support conversations at the state educational and legislative levels about how to revise and improve educational opportunities for Arizona's ELL population. The results of this study show that third grade ELLs who participate in the SEI program for more than two years are at risk of being retained in the 3rd grade based on their substantially lower reading assessment performance. Tingle, Schoeneberger, and Algozzine (2012) have expressed similar retention-related concerns for ELLs. Thus, state-level decision makers must consider funding ELLs beyond two years and provide differentiated support, based on individual ELL needs, to successfully reduce the risk of third grade retention for this population.

Research shows that the earlier a second language is introduced, the more easily it is acquired (Faulkner-Bond et al. 2012, p.28). Therefore, this study focused on students who were in the primary years of their formal public education. Analysis of their test scores revealed that ELLs are not maintaining the same rate of educational progress as their mainstream peers, as indicated by their performance on a standardized reading test. Other researchers have demonstrated similar outcomes. For example, Ohmstede Beckman, Messersmith, Shephard and Cates (2012) found that ELLs attained lower scores on standardized reading tests than non-ELLs. Interestingly, the researchers argued that this achievement gap may be explained, in part, by the standardized test itself. Specifically, they explain that ELLs struggled with the linguistic complexity of the test questions. Regardless of the cause, the achievement gap between ELLs and their mainstream peers is troubling. Thus, there is much room for further study.

It is important that future research explore the progress of students who enter the Arizona educational system as monolinguals later in their academic careers. New ELLs

arrive as monolinguals throughout the school year and across various grade levels. The academic English of middle school and high school is more complex and thus more difficult to obtain than primary school academic and conversational English. Therefore, not providing older ELLs with translation from their native language or other forms of bilingual support is a denial of Free and Appropriate Education (FAPE). Decision makers need to provide support for all students within public schools.

State decisions makers already allow districts to procure curricular material and determine the best instructional practices and placement of students within the general educational setting as long as the decisions are aligned with the state's academic standards. The same allowances should be made for ELL education. The current two-year limit on monetary support ELLs is a disservice to ELLs who are unable to test out of the SEI program after two years. To achieve the goal of providing equitable educational opportunities to all students, the state must create provisions for ELLs who need more time to acquire English and provide targeted funding to districts so they may provide adequate additional support for those ELLs.

Recommendations for Future Studies

There is limited research on this topic because Arizona's model is relatively new and very few states have implemented similar models. Nonetheless, it is critical that researchers continue to explore this topic and work toward closing the achievement gap revealed by this study. It is natural for researchers to focus directly on ELLs but closing the gap effectively and efficiently will require that investigators expand the scope of their research to include teachers and parents. Teaching students who have limited proficiency

in English is challenging for teachers who have limited proficiency in any language other than English. Likewise, parents who are limited English proficient may have trouble communicating with educators, advocating for their children, supporting their children with homework, and/or understanding cultural differences. Given how critical both groups are to the academic success of ELLs, attempting to close the gap without due consideration of teacher and parent experiences and perceptions will be futile. Ten additional recommendations for future research are provided below:

Recommendation 1. Replicate the current study across several school districts or even using the statewide data for the same years. This will expand our understanding of the impact of Arizona's SEI mandates.

Recommendation 2. The tests used to assess both English language proficiency and progress against the state academic standards have changed. Repeating the study with the revised version of AZELLA and the AzMERIT assessment that replaced AIMS in 2015 would reveal the current impact of the SEI model on Arizona's ELLs.

Recommendation 3. Expand on the research by adding a qualitative component to investigate SEI classroom teachers': 1) beliefs about their instructional practices, 2) perceptions of the effectiveness of district-supplied instructional and testing materials, and 3) perceived self-efficacy.

Recommendation 4. Conduct mixed methods research that compares outcomes between ELLs who participated in the SEI program and mainstreamed ELLs who were provided with an Individual Learning Language Plan (ILLP). This research should include teachers' perceptions of both methods, as well as student perceptions of the learning environments and outcomes.

Recommendation 5. Research has shown that second language acquisition occurs more readily at younger ages, therefore, a quantitative study that compares ELLs who participated in the SEI program at a young age, ELLs who enrolled in 6th grade or higher as monolinguals, and mainstream students would add to the body of empirical knowledge on this topic.

Recommendation 6. A qualitative or mixed methods study that explores the relationship between classroom grades, teacher perceptions, student mindsets, and parent involvement for ELLs in Arizona's SEI programs would provide a deep understanding of how the state mandates impact student academic outcomes, teacher self-efficacy, and parent satisfaction with the education their child(ren) receive.

Recommendation 7. Explore how districts analyze and use data from AZELLA and AzMERIT to make decisions regarding professional development in instructional strategies for ELLs and procurement of materials and resources specific to ELL's academic improvement.

Recommendation 8. Since state lawmakers and education officials create and enforce legislation that directly effects Arizona's ELL population (e.g., Proposition 203; Ariz. H.R. 2064), an exploration of current recommendations for ELL instruction would benefit both the ELL population and Arizona's educational system. California recently repealed Proposition 227 to allow the reemergence of bilingual education into public schools. Proposition 227 was similar to both Proposition 203 and Ariz. H.R. 2064. Its repeal may be a signal that it is time for Arizona to follow suit.

