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Academic Achievement Of Hispanic Students In Orange County Public High Schools:do Hispanic Students Have Varying Degrees Of Academic Success Based On The High School They Attend?

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ACADEMIC ACHIEVEMENT OF HISPANIC STUDENTS IN ORANGE COUNTY PUBLIC HIGH SCHOOLS: DO HISPANIC STUDENTS HAVE VARYING DEGREES OF ACADEMIC SUCCESS BASED ON THE HIGH SCHOOL THEY ATTEND?

by

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ABSTRACT

This study examined academic achievement levels of Hispanic high school students. Seven high schools in Orange County Public Schools in Orlando, Florida were selected. The schools were selected based on socio-economic status and demographics to provide a wide range of participation. The following are some of the purposes that guided this study: (a) to determine if there are differences in academic achievement among Hispanic high school students in each school, (b) to determine differences in academic achievement based on gender, (c) to determine differences in academic achievement based on LEP status, and (d) to determine if there is a relationship between grade point average and FCAT Reading scores and FCAT Mathematic scores.

The findings of this study were delineated through an examination of data using mean Grade Point Averages, mean Florida Comprehensive Assessment Test Scores (Reading and Mathematics), socio-economics, gender, Limited English Proficiency status, and attendance.

This study supported, but are not limited to, the following conclusions: (a) There was a difference in grade point averages among Hispanic high school students, (b) Hispanic students have lower mean grade point averages and lower mean FCAT Reading and Mathematic scores when compared to the school as a whole, (c) there are relationships between attendance and grade point averages and there is a relationship between grade point average and FCAT Reading and Mathematic scores

(d) there are differences in grade point averages between male and female Hispanic students, (e) there is a difference in grade point average based on socio-economic level, and (f) there is a difference in grade point averages based on LEP status.

Recommendations of the study include but are not limited to (a) further research in the area of academic achievement among Hispanic students but to disaggregate Hispanics to look for distinct differences. (b) research in the area of comparing LEP students and academic achievement., (c) research to determine why there is a disparity in numbers of 9th grade Hispanic students and 12th grade Hispanic students, (d) research of Hispanic students by doing a longitudinal study. The longitudinal study should follow 9th grade students from the high schools in one or more county through four years.

This dissertation is dedicated to my family, my brother David, my sister Amy, and especially my mother and father, Janice and Arnold Fox. They have instilled in me the desire and confidence to work towards achievement and success. In addition, they have instilled in me the desire to pursue lifelong learning. The constant encouragement and support, and the memory of my father, led to my successful completion of this dissertation.

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COMPLEX ISSUES FOR STUDY

Introduction

According to Lacey & Spencer (2000), The National Association of Secondary School Principals reported that the number of students whose first language is not English has increased in recent years. Echevarria and Short (2000) stated that “from the 1985-1986 to 1994-1995 school years, the number of Language Enriched Pupils (LEP) in public schools grew 109% while total enrollment increased by only 9.5%" (Echevarria & Short, p. 76). According to Lacey and Spencer, research from the National Association of Secondary School Principals retrieved from the United States census data for 1990 revealed that the “graduation high school rate is only 57% for Latinos born outside of the United States” (Echevarria & Short, p. 3). In addition, “Hispanics constitute the largest minority group of pre-kindergarten to grade 12 students in the United States” (Echevarria & Short, p. 8). Also, “one congressionally-mandated study reported that ELL students received lower grades, were judged by their teachers to have lower academic abilities, and scored below their classmates on standardized tests of reading and mathematics” (Echevarria & Short. 18).

Lockwood (2001) reported that the increase in cultural and linguistic diversity that Hispanics bring to schools demands a reconsideration of what effective pedagogy should be. Lockwood stated “Success for all is a comprehensive school-wide reform

that intends to transform the entire learning environment to achieve academic success" (Lockwood, p. 101). Many school districts implement bilingual education. There are two varieties of bilingual programs. The first is a program in which academic subjects are taught to individuals in their native language. In addition, students receive intensive instruction in the English language. The second and relatively new concept, recently referred to as dual language, is a program in which all students, regardless of background, receive instruction in English and another world language. The world language is usually the first language of the non-English speaking students. Consequently, all students receive content area instruction in a language they are proficient, as well as in a second language, they are learning. This program is instituted so that all students will achieve proficiency in both English and the world language that they are studying. Districts also offer programs of English for Speakers of Other Languages (ESOL) and English as a Second Language (ESL). These programs offer intense English instruction to students whose native language is one other than English. The goal of the programs is to help students achieve proficiency in English. Students attend academic classes with the mainstream population. Some districts identify second language learners and implement sheltered programs. These programs provide a test that will identify those students who are not proficient in the English language. They are then grouped and attend academic classes together. The teacher is trained in techniques and strategies to assist these students in achieving a higher level of English proficiency while attaining the academic content. Other districts implement total immersion programs, in which

students are placed in the mainstream and attend classes without any second language intervention.

Padron, Waxman, and Rivera (2002) noted that effective instructional practices are crucial to addressing the educational crisis facing Hispanic students in the United States. The number of Hispanic students attending public schools has increased dramatically in recent decades, yet Hispanic students as a group "have the lowest levels of education and the highest drop out rate of any student group" (Padron, Waxman, & Rivera, p. 1). The conditions of poverty and health and other social problems have made it difficult for Hispanics to improve their educational status. Both cultural and historical educational practices have placed a number of Hispanic students at risk for educational failure. It is therefore vital for research-based instructional practices to be developed in order to improve the academic success of Hispanic children and Hispanic students as a whole. Rolon (2003) advocated the use of language as a cognitive tool. Rolon stated, "To help Spanish-dominant students grasp concepts and clarify directions, effective teachers use Spanish for instruction or allow their students to use Spanish among themselves—as learning partners or in cooperative learning groups. They also design curriculum materials that are rich in opportunities for speaking, listening, reading and writing in English" (p. 43).

Educating children of racially, culturally, and linguistically diverse backgrounds is a major challenge for school systems across the country. The academic achievement of Latino students in the United States has consistently lagged behind that of white Americans. According to Rolon (2003), "Some blame Latino

children and their families for the difficulties in school, citing limited English proficiency, lack of motivation, or low family income" (p. 40). The reasons for their poor academic performance are complex, but they stem in part from a misalignment between educational practices and the students' needs. An important goal in educational reform is to determine which practices are considered most promising and most successful in improving the educational and academic performance of these students.

English Language Learners (ELLs) are defined as those "who come from a non-English language background, and whose language skills limit their ability to function successfully in an all English classroom" (Beckett & Haley, 2000, p. 102). The problem is that ELL students are not academically prepared to graduate from high school in a timely manner. The social adjustment and language academic acquisition processes for ELL students require teachers and administrators to be emotionally and cognitively prepared to deal with the challenging issues of Hispanic students. According to Chamot and O'Malley (1994), "Language learning is being able to process the rules; having conscious knowledge about grammar of the second language. It is known as academic language: Cognitive Academic Language Proficiency" (p. 18).

