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The Impact of School Reform Design, English Speakers of Other Languages (ESOL) Instruction and Socioeconomic Status on ESOL Students' Reading Achievement

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THE IMPACT OF SCHOOL REFORM DESIGN, ENGLISH SPEAKERS OF OTHER
LANGUAGES (ESOL) INSTRUCTION AND SOCIOECONOMIC STATUS ON ESOL
STUDENTS' READING ACHIEVEMENT

by

Cristina P. Valentino

A dissertation submitted to the Doctoral Faculty of the College of Education
and Human Services in partial fulfillment of the requirements for the degree of

Doctor of Education

UNIVERSITY OF NORTH FLORIDA

COLLEGE OF EDUCATION AND HUMAN SERVICES

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Abstract

The purpose of this study was to examine how school reform design, English speakers of other languages (ESOL) instruction, and socioeconomic status (SES) impact the academic achievement of ESOL students in Grade 2. Gains in lexile scores on the Scholastic Reading Inventory were used to measure one aspect of academic achievement, namely, general reading ability.

The primary research question was: To what extent can gains in lexile scores on the Scholastic Reading Inventory be explained by the independent variable set of school reform design (America's Choice/Direct Instruction), ESOL instruction (ESOL instruction/no ESOL instruction), and SES (free and reduced lunch/no free lunch). Participants were 204 ESOL students enrolled in Grade 2 in Duval County Public Schools during the 2003-2004 academic year, including 53 in Direct Instruction and 151 in America's Choice school reform designs; 151 receiving free and reduced lunch and 53 paying full fee for lunch; 139 receiving ESOL instruction and 65 receiving no ESOL instruction.

Findings indicated that students in the Direct Instruction school reform design had greater gains in lexile scores on the SRI than students in the America's Choice design. SES and ESOL instruction were not statistically significant predictors of academic achievement. Further, there were no statistically significant interactions among any of the predictor variables (between school reform design and ESOL instruction; between school reform design and SES; between SES and ESOL instruction; or among school reform design, SES, and ESOL instruction).

Chapter 1

Introduction

The United States has developed into a diverse society with a population of immigrants that increases each year (Hawkins, 2004). Many of these immigrants are individuals whose first language is other than English or English speakers of other languages (ESOL), also referred to as English language learners (ELLs), who are limited English proficient (LEP). With this influx of immigrants, there has been such an increase in ELL school children that they now represent 10.2% of public school enrollment in Grades pre-K through 12 in the U.S. (Padolsky, 2004). Florida, in particular, is experiencing this demographic trend, with 13.1% ELL enrollment (Padolsky, 2004).

Due to the dramatic increase in ESOL students, concerns have arisen about the ability of American school systems to offer educational practices that are effective for these students. The English language is taught and reinforced with the goal of assuring ELL students' optimal acceptance within the school culture so that learning opportunities can be maximized.

As a result of the No Child Left Behind Act (NCLB), yearly gains on state mandated tests are required for all students to show developmental growth in areas such as reading and math (U.S. Department of Education, 2001). In the state of Florida, passing scores on the state mandated test are required in Grade 3 and Grade 10 for students to be promoted to the next grade level. Beginning in Grade 3, students who are

enrolled in ESOL programs are held accountable for the Florida Comprehensive Assessment Test (FCAT) after 1 year in the program unless granted an exemption from their school district (Florida Department of Education, 2002). Therefore, helping ESOL students acquire the language and literacy skills that they need to succeed academically is of special concern.

The education of the ESOL minority has become a controversial issue. As a result of the 1990 League of United Latin American Citizens (LULAC) et al. v. the State Board of Education Consent Decree, the Florida Department of Education entered into an agreement with advocacy groups for ELLs (Florida Department of Education, 1990). The Consent Decree requires school districts to provide various accommodations for this group of students. Consequently, research is needed to determine which factors contribute most to their academic achievement.

The NCLB also requires that annual achievement of LEP students must relate to the gains in English proficiency, that an effective curriculum and instructional methods be employed so as to raise the level of English proficiency of LEP students, and that schools meet challenging academic standards aligned with Title I achievement standards. In particular, researchers are touting school reforms as school initiatives addressing standards-based reform to assist at-risk students with low scores, especially in Title I schools (Borman, Hewes, Overman, & Brown, 2003). Therefore, a body of research that offers insights into those school reform designs that are more effective for LEP students will provide a research based decision-making model.

Significance of the Research

The significance of this study is that it examines factors that affect the achievement of ESOL students, an area that has not been extensively researched. Two of the factors, school reform design and ESOL instruction, can be altered by a school system if they are found to be ineffective. In particular, educators need to be provided with effective school reform designs that will include not just students who are monolingual English speakers, but ELLs as well, by teaching them the language and literacy skills needed to succeed in school and on the state mandated tests. Because students in Florida who do not receive passing scores on the FCAT in Grade 3 and Grade 10 cannot be promoted to the next grade level, it is critical for educational policymakers and leaders responsible for the changes in the educational system in Florida to understand factors that affect the achievement of LEP students in order to maximize the learning outcomes of these students. Consequently, the findings of this research may provide information that will result in school reforms that have a profound effect on ESOL students' reading ability and leave no child behind.

Finally, this study may assist educational leaders in the implementation of effective programs that satisfy the needs of ELLs by assisting the teachers with effective instructional models in the classroom. The results gained from this study will help practitioners understand the complexity of bilingual and ESOL education.

Statement of Purpose

The purpose of the study was to examine how school reform design, ESOL instruction, and socioeconomic status (SES) impact the academic achievement of ESOL students in Grade 2. Gains in lexile scores on the Scholastic Reading Inventory (SRI)

were used to measure one aspect of academic achievement, namely, general reading ability.

Educational policies in the state of Florida impact the most diverse student population in the United States. Since 1990, when the Florida Department of Education entered into an agreement, the Consent Decree, with advocacy groups for ELLs, Florida has moved quickly to establish an ESOL program, in part to avoid litigation. Therefore, the education of the ESOL minority became a controversial issue, especially now that student achievement is addressed within the NCLB. Finding a school reform design that will have a positive effect on ESOL students' academic achievement is the goal for many policymakers and educators, given the fact that the Consent Decree requires school districts to provide various accommodations for this group of students. However, identifying the variables in the instructional environment that may have a positive effect on academic English acquisition may be of assistance in identifying the appropriate school reform designs for ESOL students, possibly even school reform designs that have not yet been developed.

Statement of Research Question and Hypotheses

The primary research question was: To what extent can gains in lexile scores on the SRI be explained by the independent variable set of school reform design (America's Choice[AC]/Direct Instruction[DI]), ESOL instruction (ESOL instruction/no ESOL instruction), and SES (free and reduced lunch/no free lunch). The corresponding research hypotheses were:

H₁: There is no statistically significant ($p = .05$) difference in the SRI lexile gain scores of students in classrooms using the AC school reform design and those in classes using DI.

- H₂: There is no statistically significant ($p = .05$) difference in the SRI lexile gain scores of students receiving ESOL instruction and those receiving no ESOL instruction.
- H₃: There is no statistically significant ($p = .05$) difference in the SRI lexile gain scores of students who qualify for free and reduced lunch and those who do not.
- H₄: There is no statistically significant ($p = .05$) interaction effect of school reform design and SES interacting together to explain the variance in SRI lexile gain scores.
- H₅: There is no statistically significant ($p = .05$) interaction effect of school reform design and ESOL instruction interacting together to explain the variance in SRI lexile gain scores.
- H₆: There is no statistically significant ($p = .05$) interaction effect of SES and ESOL instruction interacting together to explain the variance in SRI lexile gain scores.
- H₇: There is no statistically significant ($p = .05$) three-way interaction effect of school reform design, ESOL instruction and SES interacting together to explain the variance in SRI lexile gain scores.

Definition of Terms

It is important to clarify some of the terms and abbreviations that are used throughout the study, given the complexity of their use. This summary reflects the definitions used by most authors when referring to these terms in the field of English as a second language (ESL).

AC – America’s Choice school reform design.

Achievement Tests – Tests used to measure knowledge, abilities, understanding, or skills acquired from academic work.

AYP – Adequate yearly progress as defined by the NCLB.

Bilingual Education – Teaching students in two languages: their native language (L1) and the target language (English in the U.S.).

Consent Decree – Legal document in the state of Florida that mandates certain requirements and rules for teachers of ESOL students. It also recommended overseeing the services given to ESOL students in each school district. The Consent Decree is the result of a class action complaint filed by Multicultural Education, Training, and Advocacy, Inc. (META; Florida Department of Education, 1990).

CPRE – Consortium for Policy Research in Education.

CSR – Comprehensive school reform.

DCPS – Duval County Public Schools.

DI – Direct Instruction school reform design.

ELL – English language learner.

English Proficiency – Definitions will depend on the standard in the new English language assessment developed by each state. For the purpose of the present study, English proficiency is a passing score on the English state assessment, which incorporates two basic components: math and reading (Zehr, 2003). For the state of Florida, English proficiency is a passing score on the Language Assessment Scale.

ESOL – English for speakers of other languages, a term that has been adopted by many scholars instead of ESL because for many of these students English could be their third, fourth, fifth, or sixth language.

FCAT – Florida Comprehensive Assessment Test.

L1 – Native language.

L2 – Second language.

LEP – Limited English proficient (individuals who speak English, but are not proficient enough for full participation in an English-speaking society).

LULAC – League of United Latin American Citizens.

META – Multicultural Education, Training, and Advocacy, Inc.

NCEE – National Center on Education and the Economy.

NCLB – No Child Left Behind.

Non-ESOL – Native English speaker.

SES – Socioeconomic status.

SRI – Scholastic Reading Inventory.

TESOL – Teaching English to speakers of other languages.

Delimitations

The delimitations of this study were: (a) participants were LEP students in Grade 2 in DCPS during the 2003-2004 school year; (b) participants were enrolled in an AC or DI classroom; (c) participants took the SRI at both the beginning and end of the school year.

Limitations

As the present study is focused on a sample of ESOL students in one school district in Florida who were in Grade 2 in the 2003-2004 school year and took the SRI at both the beginning and end of the school year, results from the study will have limited generalizability. DCPS does not have a large ESOL population compared to other school districts, and the small sample size ($n = 204$) is a limitation of the study.

Not considering the previous educational background of ESOL students is a major limitation, as levels of education vary widely among students. Information on previous educational background of students was unavailable from the school district. The different nationalities of the students are not taken into account nor is the number of

years the students' families have been in the United States. Parental involvement also varies considerably, with some students receiving extensive help with homework and others receiving none. As a result of socioeconomic level, parents of some students are not available due to work schedules, and older children may be required to take care of younger children. Depending on the educational level of the parents, students may not be socialized into education, and in some homes there are no books to read. Children in these households have the issues of other children who live in poverty, in addition to the language barrier. Further, parents of some students do not speak English themselves, and therefore cannot assist with homework.

Thus, one limitation is that such variables as previous background of ESOL students, levels of education, and parental involvement, which the literature indicates are factors contributing to academic achievement, are not controlled and may, in fact, account for some of the variance in academic success of ESOL students in this study, rather than school reform design, ESOL instruction, and SES. As the study was conducted using archived data from the DCPS database and there was no direct contact with students, this information could not be collected.

There are many non-manipulated variables that could have an unintended effect on academic achievement, including: mobility of students between schools within the DCPS school system, classroom and school behavior management practices, curriculum alignment to other subjects, teaching experience, teachers' ESOL training, students' native country, and parents' educational background.

Organization of the Study

The study is organized into five chapters. Chapter 1 introduces the study and

includes the significance of the research, statement of purpose, statement of the research question and hypotheses, definition of terms, and delimitations and limitations.

Chapter 2 provides a review of the related literature. The literature review includes the historical perspective of the history and policy related to ESOL, the school reform designs used in Duval County, Florida, the assessment used in the study, and a brief summary of the description of an ESOL classroom environment and the development of reading ability skills.

Chapter 3 describes the methodology used to conduct the research including a description of the site, research design, research instruments, data collection procedures, and the data analysis procedures employed.

Chapter 4 presents the findings, including descriptive statistics for each of the variables, the ANOVA analysis, and an explanation of how the data results can be employed to answer the research question and corresponding hypotheses.

Chapter 5 provides an overview of the study, a summary of the findings, and discussion. Conclusions are drawn and recommendations are made for educators, including recommendations for further research on factors that impact the academic achievement of ESOL students.

Chapter 2

Review of the Literature

For purposes of organization and clarity, this review is organized in six sections:

(a) the theoretical framework upon which the study is based; (b) a summary of the history and policy of bilingual/ESOL education; (c) a summary of the two school reform designs in Duval County used in the study; (d) a brief description of high stakes testing in schools, including an assessment used in the present study; (e) a discussion of social and academic English; and (f) a final section related to appropriate ages for L2 acquisition and literacy skills.

Theoretical Framework

According to Vygotsky, learning a language is a developmental process (Wolfe, 1974). When learning another language, teacher-parent contacts, practices, structures, and enrichments are critically important during the early stages of the learning process as they shape the child's learning process (Snow, 1990). Hence, classroom activities are very important to the student's progress during the process of language acquisition (Townsend, 1976).

As moving LEP students to English fluency is a difficult process, educators are striving to find classroom strategies that will help these students succeed. Consequently, analyzing data on the academic achievement of language-minority students throughout the country is an on-going process (Thomas & Collier, 2002).

Schools are supposed to have an articulated approach to assure that LEP students achieve at the same level as other students, according to the NCLB (U.S. Department of Education, 2001). The Florida Department of Education asserts that ESOL is an effective strategy for improving achievement of LEP students. Theoreticians in the field assert that there are specific types of programs, such as school reform designs, that are effective for improving achievement of LEP students. The literature regarding policies and practices that impact the achievement of LEP students will be reviewed in the following sections.

History and Policy

Over the years, the United States has experienced an increasing number of immigrants, leading to a culturally and linguistically diverse student population (Abedi, Hofstetter, & Lord, 2004; Hawkins, 2004), which demands qualified and trained teachers and administrators across the nation (Hawkins). Zhao (2002) stated that there is only one marketable teacher for every 100 ELLs. Kindler (2002) emphasized that in the 2000-2001 school year, there were 4.6 million LEP students in public schools across the nation, which is relatively close to the most recent data provided by the U.S. Department of Education: 5 million LEP students (Hawkins, 2004). He mentioned that more than half of these students reside in four states: California (32.9%), Texas (12.4%), Florida (5.6%), and New York (5.2%), and that the majority were Spanish (79%), followed by Vietnamese (2%), Hmong (1.6%), Cantonese (1%), and Korean (1%).

This issue has generated a significant dilemma in education: the best way to teach ESL or language acquisition. This dilemma has been a controversial issue throughout the history of the United States. At one time, legislators were more focused on establishing English as the classroom language than they were on assisting individuals with

educational programs (Slavin & Cheung, 2003). Such an example may be found in Proposition 227 (P-227) approved in June of 1998. The proposition mandated fundamental changes in California's education, including the restriction of bilingual programs, and further, that the only language taught within the public school system would be English (Kerper, 2000).

Crawford (1992) pointed out about the English Only Movement that "rather than promote English proficiency, 99% of the organization's efforts go toward restricting the use of other languages" (p. 176). Unfortunately, this piece of legislation has caused many students to drop out and has created more resistance to the possibility of learning English. The language barrier is one reason why individuals are less productive in our society. The English Only Movement forces immigrants to speak English or be viewed as too lazy to learn the language of their resident society (Crawford, 1992).