Recommendation 9. The ELL sample in this study were all native Spanish speakers; therefore, these results may not be generalizable to native speakers of other

languages. Analyzing data from school districts with ELLs with native languages other than Spanish will help stakeholders make the best decisions for *all* ELLs in Arizona.

Recommendation 10. The small sample of ELLs in the district under study prevented an exploration of other groupings of ELLs. For example, it may be valuable to examine gender differences or the impact of extracurricular activity (e.g., tutoring) that may provide greater exposure to mainstream peers. Replicating the study with a larger sample of ELLs would enable researchers to explore other characteristics of ELLs that may impact their language acquisition and academic performance.

Concluding Remarks

This study provides evidence that the SEI model mandated by the state of Arizona does not provide sufficient support to ELLs. In fact, it appears that the SEI model is only effective for students who are able to exit the program within one to two years, which is consistent with the state's recommendation and funding for the program. Unfortunately, the analysis shows that this model puts ELLs who are not able to obtain English language proficiency after two years at high risk for retention. Moreover, the model perpetuates the achievement gap between ELLs and their mainstream peers. Given the outcomes of this study, the researcher believes that more than one method of instructing ELLs is needed to ensure that every student has a reasonable opportunity to succeed.

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Appendix A: IRB Approval

NORTHERN ARIZONA UNIVERSITY | Office of Regulatory Compliance

Institutional Review Board
Human Research Subjects Protection Program

805 S Beaver St
Building 22, Room 215
PO Box: 4062
Flagstaff AZ 86011
928-523-9551
http://nau.edu/Research/Compliance/Human-Subjects/Welcome

To:	Fred Lugo
From:	NAU IRB Office
Approval Date:	February 15, 2018
Project:	THE IMPACT OF A STRUCTURED ENGLISH IMMERSION MODEL ON ENGLISH LANGUAGE LEARNERS' READING ACHIEVEMENT
Project Number:	1185985-1
Submission:	New Project
Review Level:	Exempt Review
Action:	EXEMPT
Project Status:	Exempt
Review Category/ies:	**Exempt Approval 45 CFR 46.101(4):** Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

This submission meets the criteria for exemption under 45 CFR 46.101(b). This project has been reviewed and approved by an IRB Chair or designee.

- Northern Arizona University maintains a Federalwide Assurance with the Office for Human Research Protections (FWA #00000357).
- All research procedures should be conducted in full accordance with all applicable sections of the guidance.
- Exempt projects do not have a continuing review requirement.
- This project should be conducted in full accordance with all applicable sections of the guidance and you should notify the IRB immediately of any proposed changes that affect the protocol.
- Amendments to exempt projects that change the nature of the project should be submitted to the Human Research Subjects Protection Program (HRSPP) office for a new determination. See the guidance Exempt Research for more information on changes that affect the determination of exemption. Please contact the HRSPP to consult on whether the proposed changes need further review.
- You should report any unanticipated problems involving risks to the participants or others to the IRB.
- All documents referenced in this submission have been reviewed and approved. Documents are filed with the HRSPP Office. If subjects will be consented, the approved consent(s) are attached to the approval notification from the HRSPP Office.
- Exempt projects are maintained in HRSPP for five (5) years from approval. An updated application is required every five (5) years.

Appendix B: Superintendent's Permission for Data Use

A Community Passionate About Student Success

January 18, 2018

Dear Fred,

Please let this letter serve as my permission to allow you to utilize 2009-2014 student data in any way necessary in order to complete your dissertation study, knowing that you will ensure the anonymity of any student involved. I also request that you provide a copy of the results from your completed study.

Please do not hesitate to contact me if you need anything further.

Kristi Sandvik

Dr. Kristi Sandvik

Superintendent

Appendix C: Author's Biography

Fred Lugo is a seventh generation Arizona native, raised in Buckeye, Arizona. After high school graduation, he enlisted in the U.S. Army where he spent 23 rewarding years as an Airborne Ranger. During his Army tenure, he earned his bachelor's degree by taking courses from nine different colleges and universities over a 17-year period. After retiring as a Command Sergeant Major in 2002, he enrolled in the Troops to Teachers program and began teaching in the Buckeye Elementary School District, at his childhood home school where he continues to work today. He received a master's degree in Elementary Education from Grand Canyon University in 2005. His service in the Buckeye School District includes teaching Physical Education, as well as 3rd and 4th grades. Fred attained two graduate certificates, Principal and Superintendent, in 2008 from Northern Arizona University. He served as an Assistant Principal for three years and is currently a Principal in the Buckeye School District.

Fred has been happily married to his high school sweetheart, Mary Jo, for 36 short years. They have one amazing daughter, Elizabeth. Elizabeth and her husband, Johnny reside in Kentucky and have three wonderful children, Giuliana 6, John John 4, and Dominic, 1. Fred plans to remain in his hometown community of Buckeye, where he can continue to support the children through their learning and growth.