A prevalent reason for Hispanics failing in our school system is the lack of literacy development. School literacy for Hispanics is the development of both Spanish and English. Lare and Pande (2001) stated that "they need to accomplish

tasks for which typical school curricula and instructional activities fail to prepare them" (p. 737).

As noted in a report by the United States Department of Education, Improving Opportunities (1998), the assessment of Hispanic and LEP students was excluded because of technical challenges. In addition, the report stated that "Even when they do include this population of students, many national, state and local data collections are of little value to schools, students, or parents" (United States Department of Education, 1998, p. 23). The report notes that there is a need to create accountability systems to monitor the progress of Hispanic and LEP students. In addition, as stated in The President's Advisory Commission on Educational Excellence for Hispanic Americans, From Risk to Opportunity (2003), "the Federal government does not adequately monitor, measure and coordinate programs and research to the benefit of Hispanic American children and their families, despite the rapidly growing Hispanic American population in the United States" (President's Advisory Commission on Educational Excellence for Hispanic Americans, 2003, p. 8). The report notes the lack of accountability of results, not enough attention to using scientific research, analyses that do not distinguish among subgroups within the Hispanic American community and a lack of a federal research agenda that supports Hispanic students.

A review of the literature concluded that there was a scarce amount of information comparing achievement gaps of Hispanic students in different schools of varying socio-economic status. In addition, there was also a lack of information with respect to the achievement of Hispanic students based on gender. Additionally, there

was no comparison of achievement between Hispanic students provided services such as ESOL, ESL, bilingual and sheltered programs, and those Hispanic students who do not qualify and do not receive these services. The data collected on Hispanic students in the above mentioned areas may help to better understand achievement gaps and provide solutions for Hispanic students' lack of success.

As concluded earlier, there was a lack of research in many areas concerning the academic achievement of Hispanic students. Therefore, data was collected to examine the differences in academic achievement at seven public high schools in the Orange County Public School System. School names were omitted and the schools were designated as Schools 1 - 7. School 1 had a total of 2,476 students with 403 Hispanic males and 351 Hispanic females totaling 754 Hispanic students. School 2 had 3,000 students with 215 Hispanic males and 211 Hispanic females totaling 426 Hispanic students. School Three had a total of 3,411 students with 269 Hispanic males and 282 Hispanic females totaling 551 Hispanic students. School 4 had a total of 3,541 students with 1,019 Hispanic males and 1,006 Hispanic females totaling 2,025 Hispanic students. School 5 had a total of 3,813 students with 310 Hispanic males and 318 Hispanic females totaling 628 Hispanic students. School 6 had a total of 3,769 students with 367 Hispanic males and 337 Hispanic females totaling 704 Hispanic students. School 7 had a total of 2,724 students with 682 Hispanic males and 674 Hispanic females totaling 1,356 Hispanic students. Overall, the total of the seven schools equals 22,034 students with 3,265 Hispanic males and 3,179 Hispanic females totaling 6,444 Hispanic students. Each school developed programs to

increase the academic achievement levels for Hispanic students, who account for approximately 30% of the student body. In addition, each school had a distinct demographic profile. While the programs that each school had established are described, they are not being evaluated. The varying degrees of academic achievement among Hispanic students were examined and best practices, as identified through research, were recommended in an effort to increase these levels of academic achievement.

Research Purpose

Data was collected to determine if a statistically significant difference existed in academic achievement among Hispanic high school students. The term Hispanic referred to the different nationalities of Spanish speakers in seven different Orange County Public High Schools. These nationalities included Puerto Rican, Mexican, Dominican, Colombian, Peruvian, Cuban, Panamanian, and other countries from Central and South America and the Caribbean. The study included male and female Hispanic students from different socio-economic levels.

Saunders (2001) discussed the reforms in the public school environment that are essential if we hope to increase academic achievement among Hispanic students. Classroom pedagogy, systemic changes for uniformity within a district or even the state, provide opportunities to achieve academically, reduce the percentages of drop outs, and increase Hispanic enrollment and entrance to higher education.

There are distinct differences among high schools that can have effects on academic achievement. These differences included socio-economic status as determined by the number of students on free and reduced lunches, the number of minorities as compared to whites, the prevalent number of a particular minority group, the LEP designations, and the mean scores in Reading and Math FCAT. Therefore, in examining the differences in academic achievement it was important to note the particular school which Hispanic students attend. Each school examined had a distinct socio-economic status. The percentage of students in the free and reduced lunch program and the demographic distinctions of the school community defined the socio-economic status of a school. The available related literature did not refer to schools by socio-economic status nor did it address the impact of socio-economic status on Hispanic academic achievement.

Rolon (2003) noted that there are a variety of aspects that have an effect on academic achievement for all students. In reference to Hispanic students, language, culture, demographics, and other aspects, influence academic achievement. For schools to provide interventions and increase academic achievement, schools must provide a system that understands the issues affecting Hispanic students. “Respecting what Latino students bring to the classroom can help educators adopt effective school reforms and culturally sensitive pedagogy” (Rolon, p. 40). The reforms included commitment to bilingual education, high expectations, staff development, and parental involvement. Bilingual education is largely debated among educators, but it is agreed that it provides an equal development of language skills and advancement in

content knowledge in all subject areas. A single teaching strategy is not the answer for all Latino students. There must be a variety of teaching tools, thematic units, guided practice, cooperative learning groups, and the development of critical thinking skills in order to increase academic achievement.

Additionally, questions arose about the programs each school provided and the impact that they had on the achievement levels of Hispanic students. Sheltered programs, bilingual programs, and ESOL programs existed at different schools within the same district. According to Miller and Endo (2004) at least 3.5 million children identified as limited English proficiency (LEP) are enrolled in U.S. schools (p. 747). Yet many schools have no programs for LEP students, and many others have only minimal English as a second language (ESL) or bilingual classes. In addition, Miller and Endo stated that, “The problems stem primarily from linguistic and cultural differences and they are not the fault of the teachers. However, it is important that teachers understand these problems, so that they can provide these students the help they need” (p. 787). Miller and Endo discussed how teachers in the classroom could help by reducing the cognitive load, evaluating teaching strategies and approaches, reducing the cultural load, reducing the language load and teaming teachers with parents. Academic achievement in relation to FCAT, grade point average, attendance, and gender are examined to address and choose the area of best programs and practices to improve and increase academic achievement of Hispanics as English and non-English speakers.

Literature on Hispanic students referred to academic achievement, cultural distinctions and the problems that occur in public education. Reference was made to the cultural upbringing of the males and females; however, few studies compared Hispanic academic achievement based upon gender.

The purpose of this study was to determine the academic achievement of Hispanic students in seven different high schools in Orange County Public Schools in Orlando, Florida. Academic achievement is determined by FCAT and G.P.A. In addition, the purpose was to determine achievement differences based upon gender, different socio-economic levels, demographics, and provided services such as sheltered programs, ESOL programs, ESL programs and bilingual programs. There was a comparison between Hispanic students and all students in their home school, a comparison between all Hispanic students in their home school and a comparison between Hispanic students from one school as compared to other Hispanic students in the other schools in the study.