At present, the government is trying to find instructional design models to assist all school children in the U.S., especially those at risk, such as the ESL population, to perform at grade level or above. In part, this movement is driven by the accountability movement as emphasized in the NCLB (Abella, Urrutia, & Shneyderman, 2003). Slavin and Madden (1999) agreed that the point was not how LEP students should be taught (L1 instruction v. L2 instruction), but their success in learning to read. Educators must find ways to develop, evaluate, and disseminate effective reading strategies as well as effective English instruction for ELL students.

It is unrealistic to require all individuals to communicate only in English without taking into consideration each of their language limitations and the lack of methods and resources to transmit the necessary language skills in the classroom. Most teachers and

administrators lack the preparation necessary to deal with students whose L2 is English. On most occasions, school administrators and teachers do not understand or speak the respective language, nor are they knowledgeable about the various cultures. It is important to remember that learning a new language also means one must learn a new culture.

Legal Cases

This section will review some of the legal cases that had an impact on the history of LEP students. Piatt (1992) described some important cases that have made history in educational reform school designs, including *Meyer v. Nebraska* (262 U.S. 390) of 1923, which involved Robert Meyer, a teacher in a parochial school in Nebraska, who was found guilty of violating the English Only Instruction Statute of 1919 for teaching a Bible story in German to a child. The Supreme Court declared Nebraska's prohibition against teaching foreign languages in elementary schools unconstitutional, allowing immigrants to cultivate their languages and cultures in private schools should they so desire.

In 1981, in *Castaneda v. Pickard* (648 F. 2d 989), a group of Mexican American parents and their children charged the district of Raymondville, Texas of using illegal strategies to segregate their children by race and ethnicity. The district also failed to hire and promote Mexican American teachers and failed to promote an adequate bilingual program designed to overcome linguistic barriers. As a result, the appeals court developed a three-part test requiring that the schools implement an assessment to show results, not only in the acquiring of English skills, but also in areas such as math, science, social studies, and language arts (Jimenez, 1992; Ovando, 2003).

Lau v. Nichols

A new era for bilingual education was established in 1968, when the U.S. government passed the Bilingual Act allowing bilingual education in American schools for the first time as a way to assist in meeting minority needs. But it was not until 1974, with Supreme Court Justice William O. Douglas's delivery of the opinion on the *Lau v. Nichols* case, that schools were charged with providing the right educational services for LEP students' needs (Ovando, 2003). *Lau v. Nichols* challenged the San Francisco public schools to provide the Chinese population with equal educational opportunities by offering classes in their L1 until they were able to participate in the English-only classrooms (Crawford, 1992).

This was one of the most important court cases in the history of U.S. bilingual education. The Office of Civil Rights, in response to the Supreme Court decision, recommended transitional bilingual education for ELLs. Section 414 U.S. 563 (*Lau v. Nichols*, 1974) of the California education code states, "English should be the basic language of instruction in all schools." However, the skills to master the English language must be provided to the students in need. Findings in Thomas and Collier (2002) supported the *Lau v. Nichols* case by finding that LEP students' academic achievement increases significantly when services are provided. As LEP students move through the school system, they gradually close the gap with each additional year of schooling in the U.S.

Consent Decree

Since the 1960s, Florida has experienced significant growth in its immigrant population. However, it was not until the 1980s that the LEP population (known in

Florida as ESOL) dramatically increased. At the time, the educational system was not prepared to provide the needed services for the large influx of LEP students. In response to the lack of services, a suit, known as the META agreement or Consent Decree, was brought against the Florida Department of Education. The Consent Decree (Florida Department of Education, 1990), *LULAC v. Florida Board of Education*, resulted in a state agreement to implement some regulations requiring identification, assessment, programs, advisory committees, and evaluation of LEP students to guarantee equal educational opportunities for all students.

The Consent Decree is the most important and famous case in Florida related to LEP education. The term *ESOL* has its foundation from this case. Since 1990, there has been a rapid shift toward inclusion in all Florida schools, affecting the process of teaching L2 students in the educational system (Platt, Harper, & Mendoza, 2003). For instance, the Consent Decree has imposed certain requirements for teaching certification. The basic requirements for endorsement provided for in the original Consent Decree (Florida Department of Education, 1990), as presented to the court in *U.S. v. Armour* 402 U.S. 673, 29 L.Ed.2 263 (1971), rule 6A-4.0244, are:

1. A bachelor's or higher degree with certification in another subject;
2. A minimum score of 220 on the Test of Spoken English (TSE); and
3. Fifteen semester hours in ESOL to include credit in each of these five areas: (a) methods of teaching ESOL, (b) ESOL curriculum and materials development, (c) cross-cultural communication and understanding, (d) applied linguistics, and (e) testing and evaluation of ESOL.

The revised agreement of the META or Consent Decree (Florida Department of Education, 2001) outlined the following important requirements for personnel:

1. Teachers of ESOL whose instructional load includes English language must meet the 15-hour requirement, as described above, by completing either 15 college credits or 300 inservice points at the district level;
2. Teachers of basic subject areas, which include science, math, social studies, and computer literacy, who teach LEP students must complete 60 inservice points or three college credits;
3. Teachers who teach LEP students in other subjects are required to complete three college credits or 18 inservice points.

Although the original version of the META or Consent Decree did not require higher education to develop a program for ESOL, because of the higher population of immigrant children in Florida, there is a need for higher education institutions to develop preservice programs for TESOL at the undergraduate level. Many districts are looking toward preservice programs upon graduation to help them with their inservice expenditures. Many universities in Florida are graduating students with the ESOL endorsement. The State Board of Education Rule 6A-5.066, F.A.C. defines two options for teacher preparation programs to include the ESOL endorsement: (a) 15 semester hours, which includes the five classes; or (b) a certification coverage with an ESOL infused endorsement of the 300 hours.

According to Bristor, Pelaez, and Crawley (2000), Florida Atlantic University was the first institution in Florida to offer elementary education methods courses infused with ESOL competencies. In the Florida Atlantic program, preservice teachers conducted

presentations and provided much positive reinforcement. Some of the ESOL methodologies used in the classroom were: cooperative learning, realia (a strategy), and vocabulary development through a natural approach. Preservice teachers learned effective methods for including students who did not speak English. This program is a model of diversity and provides a strong example for other colleges and universities.

The University of North Florida and Jacksonville University are two universities in Duval County that are providing the ESOL endorsement through the infusion program. It is important to mention that after the completion of the courses at the universities the students are not required to take the district inservice or the ESOL subject portion of the Florida Teacher Certification Exam. The new revision of the META or Consent Decree emphasizes that college of education faculty (with the exception of educational leadership or educational administration) must fulfill certain guidelines:

1. Faculty must have sufficient training to infuse the 25 ESOL Performance Standards in all of the courses they teach and be able to show indicators that the students have sufficient background in the five required courses; and
2. A minimum of two ESOL specific courses must be offered in an infusion program at the university level.

Most of the 25 standards and indicators should be included in the methodology classes. The purpose of establishing these requirements was to develop educators who were more sensitive to the needs of ESOL students. The Consent Decree also mentioned in Chapter IV (Section 5) that the district must offer, develop, and implement in-service training for regular teachers to be able to meet the requirements previously mentioned, for ESOL teachers to update their knowledge, and for teachers' aides. The NCLB Act

approves 15% of its allotment (\$650 million) through the state education agencies for school districts experiencing an increase in LEP student population. The education agencies must agree to spend at least 95% in awarding formula subgrants to districts.

Requirements and standards for Florida have been established to help ensure the success of LEP students by the Consent Decree. There are six areas of compliance in the Decree: (a) identification and assessment; (b) equal access to appropriate programs (curriculum and instruction); (c) equal access to categorical and other programs; (d) school wide training; (e) program monitoring; and (f) student outcome measures (Platt et al., 2003). State and district fulfillment of these requirements and standards is particularly important as educational budget decisions are being developed on the basis of achievement test results. Consequently, it is crucial to assess students' academic achievement progress accurately, including ESOL students (Abella et al., 2003).

The No Child Left Behind Act (NCLB)

As a result of the *Lau v. Nichols* Supreme Court ruling in 1974, teachers were to instruct ELLs in ESL until they reached a level of English proficiency that allowed them to be part of the regular monolingual English classrooms (Ovando, 2003). Each succeeding state and federal administration has struggled with how to best bring about the desired result. Even now, the U.S. government under the U.S. Department of Education continues to endeavor to find some kind of school reform that will promote academic achievement for all students.

The current solution, adopted under the Bush administration, is the NCLB, which assigns responsibility for providing the instructional programs to satisfy each student's needs to the states. Although, the NCLB seems to be a perfect solution to the educational

system, some argue that there are some misunderstandings in its interpretation and consequences (Linn, 2003).

The NCLB mandates that the educational system be accountable for ensuring that all the students meet high standards, especially in reading and mathematics for Grades 3 through 8 (Linn, 2003; Linn, Baker, & Betebenner, 2002). Accountability becomes an essential tool in the educational system to ensure academic achievement and for moving LEP students to English fluency (Abedi, 2004). Title III also states that all students, including LEP students, must meet the standards (Abella et al., 2003; Zehr, 2003). Because schools must show academic achievement while including disadvantaged students in their figures, the likelihood for schools to show academic progress in English state assessments decreases as the number of English learners increases (Abedi, 2004). There is an added burden because of the mobility issue within the group as often this issue has not been factored into reforms (Ovando, 2003; Thomas & Collier, 2002; Zehr, 2003).

The NCLB requires a yearly student progress report known as the AYP. By doing so, pressure is placed unintentionally on LEP students and their schools (Abedi, 2004; Linn et al., 2002). An AYP must report the following subgroups: (a) economically disadvantaged, (b) racial and ethnic groups, (c) students with disabilities, and (d) LEP students. Students in all of these groups may share some of the same characteristics; however the LEP students share, in most cases, all of them (Abedi, 2004; Linn et al., 2002). Besides including the subgroups mentioned above, the NCLB also requests that states develop AYP objectives such as: (a) all students should be at the same proficiency level within the next 12 years; (b) AYP must be based on the state assessment plus one

more academic indicator; (c) AYP objectives must be assessed for each school in order to identify schools in need of improvement; (d) each school must report demographics as part of their AYP; (e) at least 95% of students in the subgroups must take the state assessment; (f) determinations of AYP may be based on 3 years of data combined (Linn et al., 2002).

Most states developed high performance standards for their statewide assessments without realizing that these standards would later be used to determine AYP to meet the requirements of NCLB and sanctions would be imposed if students were not performing at the proficient level or higher. As a consequence, performance standards vary widely among the states and many states are not in compliance with NCLB (Linn et al., 2002).

The NCLB expectations between 2001 and 2012 for those states that have had assessments and standards in place for at least 10 years would be an increase of slightly less than 1% AYP (Linn, 2003; Linn et al., 2002). Based on the NAEP, between 1990 and 2000 the annual gain in the percentage of students proficient or above in mathematics was an average of 1.5% per year at Grade 4, and 1.2% at Grade 8. The gains in reading were more modest, averaging only three eighths of a percent at Grade 4 and only two thirds of a percent at Grade 8 (Linn et al., 2002.). It is important to mention that the NCLB does not define proficiency or content domains, nor does it identify the kind of assessment for the content domains, allowing the states the option of developing flexible interpretations for their cut scores, which may change year after year (Linn, 2003; Linn et al., 2002).

School Reform Designs in DCPS Serving ESOL Students

For the purposes of this study, two types of school reform design will be considered: AC and DI. Both designs have been implemented in DCPS in an effort to increase accountability and student progress on benchmarked standards of achievement. AC is focused on English/language arts and mathematics, and DI is considered primarily a reading program.

According to Desimone (2002), the Elementary and Secondary Education Act (ESEA) schools must integrate CSR designs in the following manner. They must (a) use research-based innovative strategies; (b) have CSR plans; (c) provide ongoing professional development and technical support; (d) establish measurable benchmarks to meet students goals; (e) encourage parent and community involvement; and (f) design a plan for evaluating implementation and student achievement. Even though the ESEA establishes the criteria for selection, the districts in each state have the option of choosing among all the CSR designs the one that meets the district criteria for operating their curriculum.

In studying the effectiveness of school reform designs on academic achievement in U.S. schools, Borman et al. (2003), through use of a meta-analysis, found that both AC and DI had statistically significant positive effects on student achievement. They sampled 29 CSR designs to be evaluated among 145,296 CSR students and 77,660 comparison students. They defined CSR as approaches or effective practices with a goal of increasing at-risk student's academic achievement. Over 40% of the observations were taken from the developers and about one third were studies from a true longitudinal sample design. Findings indicated that CSRs that had been implemented for 5 years "showed

achievement advantages that were nearly twice those found for CSR schools in general, and after 7 years of implementation, the effects were more than two and a half times the magnitude of the overall CSR impact of $d = .15$ " (p. 153).

The results were presented in four groups based on the best evidence for evaluating the effects: strongest evidence of effectiveness; highly promising evidence of effectiveness; promising evidence of effectiveness; and greatest need for additional research. These results were based on the quality of evidence, quantity of evidence, and in the statistically significant and positive results. While the DI design met the highest standard of evidence that it improves test scores (effect size of $d = .21$ [$Z = 11.61$, $p < .01$] with a 95% interval of $d = .17$ to $d = .25$), the AC design was rated as having only promising evidence of effectiveness (effect size of $d = .22$). The authors noted that the number of years of implementation for school reform models has important implications for achievement, with the strongest effects occurring after the 5th year of implementation. According to Desimone (2002), CSR implementation is considered successful if it is consistent with school district guidelines, if the guidelines are specific, and if these three relevant factors are included: (a) the CSR is designed by the school, district, or a special team; (b) professional development is a component; and (c) and it is monitored by the school, district, or design team.

However, a significant number of active ESOL students in Florida are placed in regular monolingual English classrooms, where the school reform designs differ from the ones followed by ESOL teachers in the ESOL classroom. Some of these schools' reform designs could have a similar effect on academic achievement with ESOL students as they

had on Non-ESOLs. However, few studies of AC and DI have examined the success of these school reform designs for LEP and ESOL students.

America's Choice (AC)

The AC design is a K-12 CSR design created by the NCEE. The goal of AC is to raise “academic achievement by providing a rigorous standards-based curriculum and safety net for all students ... in English language arts and mathematics” (Supovitz & May, 2003, p. v). This design is based on a set of principles and tools: high expectations of student performance based on performance standards; an initial focus on literacy (phonics, oral language, shared books, guided and independent reading, daily writing, and independent writing); a common core curriculum; standards-based assessments; a distributed school leadership structure; safety nets; and a commitment to teachers’ professionalism (Supovitz & May, 2003). The pace of change varies from school to school and the length of implementation required depends upon the CSR (Desimone, 2002). AC requires a 3-year implementation (Supovitz & May, 2003).

The NCEE, in their booklet *Comprehensive Reform Designs* (2002), stated that the AC design was planned

with one goal in mind: to make sure that all but the most severely handicapped students reach an internationally benchmarked standard of achievement in English language arts and mathematics by the time they graduate. Every student, in other words, should leave high school qualified to do college work without remediation.... The design is based on acceleration, not remediation. (NCEE, 2002, p. 1)

The elements of the design are: standards, curriculum, learning environment, assessments, planning for results, professional development programs, safety net program, and school leadership. The AC design at the district level is based on proven approaches to school district organization, management, and governance.