Background and Significance

Kloosterman (2003) noted that Hispanic students from the 1500s to the present have confronted unique differences and problems in an attempt to achieve academically. Kloosterman stated, “The subordinate position and the culturally distinct status of ethnic Mexicans and Puerto Ricans posed significant challenges for public schools over the decades. Schools, for the most part, were unable to meet these challenges” (p. 7). According to Kloosterman, the public school system either ignored

or was incapable of dealing with the multiple needs of this heterogeneous student population. Cultural conformity, assimilation, social, and economic subordination were the essentials for public education rather than academic achievement. Kloosterman also stated that "The quality and quantity of that education were inferior" (p. 7).

The challenges to the education of Hispanics incorporate bilingual and bicultural problems. According to Johnson and Hernandez (1970) the greatest challenge in the southwest was the improvement of education for the Mexican-American child. Johnson and Hernandez stated, "the report admitted that educators are aware of the work that has to be done but do not have the tools whereby that awareness can be put into action" (p. 94). Identifying the tools to successfully educate such a diverse group is a major challenge. Sosa (1998) stated:

> "Although government agencies such as the U.S. Bureau of the Census have grouped Latinos under the umbrella category of 'Hispanics' to distinguish them from Europeans or those of European ancestry, they are not a homogeneous group. The term Hispanic is primarily used by governmental agencies in the United States to identify Spanish-speaking persons residing in the United States or its territories who either became citizens at birth or immigrated from Mexico, Central or South America, the Caribbean or Spain. However, these persons prefer to be referred to as Latino, a self-selected name/label rather than by the government designation of Hispanic" (p. 197).

Madding (2002) noted that the number of Hispanic individuals and families that have made homes in the United States not only has increased in number but includes a large variety of Hispanic countries and nationalities. Therefore, as the variety of Hispanic nationalities has increased in the United States, academic achievement has been impacted and influenced by each culture and the challenges have expanded. According to Madding (2002) the term Hispanic is inclusive of Mexicans, Cubans, Nicaraguans, Salvadorians, Panamanians, Puerto Ricans, Dominicans, Guatemalans, Costa Ricans, Ecuadorians, Peruvians, and others whose roots are in Central and South America and the Caribbean. Madding stated that "For Latinos, the Spanish language exists as a common bond and is a symbol of solidarity within a diverse population" (p. 69). However, the common bond cannot and does not extend to the cultural differences that exist within each group.

The United States Census Bureau reported in 2000 that there were 32 million Hispanics in the United States. "The largest Hispanic groups in the United States are Mexicans (58%), followed by Puerto Ricans (13%), and Cubans (6%)" (United States Census, 2000). Brice (2002) noted that linguistic and language differences of each subgroup need to be considered based on their needs. These considerations, according to Brice, include cultural influences, family system and obligations, and the variety of Spanish spoken by each subgroup. An understanding of cultural influences of each subgroup should be considered when planning educational programs. These influences include "such sociological variables as the average age of the group, family size and income, the education level attained, and occupations. Other variables

include religion, family values, and the various varieties of Spanish spoken by Mexicans, Puerto Ricans and Cubans" (Brice, p. 21).

Even though major cultural distinctions must be incorporated for academic achievement, second language learning has become a principal strategy in intervention. Specific techniques that can be used to promote learning and academic success for Hispanic students can be used in regular classrooms, bilingual education and in small groups of students. According to Roseberry-McKibbin (2002), "The techniques and strategies fall under four broad categories: (1) second language teaching, (2) promoting prevocational skills, (3) increasing oral and written vocabulary skills, and (4) enhancing literacy skills in Hispanic students with LLD" (p. 211).

The cultural and linguistic differences must be examined in order to promote academic achievement. Romo and Falbo (1996) noted that Hispanic youth drop out of school at about twice the rate of non-Hispanic whites. Many Hispanics leave school before completing the ninth grade. "These low levels of educational attainment limit the youth's ability to obtain good jobs and become successful citizens of their state and nation" (p. 1). Romo and Falbo attempted to make the correlation that academic achievement and improvement are essential for the economic and social well-being of the country. As noted by Romo and Falbo, it is essential to assist Hispanics in making their way to college.

Swail, Cabrera, and Lee (2004) used data from the U.S. Department of Education's National Educational Longitudinal Study (NELS) which first surveyed

eighth grade students in 1988 and conducted follow-up surveys in 1990, 1992, 1994, and in 2000. The study, as noted by Swail, Cabrera, and Lee, found that for every 1,000 eighth grade students who were of Hispanic origin, 142 earned a baccalaureate degree within eight years of high school graduation. This compared to 318 white students, which was more than double the number of Hispanics.

According to a report by Swail, Cabrera, and Lee (2004), Latino youth in high school were more likely than white students to have been held back, changed schools, earned a "C" or less, taken lower forms of mathematics classes, dropped out, or earned a GED. In addition, these students were also more likely to come from low-income families, have a sibling who dropped out of school, have limited English proficiency, have a parent who did not graduate from high school, have children during high school, and have a parent without any post secondary education.

The report, according to Swail, Cabrera, and Lee (2004), concluded that policy makers have to renew their commitment to the education of Hispanic students which includes a "comprehensive and radical reform effort" (p. 48), of the education of youth from low-income populations along the entire K-16 school system.

Summary

According to Kloosterman (2003), "there is an increased sense of urgency for efforts that seek to address the issues and challenges facing Latinos, especially low-income Latino communities. They represent a significant force in America's economic, social and political future" (p.58). In addition, the No Child Left Behind

Act (2001) required that all children reach high standards by demonstrating proficiency in English language arts and mathematics by 2014. English language learners (ELL) and its subgroups are included. According to Abedi and Dietel (2004), "performance of individuals and groups should be tracked, ideally using multiple measures, in order to identify patterns of improvement or lack of improvement" (p. 785). Romo and Falbo (1996) stated that "for the most part, the schools blamed the parents for the low achievement, bad attitudes, and scholastic gaps of the students" (Romo & Falbo, p. 218). However, Romo and Falbo also noted that "the recommendations for change are based on the premise that schools have the primary responsibility for educating students" (p. 218). Romo and Falbo noted that change is based on research and the recommended changes they made came from a number of surveys they had administered.

The research provided a multi-site analysis in Orange County Public Schools to measure academic achievement of Hispanic students during the 2003 – 2004 school year in grades 9 – 12. Hispanics were compared to each other within their home school and to other schools within the same school district. The data included grade point averages and standardized test scores (FCAT).

Research Questions

1. Is there a statistically significant difference in the mean Grade Point Averages (G.P.A.) among Hispanic students in each high school?

2a. Is there a relationship between mean Grade Point Average (G.P.A.) and mean Florida Comprehensive Assessment Test Scores (FCAT Reading and FCAT Mathematics grades 9 - 12) of Hispanic students in seven Orange County Public High Schools?

2b. Can Florida Comprehensive Assessment Test (FCAT) scores for Reading and Mathematics be predicted by Grade Point Average (G.P.A)?

2c. Is there a statistically significant relationship between Florida Comprehensive Assessment Test scores (FCAT Reading and FCAT Mathematics) and attendance?

3a. Is there a statistically significant difference between mean Grade Point Average for Hispanic students: in seven Orange County Public Schools? Is there a statistically significant difference in mean Grade Point Average based on socio-economic status as determined by the percent of free and reduced lunch data? Is there a statistically significant difference in mean Grade Point Average when gender and socio-economic status are combined?

3b. Is there a statistically significant difference between mean FCAT scores of Hispanic students: in seven Orange County Public Schools (FCAT Reading and FCAT Mathematics grades 9 - 12) based on socio-economic status as determined by the percent of free and reduced lunch data? Is there a statistically significant difference between mean FCAT scores of Hispanic students: in seven Orange County Public Schools (FCAT Reading and FCAT Mathematics grades 9 - 12) when gender and socio-economic status are combined?

4a. Is there a statistically significant difference in Grade Point Average (G.P.A.) of Hispanic students in seven Orange County Public High Schools based on gender?

4b. Is there a statistically significant difference in Florida Comprehensive Assessment Test Scores (FCAT Reading and FCAT Mathematics) of Hispanic students in seven Orange County Public High Schools based on gender?

5a. Is there a statistically significant difference in Grade Point Average (G.P.A.) of Hispanic students in seven Orange County Public High Schools based on Limited English Proficiency (LEP) status?

5b. Is there a statistically significant difference in Florida Comprehensive Assessment Test Scores (FCAT Reading and FCAT Mathematics) of Hispanic students in seven Orange County Public High Schools based on Limited English Proficiency (LEP) status?

6. Is there a statistically significant difference among Hispanic students at seven Orange County Public Schools in Grade Point Average (GPA) when comparing 9th grade Hispanic students to the 10th, 11th and 12th grade students, when comparing 10th grade Hispanic students to 9th, 11th and 12th grade Hispanic students, when comparing 11th grade Hispanic students to 9th, 10th and 12th grade Hispanic students and when comparing 12th grade Hispanic students to 9th, 10th and 11th grade Hispanic students?

7. Is there a statistically significant relationship among Hispanic students when comparing Grade Point Average and attendance? Can grade point average (G.P.A) be predicted by attendance?

Definition of Terms

For the purpose of clarification, the following definitions of terms were used throughout the study:

Bicultural: term used to identify a student that acquires two distinct cultures in one nation.

Bilingual: term used to identify a student that can speak and use two languages with the fluency characteristic of a native speaker.

Dual Language Programs (DLP): program design in which all students regardless of background receive instruction in English and another World Language.

English as a Second Language (ESL): program design using a grammar-based and audio-lingual format for LEP and Non-English Speaking (NES) students.

English for Speakers of Other Languages (ESOL): program design in use for Limited English Proficient (LEP) and NES students using English in a social and cultural format.

English Language Learner (ELL): designation for students who lack English language proficiency and whose first language is other than English; it is often interchanged with the LEP and NES classification.

Florida Comprehensive Assessment Test (FCAT): assessment instrument used to evaluate student achievement of the higher order cognitive skills represented in the Sunshine State Standards in reading, mathematics and science.

Hispanic: a term primarily used by governmental agencies in the United States to identify Spanish-speaking persons residing in the United States.

Latino (a): a term that is a preferred self-selected name/label rather than by governmental designation of Hispanics.

Limited English Proficient (LEP): designation for any student who falls below an established percentile on an English language assessment instrument.

Non-English Speaking (NES): designation for any student with no English language skills.

Second language learner (SLL): term to describe one who has proficiency in the native language and is in the state of acquiring proficiency in another language.

Methodology

Participants

During the 2003-2004 school year Orange County Public Schools had seventeen high schools that were divided into five distinct learning communities (sub-districts). These communities were the West Learning Community, the East Learning Community, the North Learning Community, the South Learning Community, and the Central Learning Community. Seven high schools were selected from the learning communities in the Orange County Public School System in Orlando, Florida.

Each school had different demographics and socio-economic distinctions. Each school was listed with the number and percentage of students based on ethnicity and the number/percentage of students on free and reduced lunch. Ethnicity was determined by the student or parent selected code authenticated by the school enrollment provided by Orange County Public Schools.

The school names were omitted and the schools were designated as Schools 1 - 7. For the 2003–2004 school year, School 1 had a total of 2,476 students with 403 Hispanic males and 351 Hispanic females totaling 754 Hispanic students. School 2 had a total of 3,541 students with 1,019 Hispanic males and 1,006 Hispanic females totaling 2,025 Hispanic students. School Three had a total of 2,724 students with 682 Hispanic males and 674 Hispanic females totaling 1,356 Hispanic students. School 4 had a total of 3813 students with 310 Hispanic males and 318 Hispanic females totaling 628 Hispanic students. School 5 had a total of 3,769 students with 367 Hispanic males and 337 Hispanic females totaling 704 Hispanic students. School 6 had a total of 3,411 students with 269 Hispanic males and 282 Hispanic females totaling 551 Hispanic students. School 7 had 3,000 students with 215 Hispanic males and 211 Hispanic females totaling 426 Hispanic students. Overall, the total of the seven schools was 22,034 students, with 3,265 Hispanic males and 3,179 Hispanic females totaling 6,444 Hispanic students. Tables 1 and 2 provide data retrieved from the Orange County Public Schools CICS mainframe in July of 2004.

The total population of each school was used to determine the percentage of Hispanic students in each school and to the total of the seven schools being examined.

Table 1 Ethnic Breakdown by Race and Gender

SCHOOL*	WM	WF	BM	BF	HM	HF	OM	OF
School 1	238	178	590	615	403	351	44	48
School 2	577	581	212	197	1019	1006	72	55
School 3	388	425	160	161	682	674	161	173
School 4	992	1014	489	550	310	318	75	65
School 5	962	929	481	496	367	337	97	100
School 6	1132	1125	237	252	269	282	109	105
School 7	757	754	382	411	215	211	152	118

WM = White Male, WF = White Female, BM = Black Male, BF = Black Female, HM = Hispanic Male, HF = Hispanic Female, OM = Other Male, OF = Other Female
* The schools are listed in descending order by the percentage of students receiving free and reduced lunch.

Table 2 Ethnicity/Demographics

Totals per School	White	Black	Hispanic	Other	% Free Reduced Lunch
School 1	416	1214	754	92	48.0%
School 2	1158	231	2025	127	34.7%
School 3	813	221	1356	334	27.1%
School 4	2006	1039	628	140	26.5%
School 5	1891	977	704	197	24.8%
School 6	2257	489	551	114	16.6%
School 7	1511	793	426	270	13.8%
Ethnic Totals	White	Black	Hispanic	Other	
	10052	4964	6444	1274	26.7%

Students whose families earn below a certain annual income qualify for free and reduced lunch. The percent of students on free or reduced lunch determined, in part, the socio-economic status of a school.