The approach is that high-quality results depend on top management clarifying the organization's goals; establishing accurate measures of progress; allowing the people who actually produce the product or render the service to decide how to reach those goals; supporting such people every step of the way and then holding them accountable; providing rewards for progress; and imposing consequences when progress is not demonstrated. (NCEE, 2002, p. 23)

The CPRE report on AC provides evidence that this design has a positive impact on student achievement (Supovitz & May, 2003). Findings of a study in a New Jersey school system indicated that in Grades 4 through 6, "students of teachers with higher levels of implementation of AC gained significantly more on state tests than did students of low-implementing teachers, even after controlling for teacher and student background characteristics. This difference in student performance was equivalent to a 1% increase in the number of correct responses for every unit of increased implementation" (Supovitz & May, 2003, p. ix). No relationships were found between "the time that teachers reported implementing either readers or writers workshops and gains in student learning" (Supovitz & May, p. ix). However, there were "strong and consistent statistical relationships between instructors' preparation to teach readers and writers workshops and student test performance gains" (Supovitz & May, p. ix).

The AC design is student oriented. The teacher establishes a collaborative relationship with the students, as well with the rest of the teachers. There is a great deal of coaching. The NCEE (2002) described the readers' and writers' workshops as a sequence of organized activities that encompassed group and individual work.

According to Poglinco et al. (2003), the writers' workshops open with a short mini-lesson (procedural, craft, and skills) of about 7-10 minutes. The procedural section focuses on the ritual and routines; craft focuses on techniques, style, and good writing; and the skills section focuses on conventions and uses students' written work. There is also an independent period of about 35-45 minutes where students are engaged in the writing process (drafting, revising, editing, and polishing/publishing). Students work individually or in small groups. Response groups provide an opportunity for feedback, and end with the author's chair where students share selections of their writing.

The readers' workshops also begin with a mini-lesson of about 15-20 minutes. A mini-lesson may cover phonics, decoding, comprehension skills, or procedures. Immediately afterward, the teacher may elect to continue with independent/guided reading and/or a reading conference period. This workshop may end with a book talk in which students share reactions to books read independently or to a book read aloud as a group (Poglinco et al., 2003).

In a study in Duval County, CPRE analyzed differences in students' performance in 14 AC schools and 14 schools that were demographically comparable during the 1999-2000 school year. In the sample of 11,212 students enrolled in Grades 4 through 8, 55% of students were African-American, 56% participated in the free/reduced lunch program, and 20% had educational disabilities. After controlling for student background

characteristics, a regression analysis indicated that, for Grade 4 students, there were statistically significant differences in reading, writing, and math. Grade 4 students in AC schools performed 4% better in writing, but 1% worse in reading and 3% worse in math than Grade 4 students in comparison schools (Supovitz, Poglinco, & Snyder, 2001). It should be noted that this study was conducted after the 1st year of implementation, and it usually takes 3 years for a school to fully implement AC.

An additional study was conducted by CPRE on the impact of AC on student performance in Duval County after the first 2 years of implementation, using data from 1999 to 2001 (Supovitz, Taylor, & May, 2002). Findings indicated that, in both elementary and middle schools, there were higher learning gains for students in AC schools when compared with students in other schools in the district in the areas of reading, math, and writing. Differences were especially apparent in Grade 4 writing, as students in AC schools had statistically significant higher gains in writing, as measured by the Sunshine State Standards, than students in comparison schools. Further, there was a statistically significant reduction in the gap of performance between white and minority students in 22% of the grades and subjects examined, and the performance of minority students increased at a higher rate than white students (Supovitz et al., 2002).

Finally, to evaluate the impact of the design on student performance, Supovitz and Poglinco (2001) found that students in AC schools performed particularly well in comparison to their peers who were not in AC schools in the subject areas that are the focus of the implementation phase of the AC design. There is also some evidence that the early stages of AC implementation positively influenced students' mathematics

performance, perhaps because reading and writing are part of today's more challenging mathematics assessments.

The standards-based instruction movement in Florida was institutionalized after 1996 due to the state's adoption of the Sunshine State Standards, a rigorous formulation of required academic knowledge above the basic skills. These standards were followed and aligned by a new assessment: the FCAT. The FCAT was first administered in 1997-98 (Herrington & MacDonald, 2001).

However in DCPS, the term *standards-based schools* is used to describe new implementation the district is trying to establish in all the schools in the district. This implementation is based on the AC design. It is called standards-based because the training is given by DCPS personnel and not by the NCEE people. Standards-based is the alignment between the two programs. Nevertheless, each program keeps its own characteristics.

Direct Instruction (DI)

DI is a school reform design primarily focused on reading that begins in kindergarten and includes phonetic materials, rapid paced instruction, and regular assessment (Adams & Englemann, 1996). The design is explicit, intensive, and teacher-directed, with very specific instructions for teachers on how to teach beginning reading skills. The lessons are scripted and the teacher is given guidelines on how to present the material. Although DI was not designed for ELL students, it is often used with this population. According to Adams and Englemann, DI consistently results in superior academic performance when it is appropriately implemented.

In a study of the lasting effects of DI on students in Grades 5 and 6, Becker and Gersten (1982) followed a group of students who had received DI in Grades 1 through 3 at five different sites. One site in Texas had a student body of primarily Latino students. Findings indicated that DI students outperformed non-DI students on the Metropolitan Achievement Test.

Gersten (1985) evaluated the effects of DI for LEP students who spoke various Asian languages. At the end of 2 years, scores of DI students were compared to scores of students in matched control groups. While 75% of DI students scored at or above grade levels on the Comprehensive Test of Basic Skills (CTBS) Total Reading Scale, only 19% of comparison students were at or above grade level ($p < .001$). Similarly, Gersten and Keating (1987) found that long-term benefits resulted from DI. Students in a follow-up study who had received DI in grade school performed better than students in comparison groups as they dropped out less frequently, received higher scores on standardized tests, and applied to college more often. Despite the positive effects, 40% of these students dropped out of high school, compared to 58% in the comparison group (Gersten & Keating). Gersten and Woodward (1985) noted that, in the absence of effective instruction in Grades 4 through 12, LEP students tended to lose more ground than other students against their middle-income peers. Consequently, successful programs such as DI are especially important for these students, not just in the kindergarten and primary grades, but also in middle school and beyond.

In a more recent study of small group tutorials using DI, Gunn, Biglan, Smolkowski, and Ary (2000) compared Hispanic and non-Hispanic children in kindergarten through Grade 3 who were having problems in reading. Students were

assigned to experimental and control groups. At the end of the 1st year, students who had received 5 to 6 months of supplementary DI instruction showed greater gains on the Woodcock-Johnson Letter Word Identification and Word Attack scales, and Oral Reading Fluency than students in the control group. Non-English speaking children in the experimental group did especially well compared to matched controls.

A school in Baltimore that implemented DI as part of the curriculum went from being 115th in a district of 120 schools to being the 12th overall and 5th in Grade 5 reading. At the time, the school, which is 98% African-American, implemented DI, no students in Grade 3 or Grade 5 had passed the Maryland state test. Since DI implementation, 50% of the Grade 5 students passed the reading test and 75.9% passed the math test (Engelmann, 2002).

The Alliance of Quality Schools evaluation report, done for 2 consecutive years in Broward County, Florida, suggested that DI was a research-based curriculum successful with at-risk Grade 1, Grade 2, and Grade 3 students in student achievement. Teachers from 10 schools individually administered an Informal Reading Inventory (IRI) to all students. The study found that the reading level of the students rose by one and a half grade levels in Grade 3 and slightly less in Grade 2. A correlation study was also performed between the IRI scores and the Stanford scores and a positive relationship was found between the two scores, with a range of correlations from $r = .49$ to $r = .51$ (Abney & Blasik, 1996).

Standards and High Stakes Testing

Over the years, the Florida Department of Education has looked for mechanisms to hold schools accountable. Currently the department requires testing to measure

students' academic achievement and to monitor schools' performance in the belief that holding schools accountable will help to establish high standards in the curriculum. Scores for ESOL students are included in these accountability measures as well. In this sense, accountability refers ultimately to decisions related to how the money should be distributed among the schools (Herrington & MacDonald, 2001).

Herrington and MacDonald explained the accountability framework in Florida as cycles of reforms. Florida started shaping a response to the concept of accountability in 1971 by establishing the Educational Accountability Act. Due to a series of events and building tensions, the state was to conduct a 2-year study of its public education system under Committee Chair Frederick Schultz. Criterion and norm-referenced tests were to be developed based on this study. But it was not until 1991 that the Florida Legislature enacted the School Improvement and Educational Accountability Act, referred to as Blueprint 2000. It established a set of more elaborate standards followed by a new assessment of students' knowledge of the standards: the FCAT, which included Florida Writes and public reporting of the assessment results.

Districts and schools were required to establish local standards and measures of progress. The development of the Sunshine State Standards began in 1993, with final adoption by the state Board of Education in May 1996. The Sunshine State Standards, established to provide expectations for student achievement, were refined as the state moved towards accountability measured by benchmarks (Florida Department of Education, 2004a, 2004b, 2004c).

Further complicating schools' attempts to meet accountability measures, the Florida State Department of Education sent a memo (M. L. Openshaw, personal

communication, January 16, 2002) to school district superintendents to announce that all LEP students were expected to take the FCAT. LEP students who had been receiving ESOL services for 1 year or less could be exempted from taking the FCAT if approved by their LEP committee. Prior to this memo, ESOL students had been able to receive an exemption from taking the test for 2 years.

This change was due to the requirements of the NCLB Act. ESOL students must take statewide assessments in English, however research has demonstrated that ESOL students performed better in their L1, except for Grade 4 where the exiting ESOL students scored higher in the English version of the achievement test (Abella et al., 2003).

To examine the level of success on long-term academic achievement for the great variety of education services provided to LEP students in U.S. public schools, Thomas and Collier (2002) conducted a 5-year (1996-2001) research study from five urban and rural sites in the northeast, northwest, south/central, and southeast U.S. They compared the LEP students' performance with that of students in the English mainstream classes as measured by their normed curve equivalent (NCE) scores on the Terra Nova, a standardized, national test including reading, language, and mathematics subtests. In 1997, the bilingual immersion students with the new program implemented in Grades K-12 outperformed the monolingually English schooled students at the end of the 1st year by at least 5 NCEs in reading, language, and mathematics, with the exception of Grade 2 students' math performance, which was slightly above the 50th NCE/percentile. By 1999, the bilingual immersion students were outscoring the monolingually English schooled students at all grade levels by 4-17 NCEs, except in Grade 2 math and Grade 5 reading and language arts, which were 3 NCEs lower, not a significant difference. On the 2000

Terra Nova, again bilingual immersion students out-performed the English mainstream students, except in Grade 2 language arts (3 NCEs lower and not statistically significant), Grade 2 math (6 NCEs lower, the only lower difference with statistical significance), and Grade 7 math (1 NCE lower and not statistically significant).

By the end of the 3 years, bilingual immersion students were scoring in the 63rd percentile in reading, 68th percentile in English language arts, and the 60th percentile in math. The last year of the study, 2000, these students scored at or above the 60th percentile (55th NCE) in every subject and in every grade level, except for Grade 2 math at the 48th NCE (47th percentile). It is important to note that the gain in scores was quite meaningful, particularly considering that the students' scores were initially very low (10th NCE), since the goal is gap closure when comparing to typical native-English speakers scoring at the 50th NCE. Long-term studies are recommended to confirm gains over time.

Assessment Accommodations

In addition to concluding that LEP students performed differently in standardized testing than English speaking students, Gonzalez and Holt (1995) found that these students had not had all the experiences or opportunities needed to perform adequately on the tests. The authors also highlighted the need to change the current focus on developing valid and reliable instruments to include an awareness of the influence of evaluators' personalities on the assessment process. In other words, they suggested that accurate diagnostic and placement decisions for language-minority children can be made only if a knowledgeable advocate selects multiple measurements and interprets them by using appropriate philosophical assumptions that take into account linguistic and cultural differences.

An additional goal is to assure students' acceptance within the school culture so that learning opportunities can be maximized. In order to verify ESOL students' achievement, the educational system has implemented assessments to determine when the students are ready to go into the regular class. ESOL standards for teachers generally focus on cultural sensitivity, adaptation of learning activities to non-English speaking LEP students, and the development of strategies for working with immigrant families. Developing greater understanding and appreciation of language-diverse students also promotes a climate of respect for all students.

Abedi et al. (2004) concluded that assessment accommodations for LEP students based on the NCLB Act must be part of state adaptations to assure AYP in schools, as well as to have a clear picture of the accountability system. For assessment data to be valid and reliable, they must include all students (Abedi et al.). Abedi (2002) stated that the criterion-related validity coefficients between English tests and other measures of English proficiency was less than 5% of common variance. Bailey and Butler (2003) noted that there is little evidence that English proficiency tests are reliable.

Abedi et al. (2004) suggested that studies including language factors in content-based assessments might improve validity and reliability in such assessments, therefore some accommodations should be made as appropriate. Some of these accommodations include translations for directions only (test translations may not be appropriately translated because some languages have more dialects than others) or for special glossaries, extra time, dictionaries, oral administration, test administration in small groups or individual carrels, and possibly provision of written or oral responses in the

student's L1 (Abedi et al., 2004). At the same time, standardized tests must be interpreted in such a way that the individual student will be able to understand.

Scholastic Reading Inventory (SRI)

The scholastic teacher's guide (Scholastic, 1999) describes the SRI as "a series of reading tests for students in elementary through high school" (p. 1). The SRI is divided into two forms, each consisting of 10 levels: Levels 11 through 16 are for Grades 1 through 6 (approximately), and Levels 17 through 18 are wider range tests that approximate Grades 7 through 12. The tests are leveled to facilitate testing of students above and below grade level and are based on the lexile framework to help to accurately assess student comprehension levels. The tests contain 40-70 items, depending on the level. Each item consists of a passage and a number of sentence completions. The items are arranged from easier to more difficult. Each sentence completion blank has four possible word options to complete the sentence appropriately, only one of which is the correct answer. The tests assess students' abilities to comprehend the passages, make inferences, and establish logical connections.

The primary function of the SRI is to provide a lexile reading level for the student. According to Stenner (2003), when texts are selected that align with all facets of the reading process, the reader is truly targeted. Texts are selected based on interest, motivation, developmental maturity, prior knowledge, and purpose for reading. The lexile framework provides a common scale for determining a reader's ability in relation to the difficulty of specific texts and allows easy monitoring of progress, helping teachers and parents choose appropriate materials (Stenner, 2004; Williamson, 2004). Students are

matched with the appropriate texts to assist them in becoming more fluent readers and to provide them with successful reading experiences.

The two assessments that utilize students' lexile scores in Duval County, Florida, are the SRI and the FCAT. An administration manual from DCPS (n.d.) mandates that the SRI be administered to students in Grades 1 through 12. There are two forms of the SRI test: A and B; the first is administered in the fall and the second in the spring.

ESOL Environment and Classification

This section discusses the language struggle, the placement of ESOL students in ESOL classrooms or regular classrooms, and the manner in which teachers' perceptions facilitate or affect L2 acquisition, particularly academic English. Also provided is a discussion of the different programs currently enacted in most U.S. schools to try to satisfy these students' needs.

ESOL Student Classification

Every day children who are not adequately proficient in the English language struggle to succeed in U.S. classrooms, especially in Florida's classroom. Likewise, these children's English-speaking teachers and peers struggle to coexist in light of the language and cultural barriers, an educational challenge for the administrators and educators who deal with this dilemma (Arreaga-Mayer & Perdomo-Rivera, 1996; Platt et al., 2003; Saunders & Goldenberg, 1999; Thomas & Collier, 2002).