Materials

Data for the 2003-2004 school year were collected and transmitted by the Instructional Technology Department of Orange County Public School. The data identified male and female Hispanic students, first name, last name, and State Department of Education Student Number. In addition, the data included the following information:

1. 2003-2004 grade level.
2. Limited English Proficiency Code (LEP).
3. Native Language (based on parents' reported home language).
4. 2003-2004 first nine weeks grade point average.
5. 2003-2004 second nine weeks grade point average.
6. 2003-2004 third nine weeks grade point average.
7. 2003-2004 fourth nine weeks grade point average.
8. 2003-2004 average grade point average.
9. Un-weighted cumulative grade point average.
10. 2003-2004 total absences.
11. 2003-2004 FCAT Math Level.
12. 2003-2004 FCAT Math Score.

13. 2003-2004 FCAT Reading Level.

14. 2003-2004 FCAT Reading Score.

Procedure

The data included all Hispanic students from seven high schools in Orange County Public Schools in Orlando, Florida. It included the information stated in the materials section. The data was entered in a computer spreadsheet format. From the spreadsheet format, data was imported into the Statistical Package for the Social Sciences, Version 11.5 (SPSS, 2003) for analysis.

Population

There were 3,265 identified male and 3,179 identified female Hispanic students from seven high schools in Orange County Public Schools in Orlando, Florida as of 2004. There were a total of 6,444 Hispanic students from seven high schools of Orange County Public Schools in Orlando, Florida as of 2004.

Delimitations, Limitations, and Assumptions

Delimitations

This study was delimited to seven Orange County Public High Schools during the 2003–2004 school year. This study was delimited to Hispanic male and Hispanic female students in attendance at the seven high schools during the 200 –2004 school

year. The study focused on factors related to Hispanic students only and not those of other ethnic or racial groups within a school or program.

Limitations

Results of the study were limited to the accuracy of the data obtained from the On Line Data Access (ODA) Crystal Reports retrieved from Orange County Public Schools. Students and parents self report of home language, ethnicity, and economic status was not verified. The study was limited to the accuracy of the data obtained from the Orange County Public Schools mainframe CICS system. The study was limited to the accuracy of the data obtained from the Informational Technology Department of Orange County Public Schools for grade point averages, Florida Comprehensive Achievement Test scores, and the Degree of Reading Power scores. The study was further limited to the accuracy of the data obtained from the Informational Technology Department of Orange County Public Schools for attendance and other data on Hispanic students.

Assumptions

Assumptions in this study included the following: (a) data acquired from the On Line Data Access (ODA) Crystal Reports of Orange County Public Schools were accurate, (b) data acquired from the Informational Technology Department of Orange County Public Schools was accurate, (c) data acquired from ODA and Informational Technology Department was a valid measure, (d) the data acquired, measured, and

analyzed regarding Hispanic students was important to the profession. Since some school information was obtained from individual schools, it was assumed that administrators and teachers from the schools and programs were willing to provide information as part of a multiple site study.

Significance of the Study

There was a collection of data and the development of a study to report academic achievement trends of Hispanic students that display success. Relative to that, this successful trend in educating Hispanics may prove useful in the formulation of other initiatives, strategies and policies for individual schools.

It was important for the research to provide data on factors that showed a trend of success or failure in the Hispanic student education process. Identifying those factors that include different demographic settings and other Hispanic subgroups could be beneficial to organizations in maintaining an appropriate focus and anticipate trends for the future.

By identifying significant trends, this research had the potential to assist individual schools in addressing issues specified by the purpose of this study. However, this researcher recognized that there was no presumption of remedy or solution to the problems related to increasing academic achievement among Hispanic students

CHAPTER 2

LITERATURE REVIEW

Introduction

Garcia (2001) noted that the societal make-up of the United States has continually transformed itself to include a variety of nationalities. Public education itself has tried to evolve, so that the different immigrants could succeed. Garcia stated "the dramatic demographic realities of present and future student enrollments would be more informed by addressing these non-school but related economic and social circumstances of our emerging majority culturally and linguistically diverse students" (Garcia, p. 27). However, according to Garcia, the pace has been slow to stagnant and the ideas and approaches so different that progress and success can only be seen as limited. Garcia reported that the linguistic and cultural diversity among students in America is apparent. "Today, one out of three children is from an ethnic or racial minority group, one out of seven speaks a language other than English at home and one out of fifteen was born outside of the United States (Garcia, p.34).

Garcia (2001) addressed the issue that culturally, ethnically, and linguistically distinct students now constitute over 30 percent of the K-12 population nationwide. Hispanics represent well over 40 percent of this growth. In the early 1900's, the growth of the population of those 18 years old and younger was almost 40 percent Hispanic and 33 percent African American in contrast to 25 percent of white European Americans. The majority of the next generation of children will most likely be children of color. The divergence is even more striking in the teaching population

where white females make up about 85 percent of the profession. Only 12 percent to 15 percent of the present teaching professionals are composed of ethnically distinct minorities (Garcia, p. 15).

Padron, Waxman and Rivera (2002) reported that Hispanic students are the largest growing minority population in the United States. While all are categorized as Hispanic, there were a vast number of differences. A major concentration of the Mexican population can be found in the southwest, Cubans in the southeast, Puerto Ricans in the north and southeast while Dominicans, Nicaraguans, Ecuadorians and other Hispanic cultures can be found throughout the United States (p. 11). Garcia (2001) stated "their identity and views of education are influenced by factors such as their country of origin, different dialects, cultural differences, place of residence in the United States, state policies on education and their level of acculturation" (Garcia, p. 23).

Grossman (1996) noted that the increase in cultural and linguistic diversity that Hispanics bring to schools demanded a reconsideration of what effective pedagogy should be. Grossman reported that school districts implemented bilingual education or programs for English for Speakers of Other Languages (ESOL or ESL). Some districts identified second language learners and implemented sheltered programs while others implemented total immersion programs.

Garcia (2001) reported that within the context of change in our society in examining the success and failure of education for non-white students, teacher educators should examine society and its multicultural context and explore how and

whom we educate and why. Garcia noted that school reform for minorities is a necessity that has seen success and failure. “Societies-past, present and future-rest on the fundamental educational capabilities of their individual members. In our present, we must prepare our children for the future” (Garcia, p.15). Schooling has taken on a significant role for the education of Hispanics and other minorities as our societal needs have changed and legal precedent has changed the focus of educating minorities. The responsibilities of schooling our minority students are both similar and significantly different from those past, present and future in ideology and practice. “What is made clear in these suggestions is that the challenge in serving immigrant students usually transcends the “typical” structure of schooling for immigrant students” (Garcia, p. 17). It is the variances of the typical structure that cause disruptions in the educational community, and ultimately lead to success and failure across the nation.

CREDE (1997) reported that there is a strong need for innovation and risk taking to find answers to meet this challenge. The need to find effectiveness is a necessary task for a democratic society. In addition, CREDE (1997) stated that (the education of all citizens with strong emphasis on minority, and especially the Hispanic population, is essential in order to ensure their goal of becoming productive participants in American society” (CREDE, p. 8). These include, but are not limited to, the need to make intelligent sophisticated choices for a number of aspects which can include voting for a candidate or issue, to the idea of earning a living and contributing to the economy. “Innovative programs of school reform and research for

diverse students tended to concentrate on specific cultural, linguistic, or ethnic populations and on specific local communities" (CREDE, p.1). These programs have a beginning, a transformation, and a result. All of which have been examined to procure successful programs to be shared in the educational community.