In fact, U.S. demographics are changing, but not all schools are prepared to deal with greater language diversity. Many in society and its schools automatically develop lesser expectations and more pejorative attitudes toward others simply as a result of physical or language differences. Disturbingly, legislators have become more focused on

establishing English as the official language and making schools accountable than on assisting non-native English speakers with educational programs to help them to develop English language skills, resulting in high student drop-out rates in these populations (Bermudez & Prater, 1988; Thomas & Collier, 2002). The lack of knowledge of appropriate ways to deal with a diverse population in the classroom has created confusion in some school districts, resulting in ELLs being placed in programs such as special education (Arreaga-Mayer & Perdomo-Rivera, 1996; Platt et al., 2003). Often, school staff have not been given the instructional strategies needed to effectively serve ESOL students and, in most cases, the assessments used for placing linguistically diverse students into the right classrooms and programs are inappropriate. As a result, the system lacks strategies to distinguish between students with learning disabilities and students who are in the process of language acquisition and lack English proficiency.

Understanding ESOL is challenging. In light of the growing ESOL population, many schools, state departments of education, and teacher preparation institutions are focused on trying to find mechanisms to improve the system. According to Fradd, Wilen, and Fardig (1998), Florida is being challenged by the fact that all teachers working with ESOL students must align their teaching to the Sunshine State Standards to show academic achievement with this group of students – thus the importance of the present study, which would explore the main factors impacting ESOL students' education. The META or Consent Decree, Section II A (1), refers to equal access for ESOL students, stating that the state shall include intensive English language instruction and instruction in basic subject matter areas to the ESOL student's level of English proficiency. It further states that the classes should be equal in amount, scope, sequence, and quality.

Teachers need a clear understanding of how a new language is acquired at the same time that these students master academic content (Bristor et al., 2000; Johnson, 1996; Perez, 2000). Bristor et al. believed higher education institutions in Florida should provide a teaching degree in ESOL, or otherwise prepare teachers in this area, as training at this level is becoming a financial problem for almost all school districts. Though they realized that the Consent Decree does not mention any direct requirements for higher education in this matter, they suggested that universities may play a proactive role in preparing teachers to deal with the growing ESOL population at school. The revised agreement of the META or Consent Decree has a section that discusses higher education, which was explained earlier in this chapter. However, to avoid misunderstandings, policymakers and educators must work together to produce individuals with the skills needed to sustain, develop, and expand the international trade market. Indeed, immigrant children represent a large population of students in Florida and they present a clear opportunity for the state's future stake in the global economy (Boswell, 1998).

ESOL Centers and Programs

According to the Consent Decree (Florida Department of Education, 1990), students in Grade 4 or above who score at or below the 32nd percentile on the reading and writing sub-parts of a norm-referenced test shall be determined to be LEP and should be provided appropriate services. ESOL students may also be determined to be LEP based on the results of the Language Assessment Scales test.

If a student is found to be LEP, the parent(s) may choose to send the student to an ESOL center school to receive help learning English from a teacher who is certified in ESOL. Students learn in a small classroom environment that is focused on their needs.

Special teaching materials are provided and the classroom is staffed with a full-time teaching assistant (DCPS, 2004a).

In DCPS, ESOL students are placed in either ESOL centers or ESOL programs. An ESOL center serves its own LEP students and also LEP students from the feeder schools that do not offer self-contained ESOL classes due to low enrollment of ESOL students. ESOL students attend self-contained, sheltered, and pull-out classes. An ESOL program school is a school with a sufficient number of its own LEP students to support the program and provides the ESOL student with self-contained classes in English/Language Arts through ESOL (DCPS, 2004a).

In a study of bilingual students in the Houston Independent School District (Thomas & Collier, 2002), LEP students in Grades 2-11 who received content ESOL services achieved significantly higher than students who did not, especially in the first few years of school. By Grade 9, those who received primary support in their elementary school years reach a higher level of achievement than those without the support.

Those LEP students who did not receive services because their parents decided to place them in the English mainstream program, rather than in an ESOL program, achieved at a very low level. Their scores in Grade 11 were at the 12th percentile in reading and the 22nd percentile in math. These students had a high dropout rate and were retained in one or more grades more than any other group (Thomas & Collier, 2002). Unfortunately, decisions like this one have caused many students to drop out of school (Platt et al., 2003).

In examining the effect of student background on academic achievement, Thomas and Collier (2002) also found SES to be a factor in the achievement of language minority

students, with SES explaining 3-6% of achievement on standardized tests and up to 11-12% of achievement in selected circumstances.

Teachers' Perceptions of ESOL Students

Teaching in a bilingual setting means going beyond the curriculum and materials in the classroom. Indeed, culture becomes a centerpiece in bilingual education, with the resident society attempting to orient the students and their families to their new culture. Success is more likely if teachers manifest the willingness and the desire to learn and understand the values, language, and patterns of the other cultures (McCollum, 1994).

Educators know that if theory is applied to practice, students learn more. Teaching an L2 has the same effect. Students can learn an L2 faster if they see that what they are learning has a positive effect on their lives. Connections between students and teachers are likely to happen if teachers have similar experiences to those of their students, allowing them to establish a relationship based on shared experience. ESOL teachers who speak an L2 or for whom English is an L2 or who have the willingness to learn from their students, either by adjusting the curriculum to the students' needs or by adjusting their views to better understand their students, tend to empathize more with these kind of students (Marx, 2000).

All of the characteristics previously mentioned explain how effective a program may be if the student is placed as the centerpiece. ESOL students are at the stage where a lot of comparisons occur between the two cultures: their own and the new one. The teacher must be knowledgeable or willing to know more about other cultures and countries. Teachers must also be able to accept criticism and respond with positive feedback.

L1 Impact in Learning L2, Literacy Development, and Academic English

One's L1 or first language is acquired by both speaking and writing. Oral language is subconsciously developed during childhood and written language is developed through one's lifetime. On the other hand, the acquisition of an L2 is influenced by the learner's motivation and need to learn it. As a consequence, academic English and social English play an important role in the process of L2 acquisition. Academic English is used in the classroom environment, such as the classroom itself, school fields, and the library. It is also used when tutoring is taking place, when using classroom computers, during recess, and when talking with the counselor, a principal, teacher, or other staff member at the school (in most cases, all of them are monolingual). Academic English is also necessary to succeed, especially in American schools, as it is necessary to fulfill school and state assessments.

On the other hand, social English is used for integration in a particular group. People who belong to the school environment, neighborhood, or to the family facilitate social English (Goldman & Reyes, 1983; Kraemer, 1993; Ovando & Collier, 1998). Social settings also play an important role in language acquisition. When a child is raised in a bilingual setting, proficiency in both languages will develop at the same rate. However, in a non-bilingual setting the most predominant language or the language most frequently used will prevail, therefore interaction with speakers of the target language is very important to academic achievement in school (Krahnke & Christison, 2002; Ovando & Collier, 1998).

Some programs fail at fostering bilingualism and bi-literacy, such as in Spanish and English, because they devalue the minority language (the first language of the

student); for instance, by teaching students that the language of success in the United States is English (McCollum, 1994; Ovando & Collier, 1998). One of the advantages of the two-way bilingual program is the opportunity to learn more about the importance of the quantity and quality of contact with language majority students (L1). One may also see how it will influence the learning process. There may be the opportunity to observe teachers' lowered expectations and negative social conditions in the classroom as well, which may damage the educational relationship with L2 students (Zanger, 1991).

Schooling seems to have a strong impact in learning L2, even more than SES. No matter how old some LEP students are when they arrive in the American school system, it seems that the schooling in L1 influences the academic skills in L2. Academic success will be expected depending on how much support is offered to maintain L1 skills in early elementary schooling (Abella et al., 2003; Thomas & Collier, 2002). Diverse population growth in a traditional school setting continues to occur. Students in a regular classroom, as well as the arriving immigrant students, may go into cultural isolation because neither group has been prepared to coexist with the other. To assimilate into a new culture is a difficult process and can be a complex transition for any newcomer.

Thomas and Collier (2002) examined the academic achievement of new immigrants who were not proficient in English from five different regions in the United States. The results showed little difference in the test scores of language-minority students and native speakers of English during K through 3, no matter what program was used. As LEP students reached middle school, significant differences were found, and by high school support of the first language played an important role. One of the conclusions was that students with no schooling in the first language needed up to 7 years to reach the

50th percentile on performance measures. Some factors that may be taken into consideration are (a) learning strategies, including problem solving and thinking skills; (b) approaches to retrieve prior knowledge; and (c) respect for the home language. The report concludes with the following: the strongest predictor of L2 student achievement is the amount of formal L1 schooling received; in other words, the more schooling in their L1, the higher the L2 achievement. Bilingual school students performed comparably with English schooled students in academic achievement in all subjects after 4 to 7 years of dual language schooling. Students who received at least 4 to 5 years of schooling in their home country before they emigrated to the U.S. reached the 34th NCE (23rd percentile). When ELLs initially exit into the English mainstream, those schooled in English outperform those schooled bilingually when tested in English. But by the middle school years, those bilingually schooled reach the same level of achievement as those monolingually schooled in English (Thomas & Collier, 2002). Those ELLs who still maintained their L1 have a linguistic advantage over their peers: the command of two languages.

There is empirical evidence that L2 literacy ability does not necessarily improve as a function of the L2. Benedetto (1985) reported that L2 literacy increased only in those students who were strategic readers in their own language. Those students who lacked the ability to read in L1 exhibited less sensitivity to L2 literacy. Swanborn and De Gloppe explained in their 1999 study that reading ability in relation to grade level was not significantly related. However, they emphasized that further studies must be done on reading ability as an outcome – particularly assessing the number of words learned by children at different ages while reading appropriate materials.

ESL teachers must understand that criticism about language itself is part of the process of comparison of the grammatical components in each language: the student's L1 and the language being taught. Input from the first language will emerge at the first stage of learning the L2. The learner will learn in the first language to be able to analyze the structure of the L2. Consequently, this language skill will make translation faster and more accurate from L2 to L1, but it may contain a few limitations, such as stronger lexical skills, when it is done from L1 to L2 (Haritos & Nelson, 2001; Ovando & Collier, 1998).

As an example of translation being easier from L2 to L1 than from L1 to L2, Haritos and Nelson (2001) studied the manner in which specific languages affect memory narrative in two languages: Greek and English. The findings indicated that bilingual Greek children were most likely to recall a story in Greek after hearing it in English. Subjects in English-Greek and Greek-English were able to hear discourse in one language, remember it, and successfully translate it into their other language without grammatical or semantic errors.

Quality L1 literacy instruction facilitates overall academic achievement and the development of L2 (Garcia, 1991; Goldman & Reyes, 1983; Perez & Torres-Guzman, 1992). However, acquaintance with L2 culture and educational materials may help children understand L2 more clearly. A two-way bilingual program provides an opportunity for both L1 and L2 children to develop full literacy in both languages, where L1 is the primary language and L2 is the secondary language (Goldman & Reyes, 1983; Perez & Torres-Guzman, 1992). The strongest predictor of L2 language acquisition was the amount of schooling in L1: the more formal schooling in L1, the higher the L2

academic achievement, which in the future led to proficient bilingualism (Thomas & Collier, 2002; Wakabayashi, 2002). Additionally, Thomas and Collier (2002) suggested based on the results of their study that both LEP and non-LEP students who were schooled bilingually outscored those schooled monolingually (English) after both 1 year and 4 years of the bilingual program. Thus, those schooled in two languages outperformed those schooled in one.

An additional and important factor to educators is the relationship between the two languages spoken by the student, such as which language is spoken at home (Haritos & Nelson, 2001). Also worthy of consideration are Saunders and Goldenberg's (1999) findings that LEP students benefited from both literature logs and instructional conversations. However, these factors did not make any difference to fluent English speaking students. Additionally, the transfer of skills learned in one language will transfer to the L2 automatically, though a child whose L1 is still not secure or established is often at a disadvantage when acquiring skill in L2 (Wakabayashi, 2002). It is important to further study of this issue to separate students who have newly arrived in this country with no proficiency in English from those who have some experience in an English school prior to arriving in the U.S. when gathering achievement data as data must show year by year progress (Thomas & Collier, 2002).

Appropriate Age to Acquire Academic Language

Most people believe that children are able to learn another language faster than adults. However, research has shown that children may capture the accent faster than adults, but adults are able to understand the grammar more easily (Ovando, 2003). Children may acquire a language "instinctively" by listening to the people around them

and will unconsciously keep a conversation in either their L1 or in L2. In contrast, adults will listen and analyze the syntax of both the spoken and written language. This is because most adults have completed the learning stage of their L1 and are able to understand abstract concepts (Wolfe, 1974).

Ovando and Collier (1998) also mentioned that adults and adolescents' L2 acquisition is characterized by retention of the accent. Although adult learners have a more difficult time with their accent, they are more capable of handling the academic side of the acquisition of L2. Therefore, it may be concluded that conversational language is easier to acquire at an early age, while reading and writing are acquired easier by adults. For the same reason it has been posited that adults can acquire native-like fluency if the optimum context is provided, some researchers believe that older students can acquire an L2 more quickly than younger students because they have already gathered a language structure to help them acquire another language (Abella et al., 2003; Wakabayashi, 2002). However, it is also believed that people become less adaptable as they mature and therefore a new language becomes more difficult to acquire as people age (Abella et al., 2003). Bilingual adults acquiring L2 rely on strong lexical skills in L1. As a result, there are many links with L1 to access concepts in L2 (Haritos & Nelson, 2001).

Vocabulary progresses and increases as part of human development and growth. Many researchers refer to vocabulary as lexicon or word formation (Stewart & Vaillette, 2001). Researchers are interested in knowing how word formation occurs in learning an L2 (Carter, 2001). People begin generating words as early as 6 months in what is known as babbling. After 12 months of age, babies start reproducing some specific words such as "mama, baba, dada." Vocabulary may differ from child to child and the first words

they generate are mostly nouns that represent surrounding objects (Gass & Selinker, 2001; Shore, 1995).

Processing of a word includes generating the word and its storage in memory. As people grow, writing and recognizing words are steps added to the process. Researchers have been interested in understanding how all of this takes place. (Carter & Nunan, 2001). Carter and Nunan also reported that people who read more, know and store more words into their vocabulary. As one develops, so does one's vocabulary. Gass and Selinker (2001) stated that words in "adult language do not always correspond to words in a child's language" (p. 95). In many cases children produce one word to represent two or more words in adult language.

It is difficult for teachers to find the mechanisms to help ESOL students succeed as immigrant students come to this country with varying levels of English proficiency. In order to verify ESOL students' academic achievement in the classroom, the educational system has implemented state assessments. Additionally, policies such as the NCLB emphasize accountability, requiring that the educational system ensure that all the students meet high standards. Moving LEP students to English fluency is difficult. Assessing LEP students with the same assessments used for Non-ESOLs might show whether the kinds of programs used by the school or school district are teaching the skills needed for these students to survive in school.

Title III states that all students, including LEP, must meet the standards by taking the state assessment. LEP students must also be assessed at the district level to measure their knowledge of English from the moment they start in the program. Schools that fail to show academic achievement with disadvantaged students will be impacted as the

opportunity for these schools to show academic progress on the English state assessment decreases proportionately with the number of English learners in the school.