According to Padron, Waxman, and Rivera (2002), effective instructional practices are crucial to addressing the educational crisis facing Hispanic students in the United States. The number of Hispanic students attending public schools has increased dramatically in recent decades, yet Hispanic students as a group "have the lowest levels of education and the highest drop out rate of any student group" (Padron, Waxman, & Rivera, p. 1). Furthermore, the authors noted that the conditions of poverty and health and other social problems have made it difficult for Hispanics to improve their educational status. Both cultural and historical practices have placed a number of Hispanic students at risk for educational failure. "It is vital that research-based instructional practices be developed in order to improve the academic success of Hispanic children and Hispanic students as a whole" (Padron, Waxman, & Rivera, p13).

In reviewing literature, one finds a constant debate on effective pedagogical strategies for Hispanic students. The use of programs such as bilingual education, immersion, English for Second Language Learners (ESL), or a sheltered program with monitoring can be found across the United States. The overall consensus is that some program must be in effect to improve academic achievement for Hispanic students. According to Calderon (2001), "programs must address language

differences, cultural differences, and the needs of students of Hispanic descent who are proficient in English" (Calderon, p. 252).

Lare and Panda (2001) reported that a prevalent reason for Hispanics failing in the school system is the lack of literacy development. According to Lara and Pande (2001) school literacy for Hispanics is the development of both Spanish and English. "They need to accomplish tasks for which typical school curricula and instructional activities fail to prepare them" (Lare & Pande, p. 3).

Rolon (2003) believes in the use of language as a cognitive tool. Rolon (2003) stated,

> "To help Spanish-dominant students grasp concepts and clarify directions, effective teachers use Spanish for instruction or allow their students to use Spanish among themselves—as learning partners or in cooperative learning groups. They also design curriculum materials that are rich in opportunities for speaking, listening, reading and writing in English" (p. 43).

Reyes (2000) reported that politics, governance, and finance have become integral parts in both the success and failure of Hispanic education as answers have been sought, used, and applied. With the onset of a legal structure looking not only to maintain but further a democratic way of life, the aspects of politics, governance, and finance have become ones of political correctness, as the future success of Hispanic students and other minorities becomes an area of concern. A variety of organizations were founded in the 1960s and 1970s "to respond programmatically to the educational needs of Puerto Rican children and to the lack of responsiveness and

inclusion of the educational establishment" (Reyes, p. 75). These organizations were ASPIRA, from the Spanish word aspirar, to aspire, (created in 1961 by Puerto Rican educators and professionals to address exceedingly high drop out rates and low educational attainment of Puerto Rican youth), PRLDEF (The Puerto Rican Legal Defense and Education Fund), and PREA (Puerto Rican Educators Association). The leadership of these organizations in the New York City area was attempting to transform the public school system. Within each organization, the leadership had an agenda. The agenda was to establish a climate to combine organizations for the benefit of the Hispanic student. This agenda brought the organizations together to create a political stronghold that could have an effect on policy. According to Reyes (2000), ASPIRA of New York, Inc., successfully negotiated a consent decree in 1974 with the New York City Board of Education which required the establishment of bilingual (speaking and using two languages) and ESL (English as a Second Language that is designed to use a grammar based and audio-lingual format) classes for students who did not speak English fluently. Reyes noted that Dr. Isaura Santiago-Santiago, described the process in her 1978 doctoral dissertation, *ASPIRA vs. Board of Education: A Communities Struggle for Equal Educational Opportunities.* In addition to treating the landmark decision, Dr. Santiago-Santiago covered issues of language instruction for Puerto Rican students in New York City public schools and mentioned how these were tied to a broader set of educational concerns.

Reyes (2000) noted that, in addition to the mission and the practices of these Puerto Rican community organizations, "there was also a strong commitment to the

cultural self-affirmation of the Puerto Rican community, that is, a determined resistance to forced assimilation" (p.75). This resistance brought on massive efforts to assert the rights of Puerto Ricans to be bicultural and bilingual. Reyes noted that the leadership of these organizations made a strong attempt to resolve this issue.

According to Lara and Pande (2001), there are a variety of strategies employed to increase Hispanic achievement in schools. In addition, Lara and Pande found that to increase Hispanic achievement in the schools, they must increase the quality of the school and the programs provided. "Several interventions hold promise for increasing learning opportunities for Hispanic students" (Lara & Pande, p. 3). These programs focus on literacy development across the curriculum and special in-service awareness sessions that include all members of the school community and focus on the needs and characteristics of secondary Latino students. The use of teaching strategies that reinforce students' strengths, affirm cultural background, and emphasize native language development can increase Hispanic student achievement. "Several factors influence the performance of Latino students at both the elementary and secondary school level including poverty status, English language proficiency, type of school attended, and racial/ethnic bias as reflected in interactions with the broader school community" (Lara & Pande, p. 4). The factors that a school has control over can be determined and interventions provided to create an environment of achievement.

Providing interventions and academic achievement involves a system that will understand the issues affecting Hispanic students. "Respecting what Latino students

bring to the classroom can help educators adopt effective school reforms and culturally sensitive pedagogy" (Rolon, 2003, p. 40). The reforms include commitment to bilingual education, high expectations, staff development, and parent involvement. Bilingual education is largely debated among educators, but it is agreed that it provides an equal development of language skills and advancement in content knowledge in all subject areas. A single teaching strategy is not the answer for all Hispanic students, which, according to Rolon, is also true for all white students. There must be a variety of teaching tools, thematic units, guided practice, cooperative learning groups, and the development of critical thinking skills to increase academic achievement.

There are a number of factors that shape immigrant students' needs and school success. These factors need to be considered for program design and instructional approaches. According to Walqui (2000), these factors are socioeconomic status, previous academic achievement, immigration status, family support, family expectation, language proficiencies, educational continuity in the United States, social challenges, and sense of self. By recognizing these factors, appropriate plans and interventions can be made to provide educational success. When designing instruction, there are a number of priorities to be considered. "In effective classrooms, teachers and students engage in co-construction of a culture that values the strengths of each person and respects their interests, abilities, language and dialects" (Walqui, p. 86). This creation of a culture in the classroom fosters the development of a community of learners in which all of the students are a part of the community. Other

effective designs in instruction are language teaching involving conceptual and academic development, a teaching and learning focus that relies on substantive ideas that are organized cyclically and tasks that are relevant, meaningful, engaging, and varied. Students must be given the opportunity to apply acquired knowledge. "Understanding a topic of study involves being able to perform in a variety of cognitively demanding ways" (Walqui, p. 100).

There are a number of programs and practices that provide academic achievement for immigrant Hispanic students. ESL and sheltered content classes can provide challenges and continued success regardless of the difference in backgrounds. In a sheltered program, students can work together to discuss and explain problems. Students can work in pairs, or cooperative learning groups. In addition, there is time allotted for students to work individually. The teacher can conduct whole class oral reading, with discussion, using a course book used in mainstream courses. Classes can use "hands on activities to contextualize new concepts and language, allowing students to cover important topics" (Walqui, 2000, p. 123). Students are provided the opportunity to cover important topics in a curriculum and develop their ability to use content related discourse. There is an abundance of research that addresses what works for students who are second language learners. According to Rutherford (1999), "The debate about which approach is best for teaching continues to this day" (Rutherford, p 131). In addition, researchers noted that the debates over total immersion, ESL and ESOL programs, bilingual and sheltered programs continue. Data are provided in the research to prove each program's success. The debate among

researchers continues over the cost and implementation of interventions, strategies, and programs to provide academic success and achievement as compared to the success of students placed in total immersion that are not provided an intervention.

Historical Perspectives

Lopez (1995) noted that Hispanic families have looked upon education as a power with the ability to free the future generations from bindings and as a freedom that will make them independent and give them the ability to exercise more available options. “For the greater part of history, a grade school education was all that was needed” (Lopez, p.155). The economy of the time did not require an education beyond reading and writing. Rosado (2003) noted that industrialization paved the way for schools to emerge as an important tool for societal success in the age of innovation. Education gave the immigrant a way to be a part of the industrial age. Both Lopez and Rosado noted that societal and occupational advancement created a need for education to develop and provide skills beyond reading and writing. Lopez reported that as America developed into a credential society, schools needed to prepare students for the occupations thus creating opportunities for students who were not white. As discussed by Rosado, even with the beginnings of the industrial age and opportunities, Hispanics have been confronted by the power system dedicated to secure a “White America” (p. 35).

The ethnic view is a factor that has made it difficult for both society and its social institutions, such as schools, to deal effectively with change. “An ‘ethnic

group' is a group of people with a sense of collective identity-solidarity- who may share a common culture, history, language, religion or national origin." (Rosado, 2003, p. 7). The beginnings of the United States were scored by intolerance towards groups that were perceived as different in terms of behavior and beliefs from the Anglo-Saxon core group, the dominant group in society at that time. Rosado reported that the prevalent ideology was conformity and assimilation in America throughout the nation's history. According to Rosado the Naturalization Act of 1790 made it clear that only whites could become citizens of the United States. Thus, the battle for immigrants began as they sought to become a part of a system that had a total disregard for their culture, their religious differences and their language.

According to Rosado (2003), when referring to Hispanic students in the United States, one must keep in mind the diversity within the culture of the Latino community itself. The immigration of Cubans for political and social asylum, the movement of Puerto Ricans between the mainland (the continental United States) and the island for economic purposes, the Mexican immigration, the Chicanos, and other Latino immigrants. Each group arrives with its own culture and dialect but united under the umbrella term of Hispanics.

Rosado (2003) referred to the melting pot theory, which was developed in the 1850s with the advent of the industrial age. According to this theory, the masses of white ethnics from Europe arrived by the millions. The cultural and religious differences led to the idea of assimilation as the only means of becoming part of the

established society. This developed a distorted view of who was to be an American. According to Rosado (2003),

> "The old and still prevailing ideology of what an American looks like, was a Northern European phenotype, white, blond and blue-eyed. Those that differed from this visual image were and still are labeled as hyphenated Americans: African-American, Mexican-American, Native-American, Asian-American, etc. The implication is that they are not quite yet Americans, and have not divested themselves completely of their past to be included" (Rosado, p. 8).

This prevailing aspect of Americanism continued throughout history to have an impact on Hispanics, as well as other groups, who maintained their cultural and linguistic differences.

Meir and Stewart (1991) stated that "during periods of great social change, it is natural for people to maintain the values from the past that could provide them with a sense of security in the present" (p. 25). Meir and Stewart noted that language is one of these highly regarded cultural pillars. Hispanics are perceived as a threat to the social, political, and economic structure. By controlling language, you can control the expansive force of these groups. This, as part of the historical perspective of bilingualism in America, sets the precedent for English-only laws in the nation. While making sure that Hispanic students are forced to learn English, their education in the rest of the curriculum came to a stop. Hispanic students were unable to make gains in education since they were not given instruction in their native language. The debate

over bilingual education, ESOL and ESL continues throughout the brief history. Meir and Stewart discussed the idea that language proficiency is central to success, dividing the educational communities and producing generations that are unable to function at higher levels in our society.

When taking an historical look at Puerto Ricans, it is only since World War II that movement has increased to the United States (Meier & Stewart, 1991). This is when Congress unilaterally granted U.S. citizenship to Puerto Ricans. The educational history of Puerto Ricans in the United States is brief as compared to Mexican Americans. However, it is considerably longer than many other recent Latino immigrants. In Puerto Rico, the education of its citizens was under a classic colonial system. While under U.S. rule, the Puerto Ricans were expected to fund their own educational system but run it as the United States desired. “The primary requirement was to conduct instruction in English” (Meier & Stewart, p. 64). The idea was that by teaching English, the Puerto Rican society proclaimed its loyalty to the United States. Therefore, in their country, English only intrusion became common place. Education in Puerto Rico was not universal and led to a poor educational system. As a result, with the migration patterns to and from the island, the low achievement levels of Puerto Rican students in U.S. schools became prevalent and of little concern. Meir and Stewart (1991) noted that achievement levels lagged mostly due to language barriers.

Meir and Stewart (1991) continued to report that language conflicts within the Hispanic community are the overwhelming indicator of success or failure. The

conflicts in education have focused primarily on bilingual education programs. Meier and Stewart stated,

> "Spanish-English bilingual education has become a major issue in U.S. education policy. It is often presented as a plausible or even preferable alternative to desegregation, and major debates range about exactly what form bilingual education should take. Bilingual education has become a policy of choice among Hispanic educators, while many Anglo educators remain skeptical of its value" (p. 74).

The historical debate of the politics of bilingual education or English only is a battle that has been raging for many years with no consensus as to what is best for the children. According to Meir and Stewart (1991), "bilingual education was designed as a policy emphasizing transition, not one to create bicultural education" (p. 78).

According to Meier and Stewart (1991), for a long time, Latinos had been seeking admission to public schools on a fair and equitable basis. In addition, they wanted to repeal laws prohibiting instruction in any language other than English. These laws, existing in 15 states in the 1920s, left Spanish speakers and other immigrant children without a fair chance to learn and to succeed in education and in society. In 1923, the Supreme Court banned the English-only law in a case brought by German Americans (*Meyer v. Nebraska*), The Supreme Court specifically stated that the protection of the Constitution extends to everyone and even to those that speak languages other than English. While this was helpful to those Anglo immigrants and

English-only laws were repealed in the later 1920s, the “No Spanish rule” still prevailed in most schools.

As documented by Meier and Stewart (1991), as a result of ignoring laws and civil rights, the League of United Latin American Citizens (LULAC) was formed. LULAC contributed to some of the nation’s earliest court victories against segregation, usually responding after community people mobilized. LULAC was responsible for many actions leading to the equitable treatment of Spanish speakers in American society and American education. LULAC and other societies created an intense ignition to the cause of the Spanish-speaking student.