Chapter 3

Methodology

The purpose of this study was to examine factors that impact the academic achievement of ESOL students in Grade 2 in a large urban public school district. There was one major research question: To what extent can gains in lexile scores on the SRI be explained by the independent variable set of school reform design (AC/DI), ESOL instruction (ESOL instruction/no ESOL instruction), and SES (free and reduced lunch/no free lunch)? This chapter includes information about the site, research design, and research instrument. Procedures for selecting the sample and collecting and analyzing the data are also described.

Study Population

Public schools in Duval County, Florida were selected as the site for the study. DCPS is the 20th largest school district in the nation. During the 2003-2004 school year, the district had 120 elementary schools (including seven ESOL centers and one ESOL program school), 24 middle schools (including four ESOL centers and one ESOL program school), and 17 high schools (including two ESOL centers and two ESOL program schools). The AC school reform design was used in 59 elementary schools, 11 middle schools, and 2 high schools during the 2003-2004 academic year. The DI design was used in 19 elementary schools. There were a total of 126,743 students in Grades K-12 in DCPS in the 2003-2004 school year, including 3,053 ESOL students (1,473 in

elementary; 727 in middle; 853 in high school). These ESOL students were from 121 different countries. Among the 85 first languages spoken by ESOL students in DCPS, the 10 primary first languages were Spanish (1,218 students), Serbo-Croatian (361 students), Albanian (Shqip), Arabic, Vietnamese, Tagalog, Farsi, Russian, Haitian-Creole, French Creole, Chinese, and Zhongwen (DCPS, 2004b).

Research Design

The present study investigated to what extent the academic achievement of ESOL students can be explained by the independent variable set of school reform design, ESOL instruction, and SES. The design was ex post facto or casual comparative. The dependent variable was gain in lexile scores as measured by the SRI. The independent variables included type of school reform design (AC or DI), whether or not ESOL instruction was received, and SES as measured by whether or not the student qualified for the free or reduced lunch program. These three variables were selected because they have been found to be correlated with students' academic achievement in previous studies: school reform design (Borman et al., 2003); ESOL instruction (Thomas & Collier, 2002); and SES (Thomas & Collier, 2002). All data were gathered from the DCPS database.

Research Instrument

The instrument for collecting data on ESOL students' academic achievement was the SRI (Scholastic, Inc., 2001), which is administered to Grade 2 students at the beginning and end of the school year. The SRI lexile is a measure of students' reading ability. A range of scores has been established for each K-12 grade equivalent, with the exception of kindergarten, with some overlap in ranges. Score ranges and grade equivalents are presented in Table 1. Lexile scores are not used to determine whether or

not a child is promoted to the next grade level; their purpose is to allow teachers to make provisions for students who read above or below grade level.

Table 1

Lexile Ranges and Grade Equivalents

Lexile Range	Grade Equivalent
1150-1300	Grade 12
1100-1250	Grade 11
1050-1200	Grade 10
980-1130	Grade 9
920-1100	Grade 8
890-1080	Grade 7
810-1000	Grade 6
710-900	Grade 5
650-820	Grade 4
530-690	Grade 3
370-550	Grade 2
250-400	Grade 1

The SRI can be administered either by a paper and pencil test or by the computerized assessment version, the SRI Interactive. Students in the present study took the paper and pencil version of the test. In the SRI Interactive, the computer continually adapts the test based on the students' responses and, therefore, the number of questions answered varies from student to student.

According to materials from Scholastic, Inc., both versions use the same item format. Assessments of validity and reliability presented in the SRI Technical Guide (Scholastic, Inc., 2001) were based on the SRI Interactive version. The SRI Interactive was administered to a sample of 512,224 students. Correlations between the paper version of the SRI and the SRI Interactive for selected subsamples of students in Grade 3 were found to be .71 ($n = 109$) and .73 ($n = 117$).

Face validity evidence was established by selecting passages from both textbooks that students are exposed to in the classroom and reading materials that they encounter beyond the classroom such as magazines and newspapers. Construct validity evidence was established by field testing it on students from four schools in Florida and North Carolina in Grades 3, 4, 5, and 7 ($n = 879$) and correlating SRI scores with other measures of reading comprehension. Correlations between the SRI interactive and the North Carolina Department of Public Instruction, the Pinellas Instructional Assessment Program, and the CTBS ranged from .56 to .74, indicating that the SRI measures similar constructs as those measured by other tests of reading comprehension.

To establish reliability for scores on the SRI, the standard error of measurement was computed in lexile (L) units, and varied depending on the number of items a student answered, and whether the grade level and reading level were known at the time of the test. For students whose grade level was known, but reading level was unknown, the standard error of measurement ranged from 84L (24 questions answered) to 104L (15 questions answered). For students whose grade and reading level were known, the standard error of measurement ranged from 54L (24 questions answered) to 58L (15 questions answered). According to the example given by Scholastic, Inc., if a Grade 7 student received a lexile score of 950L, his prior reading level was not known, and he answered 20 questions, one could be 90% confident that the student's true reading ability, as measured in lexils, was between 860L and 1040L.

More detailed information about the SRI was included in the literature review in chapter 2.

Data Collection

Data were collected during fall 2004 from the DCPS database. DCPS was sent a letter requesting their participation in the study and the completed application to conduct research at DCPS (See Appendix A). The dataset received from the school district included those students in Grade 2 during the 2003-2004 school year who were enrolled in a DI or AC classroom or who had an ESOL code. Students were eliminated from the dataset if they did not have data for all of the variables. Hence, students were eliminated from the sample if they did not have an SRI lexile score from both the beginning and end of the school year, were not in either a DI or AC classroom, did not have an ESOL code, or did not have a code for SES as measured by whether or not a student received free and reduced lunch.

The final research sample consisted of 204 students, including 53 in DI and 151 in AC; 151 receiving free and reduced lunch and 53 paying full fee for lunch; 139 receiving ESOL instruction and 65 receiving no ESOL instruction.

Informed Consent and Institutional Review Board Approval

Approval for the study was obtained from DCPS and the Institutional Review Board (see Appendix B) at the University of North Florida prior to the collection of any data. Students' names were kept confidential. DCPS representatives were assured that the results of the study and names of the schools involved would be held confidential, unless the district gave permission to do otherwise, to ensure that no negative perceptions would result from their participation in the study.

Data Analysis

The data analysis procedure employed was a three-way, two (school reform design: DI versus AC) by two (ESOL instruction: received some instruction versus no instruction) by two (SES: free and reduced lunch versus no free lunch) ANOVA. All statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS) version 11.5 (SPSS, Inc., 2002).

Because of the small sample size, ESOL instruction and SES were collapsed into dichotomous categories. The variable ESOL instruction was collapsed from the four original categories into ESOL instruction (F = exited ESOL in last 2 years, Y = LEP in classes for ESOL students, Z = former LEP, exited ESOL more than 2 years ago) and no ESOL instruction (A = students who were determined to be English proficient as a result of test scores on the Language Assessment Scale and never received ESOL instruction). The variable SES was collapsed from the four original categories into free and reduced lunch (F = free and R = reduced) and no free lunch (P = pay and N = denied).

Summary

DCPS was the site selected for the present study. The design was ex post facto or casual comparative. The data analysis procedure employed was a three-way ANOVA. The dependent variable was lexile gain scores on the SRI. The independent variables were school reform design, ESOL instruction, and SES.

Data were collected during fall 2004 from the DCPS database. The final sample consisted of 204 Grade 2 students who had taken the SRI at the beginning and end of the school year, were either in a DI or AC classroom, and had an ESOL code. Approval for the study was obtained from the Institutional Review Board at the University of North

Florida prior to the collection of data, and approval from DCPS to release the data requested was obtained prior to their participation in the study. The data analysis consisted of examining descriptive statistics for each of the variables and conducting a three-way factorial ANOVA.

In chapter 4, the results of the data analyses are presented. Data are used to test the study's seven research hypotheses and answer the primary research question.

In chapter 5, the findings of the study are summarized and discussed in relationship to past research. Conclusions are drawn, recommendations are made, and contributions of the present study to the field of education are presented.

Chapter 4

Findings

As stated in chapter 1, the present study examined how school reform design, ESOL instruction, and SES impact the academic achievement of ESOL students in Grade 2. Lexile gain scores on the SRI were used to measure academic achievement. There was one major research question in the study: To what extent can gains in lexile scores on the SRI be explained by the independent variable set of school reform design (AC/DI), ESOL instruction (ESOL instruction/no ESOL instruction), and SES (free and reduced lunch/no free lunch)? A full factorial design allowed for the testing of seven research hypotheses.

An analysis of data obtained from the DCPS database was conducted in order to answer the primary research question and test the seven research hypotheses. The analysis included running descriptive statistics for each of the variables and performing a univariate analysis of variance (ANOVA) procedure. All statistical analyses were performed using SPSS version 11.5 (SPSS, Inc., 2002). After the data analysis is presented, each research hypothesis is addressed separately.

Descriptive Statistics

Descriptive statistics for each of the dependent and independent variables are provided in Tables 2 through 9.

Lexile Gain Scores

Gains in lexile scores on the SRI ranged from -430 to +725, with a mean of 46.45 and a standard deviation of 185.06. Lexile gain scores are presented in Table 2.

Table 2

Descriptive Statistics for Lexile Gain Scores

	N	Minimum	Maximum	Mean	Std. Deviation
LexileGain	204	-430.00	725.00	46.4510	185.05638
Valid N (listwise)	204				

School Reform Design

The sample included a total of 53 students (26.0%) in 6 DI classrooms and 151 students (74.0%) in 38 AC classrooms. Of the six DI schools, only one was an ESOL center school, with four students in the sample attending that school. Of the 38 AC schools, two were ESOL center schools with four students in the sample, and one was an ESOL program school with 16 students in the sample. Descriptive statistics for school reform design are presented in Table 3.

ESOL Instruction

Of the 204 students in the sample, all of whom were designated as LEP by the school district, 65 students (31.9%) “tested out” on the Language Assessment Scales test and, therefore, never received ESOL instruction. A total of 59 students (28.9%) had exited ESOL within the past 2 years, 68 students (33.3%) had exited ESOL more than 2 years ago, and 12 students (5.9%) were currently enrolled in ESOL classes. A breakdown of participants by level of ESOL instruction is presented in Table 4.

Table 3

N of Participants Selected from DI and America's Choice Settings Across 38 Schools

School	School Reform Design		Total
	1=Direct Instruction	2=America's Choice	
A	0	7	7
B	0	1	1
C	0	1	1
D	0	1	1
E	0	4	4
F	0	7	7
G	0	3	3
H	0	4	4
I	0	4	4
J	26	0	26
K	0	1	1
L	9	0	9
M	2	0	2
N	0	4	4
O	0	1	1
P	11	0	11
Q-AC ESOL Program	0	16	16
R	1	0	1
S	0	2	2
T	0	2	2
U	0	3	3
V-AC ESOL Center	0	3	3
W	0	5	5
X	0	7	7
Y	0	6	6
Z	0	9	9
AA	0	11	11
BB	0	4	4
CC	0	1	1
DD-DI ESOL Center	4	0	4
EE	0	1	1
FF	0	4	4
GG-AC ESOL Center	0	1	1
HH	0	12	12
II	0	8	8
JJ	0	7	7
KK	0	7	7
LL	0	4	4
Total	53	151	204

Table 4

Participants by Level of ESOL Instruction Received

	Frequency	Percent	Valid Percent	Cumulative Percent
A=No ESOL Instruction/ Tested Out	65	31.9	31.9	31.9
F=Exited in last 2 years	59	28.9	28.9	60.8
Y=LEP in classes for students	12	5.9	5.9	66.7
Z=Former LEP exited more than 2 years ago	68	33.3	33.3	100.0
Total	204	100.0	100.0	

Because of the small number of students in one of the four categories, the ESOL instruction variable was recoded into the dichotomous categories of ESOL instruction or no ESOL instruction. A total of 65 students (31.9%) had never received ESOL instruction (original code A) and 139 students (68.1%) had received some ESOL instruction (original codes F, Y, Z). Descriptive statistics for the recoded ESOL instruction variable are presented in Table 5.

Table 5

Recoded ESOL Frequencies

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
No ESOL Instruction (A)	65	31.9	31.9	31.9
ESOL Instruction (F, Y, Z)	139	68.1	68.1	100.0
Total	204	100.0	100.0	

Socioeconomic Status (SES)

Of the 204 students in the sample, 46 students (22.5%) paid full fee for lunch; 7 students (3.4%) had applied for free or reduced lunch, but were denied; 41 students (20.1%) paid a reduced fee for lunch; and 110 students (53.9%) received free lunch. Descriptive statistics for SES, as defined by free lunch, are presented in Table 6.

Table 6

Participants by Original SES Code (Free Lunch) Frequencies

	Frequency	Percent	Valid Percent	Cumulative Percent
F=Free	110	53.9	53.9	53.9
N=Denied	7	3.4	3.4	57.4
P=Pay	46	22.5	22.5	79.9
R=Reduced	41	20.1	20.1	100.0
Total	204	100.0	100.0	

Because of the small number of students in one of the four categories, SES was recoded into the dichotomous categories of free and reduced lunch or no free lunch. A total of 151 students (74.0%) in the sample received free or reduced lunch, and 53 students (26.0%) did not receive free or reduced lunch. Descriptive statistics for the recoded SES variable are presented in Table 7.

Table 7

Recoded SES Frequencies

	Frequency	Percent	Valid Percent	Cumulative Percent
Free/Reduced Lunch (F, R)	151	74.0	74.0	74.0
No Free Lunch (N, P)	53	26.0	26.0	100.0
Total	204	100.0	100.0	

ANOVA Analysis

Descriptive statistics from the factorial ANOVA analysis are presented in Table 8.

Overall, students receiving DI had greater gains in lexile scores ($M = 162.42$, $SD = 172.76$, $n = 53$) than students receiving AC ($M = 5.75$, $SD = 171.99$, $n = 151$); students who received ESOL instruction had greater gains in lexile scores ($M = 57.91$, $SD = 184.99$, $n = 139$) than students who did not receive ESOL instruction ($M = 21.94$, $SD = 184.22$, $n = 65$); and students who did not qualify for free and reduced lunch had greater gains in lexile scores ($M = 59.74$, $SD = 195.06$, $n = 53$) than students who did qualify for free and reduced lunch ($M = 41.79$, $SD = 181.86$, $n = 151$).

There were observable differences between students in DI and AC classes with regard to SES and ESOL instruction. Among the 53 students receiving DI, students who qualified for free and reduced lunch scored lower ($M = 157.29$, $SD = 157.62$, $n = 35$) than those who did not qualify for free and reduced lunch ($M = 172.39$, $SD = 203.59$, $n = 18$). However, among the 151 students receiving AC, students who qualified for free and reduced lunch scored somewhat higher ($M = 6.94$, $SD = 174.66$, $n = 116$) than students who did not ($M = 1.80$, $SD = 165.21$, $n = 35$). Also, among the 53 students receiving DI, students who received ESOL instruction had much greater gains in lexile scores ($M = 170.14$, $SD = 174.23$, $n = 43$) than students who did not receive ESOL instruction ($M = 129.20$, $SD = 171.09$, $n = 10$). However, among the 151 students who received AC, students who received ESOL instruction scored only slightly higher ($M = 7.65$, $SD = 167.44$, $n = 96$) than students who did not receive ESOL instruction ($M = 2.44$, $SD = 181.17$, $n = 55$). Obviously, the large standard deviations of the lexile scores recommends caution in interpreting these initial measures of group differences.

Table 8

ANOVA Descriptive Statistics

School Reform Design	SES Recode	ESOL Recode	Lexile Scores Mean	Std. Deviation	N
1=Direct Instruction	Free/Reduced Lunch (F,R)	No ESOL Instruction (A)	181.5000	172.93640	4
		ESOL Instruction (F,Y,Z)	154.1613	158.36079	31
		Total	157.2857	157.62140	35
	No Free Lunch (N,P)	No ESOL Instruction (A)	94.3333	176.35268	6
		ESOL Instruction (F,Y,Z)	211.4167	211.98090	12
		Total	172.3889	203.58988	18
	Total	No ESOL Instruction (A)	129.2000	171.09374	10
		ESOL Instruction (F,Y,Z)	170.1395	174.23296	43
		Total	162.4151	172.76345	53
2=America's Choice	Free/Reduced Lunch (F,R)	No ESOL Instruction (A)	-.5000	199.81928	40
		ESOL Instruction (F,Y,Z)	10.8553	161.15067	76
		Total	6.9397	174.66182	116
	No Free Lunch (N,P)	No ESOL Instruction (A)	10.2667	123.65301	15
		ESOL Instruction (F,Y,Z)	-4.5500	193.58623	20
		Total	1.8000	165.20750	35
	Total	No ESOL Instruction (A)	2.4364	181.17454	55
		ESOL Instruction (F,Y,Z)	7.6458	167.44237	96
		Total	5.7483	171.98772	151
Total	Free/Reduced Lunch (F,R)	No ESOL Instruction (A)	16.0455	202.73444	44
		ESOL Instruction (F,Y,Z)	52.3738	172.44767	107
		Total	41.7881	181.85619	151
	No Free Lunch (N,P)	No ESOL Instruction (A)	34.2857	141.39489	21
		ESOL Instruction (F,Y,Z)	76.4375	224.04952	32
		Total	59.7358	195.06026	53
	Total	No ESOL Instruction (A)	21.9385	184.21852	65
		ESOL Instruction (F,Y,Z)	57.9137	184.99230	139
		Total	46.4510	185.05638	204

It is important to test for the homogeneity of variance (equality of error variances) assumption when conducting ANOVA analyses. This assumption is met if the dependent variable error variances across groups within the analysis are deemed roughly equivalent. For the data in hand, the homogeneity assumption is met as the statistical significance is greater than .05 in Levene's test ($F_{(1, 196)} = .710, p = .663$). As there are three independent

variables, there are three main effects and four interactions (each independent variable with each other, and then all three together), for a total of seven degrees of freedom needed to conduct the test. Results of the Levene test are presented in Table 9.

Table 9

Levene Test Results

F	df1	df2	Sig.
.710	7	196	.663

Note: Tests the null hypothesis that the error variance of the dependent variable is equal across groups. (a Design: Intercept+refdesign+SESRecode+ESOLRecode+refdesign * SESRecode+refdesign * ESOLRecode+SESRecode * ESOLRecode+refdesign * SESRecode * ESOLRecode) Dependent variable: lexile gain.

Table 10

ANOVA Analysis

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1029053.775(a)	7	147007.682	4.865	.000	.148
School Reform Design	569144.526	1	569144.526	18.834	.000	.088
SES	1737.338	1	1737.338	.057	.811	.000
ESOL Instruction	10835.369	1	10835.369	.359	.550	.002
School Reform Design * SES	929.596	1	929.596	.031	.861	.000
School Reform Design * ESOL Instruction	12643.841	1	12643.841	.418	.518	.002
SES * ESOL Instruction	20351.394	1	20351.394	.673	.413	.003
School Reform Design * SES * ESOL Instruction	42356.337	1	42356.337	1.402	.238	.007
Error	5922856.735	196	30218.657			
Total	7392080.000	204				
Corrected Total	6951910.510	203				

Note: a R Squared = .148 (Adjusted R Squared = .118). Dependent variable: Lexile gain.

Results of the 3-way (2 x 2 x 2) full factorial analysis of variance are presented in Table 10 above. The overall model yielded a statistically significant $F_{(1, 196)}$ of 4.865, $p <$

.001, $\eta_p^2 = .148$. Explanation of the ANOVA results relative to each of the present study's seven null hypotheses follows.

Consideration of the Primary Research Question

Test of Hypothesis 1: School Reform Design

The first research hypothesis stated: There is no statistically significant ($p = .05$) difference in the SRI lexile gain scores of students in classrooms using the AC school reform design and those in classes using DI. As noted in Table 9, this main effect hypothesis was included in the factorial ANOVA. This hypothesis was rejected as the main effect of school reform design was statistically significant ($F_{(1, 196)} = 18.834, p < .001$). The effect size associated with this difference was $\eta_p^2 = .088$. A partial eta squared of .088 is modest as it means that approximately 9% of the variance in SRI gain scores can be attributed to the school reform design factor by itself.

Test of Hypothesis 2: ESOL Instruction

The second research hypothesis stated: There is no statistically significant ($p = .05$) difference in the SRI lexile gain scores of students receiving ESOL instruction and those receiving no ESOL instruction. As noted in Table 9, this main effect hypothesis was included in the factorial ANOVA. This hypothesis was not rejected as the main effect of ESOL instruction was not statistically significant ($F_{(1, 196)} = .359, p = .550$). The near zero η_p^2 value for this effect further substantiated the lack of association between ESOL instruction and achievement as measured by SRI lexile scores.

Test of Hypothesis 3: Socioeconomic Status (SES)

The third research hypothesis stated: There is no statistically significant ($p = .05$) difference in the SRI lexile gain scores of students who qualify for free and reduced

lunch and those who do not. As noted in Table 9, this main effect hypothesis was included in the factorial ANOVA. This hypothesis was not rejected as the main effect of SES was not statistically significant ($F_{(1, 196)} = .057, p = .811$) and was practically nonexistent ($\eta_p^2 = .000$).

Test of Hypothesis 4: Interaction of School Reform Design and ESOL Instruction

The fourth research hypothesis stated: There is no statistically significant ($p = .05$) interaction effect of school reform design and SES interacting together to explain the variance in SRI lexile gain scores. As noted in Table 9, this interaction hypothesis was included in the factorial ANOVA. This hypothesis was not rejected as there was no statistically significant interaction between school reform design and ESOL instruction ($F_{(1, 196)} = .418, p = .518$) and only a negligible statistical effect ($\eta_p^2 = .000$).

Test of Hypothesis 5: Interaction of School Reform Design and SES

The fifth research hypothesis stated: There is no statistically significant ($p = .05$) interaction effect of school reform design and ESOL instruction interacting together to explain the variance in SRI lexile gain scores. As noted in Table 9, this interaction hypothesis was included in the factorial ANOVA. This hypothesis was not rejected as there was no statistically significant interaction between the factor of school reform design and the factor of SES ($F_{(1, 196)} = .031, p = .861; \eta_p^2 = .002$).

Test of Hypothesis 6: Interaction of ESOL Instruction and SES

The sixth research hypothesis stated: There is no statistically significant ($p = .05$) interaction effect of SES and ESOL instruction interacting together to explain the variance in SRI lexile gain scores. As noted in Table 9, this interaction hypothesis was

included in the factorial ANOVA. This hypothesis was not rejected as there was no statistically significant interaction between SES and ESOL instruction ($F_{(1, 196)} = .673$, $p = .413$; $\eta_p^2 = .003$).

Test of Hypothesis 7: Interaction of School Reform Design, ESOL Instruction, and SES

The seventh research hypothesis stated: There is no statistically significant ($p = .05$) three-way interaction effect of school reform design, ESOL instruction, and SES interacting together to explain the variance in SRI lexile gain scores. As noted in Table 9, this interaction hypothesis was included in the factorial ANOVA. This hypothesis was not rejected as the three-way interaction between school reform design, SES, and ESOL instruction was not statistically significant ($F_{(1, 196)} = 1.402$, $p = .238$; $\eta_p^2 = .007$).

Summary

In this chapter, findings were presented from the data analyses and used to examine the research question and test the seven null hypotheses. Descriptive statistics were presented for each of the dependent and independent variables, followed by the ANOVA analysis. Findings indicated that only one of the seven research hypotheses was supported.

Gains in lexile scores on the SRI ranged from -430.0 to +725.0, with a mean of 46.45 and a standard deviation of 185.06. The sample included 53 students in 6 DI classrooms and 151 students in 38 AC classrooms. A total of 65 students had never received ESOL instruction and 139 students had received some ESOL instruction. For the SES variable, 151 students in the sample received free or reduced lunch and 53 students did not.

Overall, students receiving DI had greater gains in lexile scores than students receiving AC; students who received ESOL instruction had greater gains in lexile scores than students who did not receive ESOL instruction; and students who did not qualify for free and reduced lunch had greater gains in lexile scores than students who did qualify for free and reduced lunch.

The overall ANOVA model yielded a statistically significant result of $F_{(1, 196)} = 4.865, p < .001, \eta_p^2 < .148$. Only the main effect of school reform design was statistically significant ($F_{(1, 196)} = 18.834, p < .001$). The effect size associated with this difference was $\eta_p^2 = .088$, which means that 9% of the variance in SRI gain scores can be attributed to school reform design.

The main effect of ESOL instruction was not statistically significant and the main effect of SES was not statistically significant. There was no statistically significant interaction between the factor of school reform design and the factor of SES, no statistically significant interaction between school reform design and ESOL instruction, and no statistically significant interaction between SES and ESOL instruction. The three-way interaction among school reform design, SES, and ESOL instruction was also not statistically significant.

Chapter 5 includes a summary of the study, a discussion of the results, and conclusions. Recommendations are made for future studies and contributions are presented.

Chapter 5

Summary, Conclusions, and Recommendations

The purpose of the present study was to examine how school reform design, ESOL instruction, and SES impact the academic achievement of ESOL students in Grade 2. Lexile scores on the SRI were used to measure reading ability. There was one major research question in the study: To what extent can lexile scores on the SRI be explained by the independent variable set of school reform designs (AC/DI), ESOL instruction (ESOL instruction/no ESOL instruction), and SES (free and reduced lunch/no free lunch)? Seven null hypotheses were tested.

In this final chapter, the methodology employed in the study is reviewed. Findings are summarized and discussed relative to past research, as well as to the theoretical framework upon which the present study is based. Conclusions are drawn, recommendations are made for future research, and the contributions the study has made to the field of education for ELL students are highlighted.

Review of the Methodology

Two hundred four ESOL students enrolled in Grade 2 in Duval County (Florida) Public Schools for the academic year 2003-2004 participated in the study. The participants included 53 students in DI and 151 students in AC schools; 151 receiving free or reduced lunch and 53 paying full fee for lunch; 139 receiving ESOL instruction

and 65 receiving no ESOL instruction. Approval was obtained through the Institutional Review Board prior to gathering data.

The instrument used for collecting data on ESOL students' academic achievement was the SRI, which is administered to Grade 2 students at the beginning and end of the school year. The SRI lexile scores serve as a measure of students' overall reading ability. A range of scores has been established for each K-12 grade equivalent, with the exception of kindergarten, with some overlap in ranges.

The dependent variable set included gains in lexile scores on the SRI. The independent variable set included school reform design, ESOL instruction, and SES. Analysis of the data consisted of running descriptive statistics for each of the variables and an ANOVA analysis.

Summary of the Results

Overall, the findings indicated that students in the DI school reform design had greater gains in lexile scores on the SRI than students in the AC school reform design. SES and ESOL instruction were not significant predictors of academic achievement. Findings for the primary research question and each of the corresponding research hypotheses follow.

The primary research question in the present study asked: To what extent can gains in lexile scores on the SRI be explained by the independent variable set of school reform design (AC/DI), ESOL instruction (ESOL instruction/no ESOL instruction), and SES (free lunch and reduced lunch/no free lunch)?

The overall ANOVA model yielded a noteworthy statistically significant result of $F_{(1, 196)} = 4.865, p < .001, \eta_p^2 < .148$. However, only the main effect of school reform design was statistically significant ($F_{(1, 196)} = 18.834, p < .001, \eta_p^2 = .088$).

The first research hypothesis stated: There is no statistically significant ($p = .05$) difference in the SRI lexile gain scores of students in classrooms using the AC school reform design and those in classes using DI. This hypothesis was rejected, as the main effect of school reform design was statistically significant ($F_{(1, 196)} = 18.834, p < .001$). The effect size associated with this difference was $\eta_p^2 = .088$. A partial eta squared of .088 is modest, as it means that approximately 9% of the variance in SRI gain scores can be attributed to the school reform design factor by itself.

The second research hypothesis stated: There is no statistically significant ($p = .05$) difference in the SRI lexile gain scores of students receiving ESOL instruction and those receiving no ESOL instruction. This hypothesis was not rejected, as the main effect of ESOL instruction was not statistically significant ($F_{(1, 196)} = .359, p = .550$).

The third research hypothesis stated: There is no statistically significant ($p = .05$) difference in the SRI lexile gain scores of students who qualify for free and reduced lunch and those who do not. This hypothesis was not rejected, as the main effect of SES was not statistically significant.

The fourth research hypothesis stated: There is no statistically significant ($p = .05$) interaction effect of school reform design and SES interacting together to explain the variance in SRI lexile gain scores. This hypothesis was not rejected, as there was no statistically significant interaction between school reform design and SES.

The fifth research hypothesis stated: There is no statistically significant ($p = .05$)

interaction effect of school reform design and ESOL instruction interacting together to explain the variance in SRI lexile gain scores. This hypothesis was not rejected, as there was no statistically significant interaction between the factor of school reform design and the factor of ESOL instruction.

The sixth research hypothesis stated: There is no statistically significant ($p = .05$) interaction effect of SES and ESOL instruction interacting together to explain the variance in SRI lexile gain scores. This hypothesis was not rejected, as there was no statistically significant interaction between SES and ESOL instruction.

The seventh research hypothesis stated: There is no statistically significant ($p = .05$) three-way interaction effect of school reform design, ESOL instruction and SES interacting together to explain the variance in SRI lexile gain scores. This hypothesis was not rejected, as the three-way interaction between school reform design, SES, and ESOL instruction was not statistically significant.

Discussion of the Results

The findings of the present study will be discussed in relationship to past research studies and to the theoretical framework upon which the study is based. Limitations of the research instrument, the SRI, will also be addressed.

Relationship of the Present Study to Previous Research

To date, few empirical studies have been conducted on factors that affect the academic achievement of ELLs. A discussion of the results of the present study follows. The discussion includes comparisons between the present study's findings and those of available past studies that focused on school reform design, ESOL instruction, and SES as predictors of school achievement.

Discussion relative to Hypothesis 1: school reform design. In a meta-analysis of 29 CSR models and academic achievement, Borman et al. (2003) found that although both DI and AC had statistically significant positive effects on student achievement, DI was more effective than AC. While the DI design met the highest standard of evidence that it improves test scores, the AC design was rated as having only “promising” evidence of effectiveness. The authors also noted that the number of years of implementation for school reform models has important implications for achievement, with the strongest effects occurring after the 5th year of implementation.

The finding in the present study that DI is more effective than AC is consistent with the findings of Borman et al. (2003). However, the number of years of implementation of the school reform design models was not examined in the present study.

It is important to note that the meta-analysis by Borman et al. (2003) is the only study found in the literature in which DI and AC were compared, and the comparison was not direct, as 29 different school reform designs were included. No study was found in which the DI and AC school reform designs were compared to each other. Although comparing the results of the present study to studies in which either the effects of AC (Supovitz et al., 2001, 2002) or DI (Becker & Gersten, 1982; Gersten, 1985; Gunn et al., 2000), but not both, were examined, is not entirely appropriate, such studies verify that both of these designs have been found to be more effective than unspecified comparison strategies.

Results of the present study will now be compared to two relevant studies on AC (Supovitz et al., 2001, 2002). In a study in Duval County Florida, CPRE analyzed

differences in performance of students in 14 AC schools and 14 schools that were demographically comparable in the 1999-2000 school year (Supovitz et al., 2001). After controlling for student background characteristics, a regression analysis indicated that, for Grade 4 students, there were statistically significant differences in reading, writing, and math. While Grade 4 students in AC schools performed 4% better in writing, they performed 1% worse in reading and 3% worse in math than Grade 4 students in comparison schools.

It should be noted that this study was conducted after the 1st year of implementation of AC, and it takes 3 years for a school to fully implement AC (Supovitz & May, 2003; Supovitz et al., 2001). Further, it is not known whether schools employing the DI school reform design were included among the schools in the comparison group. The finding in the present study is consistent with the finding of Supovitz et al. (2001) that students in AC classrooms performed worse ($M = 5.75$, $SD = 171.99$, $n = 151$) on a reading assessment than students in a comparison group, which in the present study was DI classrooms ($M = 162.42$, $SD = 172.76$, $n = 53$).

An additional study was conducted by CPRE on the impact of AC on student performance in Duval County after the first 2 years of implementation, using data from 1999 to 2001 (Supovitz et al., 2002). Supovitz et al. (2002) compared AC schools to non-AC schools, but not specifically to DI schools. DI schools may have been among the non-AC schools, however. Findings indicated that, in both elementary and middle schools, there were higher learning gain scores of students in AC schools compared to students in other schools in the district in the areas of reading, math, and writing. On the Grade 4 writing test, students in AC schools had statistically significant higher gains than students

in comparison schools. The results of the present study are inconsistent with these findings, as students in AC classrooms had statistically significant lower gains in lexile scores on the SRI, a measure of reading ability, than the comparison group of students in DI classrooms.

The results of the present study will now be compared to three relevant studies on DI (Becker & Gersten, 1982; Gersten, 1985; Gunn et al., 2000). In a study of the lasting effects of the DI school reform design (that did not examine AC), on students from Grades 5 and 6, Becker and Gersten (1982) followed a group of students who had received DI in Grades 1, 2, and 3 at five different sites, one of which had primarily Latino students. Findings indicated that DI students outperformed non-DI students on the Metropolitan Achievement Test. The results of the present study are consistent with these findings; students in DI classrooms had greater gains in lexile scores on the SRI ($M = 162.42$, $SD = 172.76$, $n = 53$) than the comparison group of students in AC classrooms ($M = 5.75$, $SD = 171.99$, $n = 151$).

Gersten (1985) evaluated the effects of DI for LEP students who spoke various Asian languages. Again, the AC design was not examined in this study. At the end of 2 years, scores of DI students were compared to scores of students in matched control groups. While 75% of DI students scored at or above grade levels on the CTBS Total Reading Scale, only 19% of comparison students were at or above grade level ($p < .001$). The results of the present study are consistent with these findings; students in DI classrooms had greater gains in lexile scores on the SRI ($M = 162.42$, $SD = 172.76$, $n = 53$) than the comparison group of students in AC classrooms ($M = 5.75$, $SD = 171.99$, $n = 151$).

In a study of small group tutorials using DI (and not AC), Gunn et al. (2000) compared Hispanic and non-Hispanic children, in kindergarten through Grade 3, who were having problems in reading. Students were assigned to experimental and control groups. At the end of the 1st year, students who had received 5 to 6 months of supplementary DI instruction showed greater gains on the Woodcock-Johnson Letter Word Identification and Word Attack scales, and Oral Reading Fluency than students in the control group. Non-English speaking children in the experimental group did especially well compared to matched controls. Again, the results of the present study are consistent with these findings; students in DI classrooms had greater gains in lexile scores on the SRI ($M = 162.42$, $SD = 172.76$, $n = 53$) than students in the comparison group of AC classrooms ($M = 5.75$, $SD = 171.99$, $n = 151$).

In regard to the statistically significant moderate effect for DI over AC with ELLs in the present study, it is important to consider why DI was more effective than AC with this population. While both DI and AC focus on the mastery of skills, AC is more student directed and DI is more teacher directed, with more drill and practice exercises for students. It may be that ELL students need more focused instruction from the teacher and are not as comfortable engaging in self-directed activities. Another distinction is that AC is more holistic while DI focuses more on phonics and decoding skills, which ELL students may be more in need of than other students.

This finding provides evidence that the implementation of districtwide school reform designs does not serve all students equally well. Hence, their effectiveness on subgroups such as ELLs should be studied and considered prior to implementation. In the present study, the most widely used school reform design in DCPS was demonstrated to

be ineffective with ELLs. Differential forms of instruction should be provided to students based on the needs of the specific group (e.g., ESOL, learning disabled, minority, etc.). Because the number of years of implementation of the school reform designs was not examined in the present study, it is not known how many years the designs had been implemented in any of the schools or how important this factor was to the success of students in either DI or AC. As noted by Borman et al. (2003), the number of years of implementation for school reform models has important implications for achievement, with the strongest effects occurring after the 5th year of implementation. It may be that the AC classrooms in the present study had not yet achieved full implementation, which requires 3 years (Supovitz & May, 2003; Supovitz et al., 2001).

Discussion relative to Hypothesis 2: ESOL instruction. In a study of bilingual students in the Houston Independent School District (Thomas & Collier, 2002), LEP students in Grades 2-11 who received content ESOL services achieved significantly higher than students who did not, especially in the first few years of school. Although students in the present study who had received ESOL instruction had greater gains in lexile scores ($M = 57.91$, $SD = 184.99$, $n = 139$) than students who received no ESOL instruction ($M = 21.94$, $SD = 184.22$, $n = 65$), the difference was very small and not statistically significant.

This finding may be due to limitations of how the effects of ESOL instruction were measured. In the present study, ELL students who had ever received ESOL instruction were compared to ELL students who had never received ESOL instruction. Most of the ESOL students in the sample were no longer active in ESOL classes, with 59 having exited within the past 2 years and 68 having exited more than 2 years ago. Only

12 students were currently active in ESOL. Therefore, it is not known how the amount of time elapsed since receiving ESOL instruction affected the academic achievement of ESOL students. Further, these students in Grade 2 were quite young and the long-term effects of having received ESOL instruction are not known.

The quality of ESOL instruction was also not taken into consideration in the present study, as information on the level of ESOL endorsement of teachers providing the ESOL instruction was not available in the DCPS database. Because the present study could not determine the quality of ESOL instruction the LEP students were receiving, it is not surprising that the study found that ESOL instruction had no statistically significant effect on achievement. Thus, studies that can rate the quality of ESOL instruction might find that good ESOL instruction may have greater positive effects on achievement than poor ESOL instruction or English immersion approaches.

Research has shown that the strongest predictor of L2 language acquisition is the amount of schooling in L1; the more formal schooling in L1, the higher the L2 academic achievement (Thomas & Collier, 2002). Given that the present study examined reading ability in English, language acquisition was an important consideration. It would seem that providing ESOL instruction to students who had limited schooling in their L1 would be less effective than providing it to students who had more schooling in their L1. As information on how many years of schooling the students in this sample had in their L1 was not available in the DCPS database, this factor was not examined in the present study, but may have had an impact on the results.

Discussion relative to Hypothesis 3: SES. In examining the effect of student background on academic achievement, Thomas and Collier (2002) found SES to be a

factor in the achievement of language minority students, with SES explaining 3-6% of achievement on standardized tests for dual language programs and ESL content programs and up to 11-12% of achievement in selected circumstances. In the present study, while students with higher SES (those who did not qualify for free or reduced lunch) had greater gains in lexile scores ($M = 59.74$, $SD = 195.06$, $n = 53$) than students with lower SES (those who did qualify for free or reduced lunch) ($M = 41.79$, $SD = 181.86$, $n = 151$), the difference was minimal and not statistically significant.

This finding may be due to the fact that the free and reduced lunch designation is not an accurate indicator of, and proxy variable for, SES. To qualify for free and reduced lunch, parents had to complete the required paperwork in English, request free and reduced lunch for their children, and accurately report their incomes. Parents with low incomes may have been embarrassed to report their income. Others may have been reluctant to ask for a handout out of pride. Further, completing the paperwork may have been difficult for some parents due to the language barrier or their reading ability.

Discussion relative to Hypotheses 4, 5, 6, and 7. There were no statistically significant differences due to variable interactions, which was largely due to the fact that two of the main effects produced no statistically significant differences.

Interpretation of Results Within the Theoretical Framework

Accountability is an essential tool in the educational system to show academic achievement and for moving students with limited English proficiency to English fluency (Abedi, 2004). The present study was based on the premise that in order for all students to meet high standards, ESOL students will also be held accountable for making AYP under the NCLB. It was undertaken at a time when accountability became an essential

tool in the educational system to show academic achievement and, at the same time, the number of ELLs in school systems continued to grow and now represent a large population of the students in the State of Florida. Indeed, the NCLB goal is to move LEP students to English fluency by providing them the services, such as ESOL, that they need to make this transition.

Over the years, many school districts have tried to find mechanisms to hold schools accountable. Implementing new school reform designs with a genuine accountability system is theoretically one mechanism for improving student achievement. AC and DI are two well known school reform designs that have been implemented, not only in Florida, but throughout the United States. The results of the present study indicate that DI is more effective than AC with ELLs, yet many of these children are being taught in AC classrooms.

Because classroom activities are so important to the student's progress during the process of language acquisition (Snow, 1990; Townsend, 1976), it is essential to determine what specific aspects of DI are highly effective with ELL students. It is hoped that the present study will make a contribution to the on-going research on factors that impact the academic achievement of language-minority students (Thomas & Collier, 2002).

Limitations of the Research Instrument

Although the study's intent was to examine ESOL students' academic achievement, the research instrument employed does have some limitations. While the lexile score on the SRI is considered the best measure of reading ability by DCPS and is used to provide students with reading materials at the appropriate level of difficulty for

their ability, it may not be an accurate measure of reading academic achievement for ESOL students. Because reliability information on the SRI is not available specifically for this population, it is not known whether or not questions on the SRI are written to the level of contextual understanding for ESOL students.

Conclusions and Recommendations

The findings of the present study led to conclusions, recommendations for educators, and recommendations for further research regarding the factors that impact the academic achievement of ESOL students.

Conclusions

While knowledge of more than one language is beneficial, to be able to achieve academically in the U.S., one must be fluent in English. The results of the present study indicate that DI was more effective than AC for this population of ELLs in Grade 2. It is hoped that the present study will spur curiosity for additional research on how to make students whose first language is not English more academically successful.

Recommendations for Educators

School leaders in urban school districts, especially those serving ELL students, must look for effective strategies to meet the pressing demands for ESOL students to achieve academically and show AYP, as imposed by the NCLB and the Consent Decree in the state of Florida. Therefore, educators must determine how best to serve the needs of the ESOL students population, especially when considering the implementation of a new school reform design.

Educators need to understand the ways that language minority students learn and the contextual variables that influence their learning process. The results of the present

study offer evidence that DI is an effective school reform design for ESOL students, yet there are few DI programs and an abundance of AC programs in DCPS. Leaders must learn from negative experiences and make changes to provide school reform designs that are conducive to the academic achievement of ESOL students and aligned with the demands for ESOL accountability.

Educators need effective methods to teach ELLs, yet minimal attention has been paid to teaching language acquisition and the factors in the environment that are more effective. When implementing school reforms designs, educators should take into consideration the use of accountability-driven data for the purposes of improving instruction of ESOL students.

Given the consequences of current “high stakes” policies aimed at improving student achievement through CSR and accountability, state policymakers must encourage and support local policymakers in devising useful strategies to improve AYP for the ESOL student population. Findings from the present study suggest that policymakers should evaluate the possibility of changing the school reform design offered in ESOL programs, especially when these programs are in low performing schools.

Recommendations for Further Research

The need for more studies on LEP students’ academic achievement prompted this particular study. Because ESOL education in Florida is relatively new, more studies should be conducted, particularly in language immersion programs or programs with a high concentration of ESOL students in the earlier grades. Future research should investigate the quality of ESOL instruction and the effect of specific teacher behaviors on

student achievement in further detail. Studies should also examine the duration of ESOL instruction received by students and its long-term effects on academic achievement.

In studies of school reform designs, the level of implementation should be considered, including the number of years of implementation, as well as specific indicators of implementation in individual classrooms. In particular, future studies should identify the specific classroom activities that maximize the achievement of all students, as well as subgroups of students including ELLs, minorities, and students with disabilities.

As the sample size ($n = 204$) of the present study was relatively small, generalizations of the findings should be made with caution. Results are generalizable primarily to students enrolled in similar urban schools. In order to better understand ESOL academic achievement, it is recommended that a larger sample, such as a statewide population of ESOL students in Florida, be studied. Future studies could be expanded to include the relationships among ESOL school principals' experience, ESOL training and endorsement of teachers, and ESOL students' academic achievement. Further, teachers' ESOL endorsement, as well as their perceptions of ESOL students in relation to ESOL students' academic achievement should be addressed, as the teacher plays an important role in education.

While the present study was quantitative, qualitative studies of ESOL students' academic achievement could help clarify the complexity of variables that impact the academic achievement of ESOL students. Actions of the school community could be described in depth, and participants' personal experiences could offer additional insights.

Each study, followed by reflections of school practitioners can lead to enhanced education for ESOL students.

Longitudinal studies would be beneficial, in order to follow students' learning, retention, and completion rates. Such studies could answer questions about how students performed in English and in their L2, and how they have utilized bilingualism after graduation. It would be of benefit, also, to explore, through additional longitudinal studies, how students who speak different languages perform based on school reform design and ESOL instruction.

Contributions of the Study

The present study is the first known research that compared the achievement of students in AC classrooms directly to the achievement of students in DI classrooms. It is also the first research conducted on the academic achievement of ESOL students in DCPS. The design of this study offers future researchers a basis upon which to conduct further empirical research on ESOL students' academic achievement at any K-12 educational institution.

The results of the study raise the awareness that school reform designs are still being challenged to demonstrate AYP for ESOL students. These findings emphasize the need for better strategies to improve ESOL students' academic achievement.

The one statistically significant finding in the study, that DI is more effective than AC with ESOL students, indicates the need for differentiated instruction for these students. In order to address the learning needs of individual students, differentiated instruction should include strategies to address not only students' ability level, but also their learning profiles, skills, readiness, and interests.

Appendix A

Office of Research, Assessment, and Evaluation
DUVAL COUNTY PUBLIC SCHOOLS
 Jacksonville, Florida

REQUEST TO CONDUCT RESEARCH

SUMMARY

Duval County Public Schools (DCPS) provides the opportunity for quality research studies to be conducted within the system by graduate students and by other professionally and technically qualified individuals and research organizations.

Factors that are considered in assessing whether the school system will cooperate in a research study:

1. The technical soundness of the proposal design
2. The appropriateness of the research topic for support in the public setting
3. The availability of appropriate research sites and subjects
4. The nature and degree of interruption within the ongoing educational program
5. The types of background data requested about the subjects of the proposed study and the nature of personal information to be collected from the subjects themselves
6. The kind and number of data-gathering procedures or instruments to be used in the study
7. The need for schools to safeguard the personal and legal rights of students, parents, and staff

The following categories of research proposals will be considered for approval:

1. Proposals for research activities originating within DCPS offices, departments, divisions, and other units, transmitted through their central office administrative channels
2. Responses to DCPS requests for proposals (RFP's) for external audits and research
3. Unsolicited research proposals from individuals or organizations independent of DCPS
4. Proposals for studies for master's theses and doctoral dissertations originating from DCPS employees
5. Proposals for studies for doctoral dissertations originating from proponents other than DCPS employees

DCPS will not accept applications to conduct research studies to meet requirements of routine undergraduate or graduate course papers from any individuals or groups.

The Office of Research, Assessment, and Evaluation is responsible for evaluating each request for research support, and the researcher(s) must obtain approval as indicated by the signature of the General Director for Research, Assessment, and Evaluation before the study begins. Proposals involving sensitive issues or substantial commitment of DCPS resources may be referred to the District's Institutional Review Board (IRB), the Superintendent of Schools or the Chief of Staff for approval, disapproval, or transmittal to the School Board for review.

The approval process may take as long as six weeks. Please submit your request for support in sufficient time to meet your anticipated timeline. Research activities involving students may not be conducted from April 1 through August 31, unless the project is originated by Duval County Public Schools.

The Office of Research, Assessment, and Evaluation cannot assist applicants with research design, development or implementation of data collection instruments, analysis of data, or composition of the final report except as indicated in the evaluation provisions of the *Guidelines for Requesting to Conduct Research in Duval County Public Schools*.

Student and parent participation in a study is voluntary. Participation by DCPS personnel is also voluntary unless otherwise specified by the Superintendent of Schools or the Chief of Staff. Every data collection instrument must contain a clearly visible statement to that effect on its cover page. Anonymity of all participants must be preserved. The identity of schools or the school system may be disclosed only under authorization by the Superintendent of Schools or the Chief of Staff.

The applicant is responsible for submitting an acceptable health certificate for all project staff who are not DCPS employees if the research activity requires contact with students. Health certificates must be submitted to the school's principal prior to student contact.

For additional details on DCPS policy and procedures on supporting and screening research proposals, refer to the *Guidelines for Requesting to Conduct Research in Duval County Public Schools*. Copies are available upon request and may be downloaded from the DCPS website.

INSTRUCTIONS: Applicants who wish to conduct research in Duval County Public Schools must complete and submit this form, *Request to Conduct Research*, and all required attachments, to the Office of Research, Assessment, and Evaluation, Duval County Public Schools, 1701 Prudential Drive, Suite 651, Jacksonville, Florida 32207.

Research Request Submission Date: _____ Applicant Name: _____

Project Name: _____

For RAE Office Use Only: Processing Status

Date Request Received: _____	Date Reviewed: _____	Reviewer: _____
Initial Reviewer Recommendation: <input type="checkbox"/> Approve <input type="checkbox"/> Reject <input type="checkbox"/> Refer to IRB <input type="checkbox"/> Return for Revision _____ (Date)		
IRB Recommendation: <input type="checkbox"/> Approve <input type="checkbox"/> Reject <input type="checkbox"/> Not Applicable _____ (Date)		
Supt./COS Recommendation: <input type="checkbox"/> Approve <input type="checkbox"/> Reject <input type="checkbox"/> Not Applicable _____ (Date)		
Final Decision: <input type="checkbox"/> Approve <input type="checkbox"/> Reject	Comment: _____	

A. APPLICANT INFORMATION

1. Name: Mr. Mrs. Miss Ms. Dr. _____

Home Address: 8832 Harpers Glen Court, Jacksonville, FL 32256
Street City State Zip

Business Name: Duval County Public Schools (Englewood Elementary)

Business Address: 1701 Prudential Drive, Jacksonville, FL 32207
Street City State Zip

Your Professional Position/Title: Standards Coach

Home Telephone Number: (904) 363-9398 Business Telephone Number: (904) 739-5280

E-mail Address: billncristina@earthlink.net and valentinoc@educationcentral.org

2. Are you employed by Duval County Public Schools? Yes No

If "Yes," indicate status: Full-time Employee Part-time Employee Employee on leave

3. Is this proposal related to the degree requirements of a college or university?

Yes No (If "Yes," continue with items a, b, and c of this section; otherwise skip to question 4.)

a) What degree requirements? Master's Doctorate Other (specify): _____

b) Who is your advisor or committee chairperson?

Name: Dr. G. Pritchey Smith Phone: (904) 620-2610

Institution: University of North Florida Department Curriculum & Instruction

Address: 4567 St. Johns Bluff Road, South, Jacksonville, FL 32224-2645
Street City State Zip

c) What is the approval status of your proposal at your college or university?

Formally approved Approved by advisor but not by thesis/dissertation committee Not at the approval stage

4. If you answered "No" to Question 3, indicate the impetus for this proposal:

A component of an existing DCPS program/project An external research organization

A response to a request for proposals (RFP) or grant announcement

An individual researcher. Briefly describe your area of research specialization and activity:

5. Indicate your degree status: Non-degree Baccalaureate Master's Specialist Doctorate (All But Dissertation)

6. How will the cost of this study to be funded?

By applicant By applicant's institution, organization, or business By DCPS program funds

By government foundation, or other research grant (explain): _____

B. MAJOR FEATURES

NOTE: All applications must be accompanied by a full technical proposal submitted as an attachment to this application form and project summary. See pages 6 - 7 for details.

1. Title of study ESOL Students' Academic Achievement: The Impact of School Reform Design, ESOL Instruction, and SES
2. Anticipated timeline for conducting the research: Begin 6/29/04 End 12/30/05
3. Research questions/hypotheses to be explored:
 - a. Research question: To what extent can lexile scores (scores on the SRI, SAT 9, SDRT) be explained by the predictor variable set of school reform design
 - b. (America's Choice/Direct Instruction), ESOL instruction (ESOL active/inactive),
 - c. and socioeconomic status (free lunch/no free lunch)?
 - d. See attached proposal narrative for corresponding research hypotheses.
4. Site(s) to be included in the study:
 - a. Check all that apply: Elementary Schools Middle Schools High Schools District Office(s)
 - b. Are there specific schools you wish to include in the study? Yes No
If "Yes", please specify: Schools that employ America's Choice and Direct Instruction.
 - c. Are there specific "other" research sites you wish to include? Yes No
If "Yes" please specify: ESOL Centers and Programs

C. DATA REQUIREMENTS

1. Will data be collected from/about students?

Yes No (If "Yes," continue with items a, b, c, and d of this section; otherwise skip to question 2.)

 - a. Total number of students needed for this study Prefer 300, but must have 20 per variable (n=80)
 - b. Check and describe any specific criteria for selection of students to take part in the study.

Grade level(s) Attended 2nd grade in 2003-2004 school year.

Ability/Achievement level(s) _____

Race/Ethnicity Need primary language of each LEP student.

Gender _____

Enrollment in specific program(s) ESOL; America's Choice/Direct Instruction

Recipient of special education services _____

Other (specify): ESOL endorsement for student's homeroom teacher, if in database.
 - c. Will student test data be required? Yes No
If "Yes," specify the test(s) by name and scores/data needed: Lexile scores on the SRI, SAT9, SDRT; scales and subscales of the SDRT, SDMT, SAT9, SRI.
 - d. Are historical/archived data on current students required? Yes No If "Yes," specify: _____
Only data available in the database, as stated above.

2. Will data be collected from/about school staff, parents, or former students?

Yes No (If "Yes," continue with items a, b, c and d of this section; otherwise skip to section D.)

a. Check all that are applicable. Indicate the number needed and briefly describe the Individuals' roles in the study.

Target Population	Number Needed	Role of Individuals
<input checked="" type="checkbox"/> Classroom teachers	_____	ESOL endorsement of student's homeroom teacher, if available in database.
<input type="checkbox"/> School-based administrators	_____	_____
<input type="checkbox"/> District office administrators	_____	_____
<input type="checkbox"/> Parents	_____	_____
<input checked="" type="checkbox"/> Former students/graduates and/or their family members	_____	Students in 2nd grade in 2003-2004
<input type="checkbox"/> Support Staff (i.e., technology, resource teachers, media center)	_____	_____
<input type="checkbox"/> Other (specify):	_____	_____

b. Are historical/archived data on staff required? Yes No If "Yes," specify: _____

c. Are historical/archived data on parents required? Yes No If "Yes," specify: _____

d. Are historical/archived data on former students or graduates and/or their families required? Yes No

If "Yes," specify: _____

D. INSTRUMENTS, EQUIPMENT, AND INSTRUCTIONAL MATERIALS

1. What tests, observation guides, questionnaires, attitude scales, interest inventories, surveys, and/or other typed or printed instruments will be used? Be specific.

Type of Instrument	Purpose/Description	Who Will Respond or Be Observed?	Is the Instrument Researcher Made?	Estimated Administration Time Needed
<input type="checkbox"/> Group test	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____
<input type="checkbox"/> Individual test	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____
<input type="checkbox"/> Questionnaire/Survey	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____
<input type="checkbox"/> Interview guide	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____
<input type="checkbox"/> Observation guide	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____
<input type="checkbox"/> Attitude/Interest inventory	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____
<input checked="" type="checkbox"/> Other (specify) SDRT, SDMT, SAT9, SRI administered by DCPS	_____	_____	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	_____

NOTE: Copies of all data collection instruments for this proposed study must be included with the submission of this document and must be approved by the General Director for Research, Assessment, and Evaluation prior to use.

2. Will instructional materials or equipment be used for research purposes? Yes No

If "Yes," explain: _____

E. REQUESTED PARTICIPATION OF DCPS STAFF

1. Will teachers be asked to assist with this study? Yes No

If "Yes," who and how much time will be needed? _____

2. Will other school system personnel be asked to assist with this study? Yes No

If "Yes," who and how much time will be needed? Only to pull data from the existing database, maybe 1 hour.

F. ATTACHMENTS

Check items you are attaching to this application:

- Proposal Description (REQUIRED - See pages 6 - 7 for outline of required narrative description)
- Copies of each data collection instrument to be used (REQUIRED)
- Copy of the Institutional Review Board (IRB) for Human Subjects from the researcher's college/university for master's theses and doctoral dissertations (REQUIRED)
- Consent forms if the study is to include parents, students, or DCPS staff members (REQUIRED)
- Other, (specify): Resume and reference letter signed by two of the dissertation committee members

G. RESEARCH REPORT REQUIREMENT

The *Guidelines for Requesting to Conduct Research in Duval County Public Schools*, Section VIII-C, provides the following:

When students, DCPS staff members, or parents are participants in a research study, an executive summary of no more than 25 pages will be prepared and reproduced by the researcher, and one copy is to be provided the Office of Research, Assessment, and Evaluation. In addition, the department may request one complete copy of each report or product developed as a part or outcome of the research project. No charge will be made of DCPS for any of these reports, copies, or products; and all will be provided within 30 days of the development of the report or product, or within 30 days of the end of the study, whichever comes first.

Your signature on the line below indicates agreement with the following statement: I have read and agree to follow the *Guidelines for Requesting to Conduct Research in Duval County Public Schools*, Section VIII-C, Research Activity Reports, regarding report requirements.

Signature Deleted

Signature: Applicant

06/15/04
Date

H. SIGNATURE OF THESIS/DISSERTATION COMMITTEE CHAIRPERSON (if applicable)

I have reviewed the enclosed research proposal and find it to be technically competent, theoretically sound, and significant in focus.

Signature Deleted

Signature: Committee Chairperson

June 15, 2004
Date

Title of Study ESOL Students' Academic Achievement: The Impact of School Reform Design, ESOL Instruction, and SES

Appendix B



ACADEMIC AFFAIRS
4567 St. Johns Bluff Road, South
Jacksonville, Florida 32224-2665
(904) 620-2455 FAX (904) 620-2457

Division of Sponsored Research and Training

MEMORANDUM

TO: Christina Valentino
Curriculum and Instruction

VIA: Dr. Pritch Smith
Curriculum and Instruction

Signature Deleted

FROM: James Collom, UNF Institutional Review Board

DATE: June 21, 2004

RE: Review by the Institutional Review Board #04-100
"ESOL Students' Academic Achievement: The Impact of School Reform
Design, ESOL Instruction and SES"

This is to advise you that your project "ESOL Students' Academic Achievement: The Impact of School Reform Design, ESOL Instruction and SES", has been reviewed on behalf of the IRB and has been declared exempt from further IRB review.

This approval applies to your project in the form and content as submitted to the IRB for review. Any variations or modifications to the approved protocol and/or informed consent forms as they relate to dealing with human subjects must be cleared with the IRB prior to implementing such changes.

If you have any questions or problems regarding your project or any other IRB issues, please contact this office at 620-2498.

sah

Attachments

c: Dr. Sandra Gupton

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Vita

Cristina P. Valentino

EDUCATION

Ed.D., University of North Florida, Educational Leadership, August 2005.

M.S.Ed., Longwood College, Curriculum and Instruction, July 1997.

B.A., Augustana College, Secondary Education/Spanish major, Psychology minor, May 1992.

PROFESSIONAL EXPERIENCE

2006-Present, Assistant Professor/TESOL Coordinator, Education Department, Jacksonville University, Jacksonville, FL

2005-2006, Curriculum Integration Teacher, Spanish Immersion Program, John E. Ford K-8, Magnet Office, DCPS, Jacksonville, FL

2004, Teacher Instructional Support, John E. Ford Elementary, DCPS, Jacksonville, FL

2001-2004, Adjunct Professor, Education Department, Jacksonville University, Jacksonville, FL

2000-2004, Standards Coach, Englewood Elementary, DCPS, Jacksonville, FL

2003, Adjunct Professor, Education Department, University of Phoenix, Jacksonville, FL

2002, Adjunct Professor, ESOL Department, Florida Community College at Jacksonville, Jacksonville, FL

2001, Adjunct Professor, Education Department, St. Leo University, Jacksonville, FL

1999-2000, Principal, Wayman Academy of the Arts, DCPS, Jacksonville, FL

1999, Bilingual Teacher, School District U-46, Chicago, IL

1992-1999, Vice-Principal, Dowal School, Tegucigalpa M.D.C., Honduras

CERTIFICATIONS

Florida Certification in Spanish & ESOL, Grades K-12

Illinois Certification in Spanish & Bilingual K-12

PROFESSIONAL PRESENTATIONS

April 2003, *Understanding immigrant students*, New Orleans, LA

April 2002, *Voces del silencio*, Miami, FL

November, 2001, *Light in the darkness*, Las Vegas, Nevada.

November, 1998, *Hurricane Mitch devastation in Central America*, Farmville, VA

PUBLICATIONS

Valentino, C. (2002). [Review of Hispanic education in the United States]. *Multicultural Perspectives*, 4(4), 44-45.

PROFESSIONAL ORGANIZATIONS

1999 – Present, Association for Supervision and Curriculum Development, Alexandria, VA

2003 – Present, Phi Delta Kappan, Jacksonville, FL

2003 – Present, Pi Lambda Theta, Jacksonville, FL

AWARDS

CAPS Scholarship, Augustana College, IL, AID, U.S. Government, 1987

“Who’s Who Among Students in American Universities & Colleges,” 1991-1992

PLACE OF BIRTH

La Esperanza, Honduras, Central America