Cockroft (1995) discussed that Hispanics, due to a cultural orientation and a variety of fears such as deportation, have traditionally maintained a code of silence and acceptance. According to Cockroft, “in 1931, the principal of a newly constructed grammar school stood in the doorway and turned away 75 of 169 school children” (p. 33). These were the children of the town’s workers who had never had their children separated in the past except for special English classes. “Now the principal told them they must attend a dismal-looking two-room structure they nicknamed La Caballeriza (the barnyard or horse stable).” (Cockroft, 1995, p.34). The parents obtained legal aid and took the school board to court. The idea was to set precedent to eliminate segregation in California schools. The school children did not attend and maintained a boycott. As a result, there were raids on work places and the barrios. People were taken off busses and families were separated. Local trains were packed with deportees. (Cockroft, p. 34)

According to Cockroft (1995), at this time (1931), in California, 75,000 to 100,000 men, women, and children were shipped off to Mexico. “Even though 60 to 75 percent of the children were born in the United States and, therefore, citizens, they were still deported for their ancestry” (Cockroft, p.53). Educational equality was no longer a question of being admitted to a decent public school. Rather, it was a question of being allowed to stay in your own country. The case did go to court. The lawyer for the school board stated that, “This was not segregation but rather an attempt at Americanization… wherein backward and deficient children could be given better instruction than…(especially in) knowledge of English” (Cockroft, 1995, p.36) Fortunately, the judge saw the matter differently and was not swayed by the political or the social climate of the times. According to the judge, “ this separation denies the Mexican children the presence of the American children, which is so necessary to learn the English language” (Cockroft, p. 36). In this struggle, equality took a step foward, however the success educationally can be termed limited at best. This is one of the beginning struggles not just for equality but the beginning of a journey that includes future successes and failures of the Hispanic community in the educational setting.

In Cockrofts research (1995), he refers to Sanchez, and educational psychologist, who in the 1940s, explained how non-adaptive schools harmed a Latino child. “He cannot speak to the teacher and is unable to understand what goes on about him in the classroom. He finally submits to rote learning, parroting words and processes in self-defense….Of course he learns English and the schools subjects

imperfectly" (Cockroft, p. 42)! The ongoing educational struggle has taken little turn in its course of action. The ideology to teach those of a different language continues to be a battle for which no single solution is evident or purposely proposed. Cockroft continued to explain that the political power struggle of organizations, both Anglo and Hispanic has become a preventative means to successful education for Hispanic students.

According to Meier and Stewart (1991), the separation, or divorce, of bilingualism and biculturalism was important because it allowed educational officials to retain claims to expertise and to control the school systems. If the system accepted biculturalism, then there is an admission that the school system was failing the children with second languages. Consequently, the school system would have to be responsive to the community, henceforth, be responsive to those who were not English speakers. However, with the advent of a number of cases and laws in reference to language, local school districts were charged with the responsibility for overcoming the language deficiencies of their students so that all educational programs were accessible to language minority students. "Because the courts were slow to consider Hispanics as a separate minority group for civil rights purposes, the Hispanic legal struggle for equal education did not develop as quickly as the black struggle" (Meier & Stewart, 1991 p. 201).

As noted by Meier and Stewart (1991), the historical patterns of exclusion from education that handicapped African-Americans also applied to Hispanics, although the method of exclusion differed. Hispanics, for a time, were trapped in a

state of legal limbo, at times being considered white and, at other times, non-white. Regardless of how Hispanics were considered, the designation was manipulated and used to limit access to educational opportunities. Even if a system is desegregated, common educational practices can restrict the interaction among groups. Academic grouping was utilized as a means of segregation. Meir and Stewart explained that bilingual education also led to academic grouping and segregation. This led to a number of problems. According to Meier and Stewart, first, it separated students from those that were different from themselves and had them only interact with those that were sixilar to themselves. Second, this created a caste system in the eyes of the teachers and the students themselves. The groups were of a different status. Students were ranked creating an unequal environment. The academic grouping led students to perform at lower levels. Hispanic students were placed into special education, remedial, or lower track classes. “Students in higher-status groups normally receive greater attention, more resources and better quality instruction from teachers with higher expectations. In short, grouping creates inequalities in access to education among students” (Meier & Stewart, p. 203). The educational system would find ways to circumvent the laws of desegregation to maintain the power it had to deny equal access to education. Meir and Stewart explained that this philosophy was to maintain and further the progress of the political and financial power over others.

Cockroft (1995) noted that the past educational experience for Hispanics was poor at best, but for women of Hispanic descent, it was even worse. Most of the educational experience for Hispanic women was pointed toward domestic servitude.

In a thesis written in 1938 by a future teacher at the University of Southern California, it was stated “they should be taught something about cleaning, table-setting and serving.” (Cockroft, p. 31). The education of the male Hispanic was not at a considerably higher level, with his educational path being directed towards custodial or janitorial experience, for the most part.

It was not until 1970 that the courts mandated school desegregation for Latinos. In *Cisneros v. Corpus Christi Independent School District*, (1970, 1971), a U.S. district court and an appellate court ruled that Mexican-Americans are an “identifiable ethnic minority with a pattern of discrimination” (Cockroft, 1995, p. 49). They are, therefore, covered by the Brown decision. However, courts in Texas and Florida ruled otherwise. The issue was resolved in *Keyes v. School District No. 1,* Denver, Colorado, (1973), pointing out that school boards were falsely claiming desegregation by categorizing Mexican-Americans as “whites”. In this way, a school with mostly blacks and Latinos could be considered “integrated”. The Supreme Court, in 1973, ruled that this was wrong: Latinos must be covered by the *Brown* decision. Cockroft (1995) explained that local and state school officials used the issue of residential concentration and “local school autonomy” to circumvent the *Keyes* decision. Once again, according to Cockroft, Latinos were left with the problem of “Mexican Schools”, or “escuelas de burros”, (dumb schools). From 1968 to 1986 the percentage of Latinos attending predominantly non-white schools rose from 54.8 percent to 71.5 percent despite all of the court battles. According to Cockroft (1995), the battle for integration and equality continues.

During the last five to seven decades, the educational establishment has been guided by the theories that hold the concept of intelligence as the central factor in learning and placement. “And equality of treatment has often been determined in educational institutions by using this intelligence construct to the detriment of Hispanics” (Garcia, 2001, p.132). In the 1920s it was Latinos and other immigrants that were given Intelligence Quotient (I.Q.) and psychological tests. These exams were used to measure and determine people’s intelligence and, consequently, future employability skills.

Latinos and other immigrant children took the exams under several obvious handicaps. Reading speed and comprehension were important components. Poor English language skills led to slow and poor performance on the test. In addition, the questions were considered to be culturally biased and contained little material that was familiar to children of Latino communities and homes. Economic and health issues also had a negative impact on test scores. Mexican-American educator, Sanchez, pointed out in 1932 that “intelligence tests are in part measures of environmental effects” (Cockroft, 1995, p. 27) Following his studies, scientists have come to realize that intelligence is expressed in many forms and that no single written exam can possibly come close to measuring it. Nevertheless, children were placed in classes based on their I.Q. scores.

Cockroft (1995) and other authors explained that the expectation of achievement, or lack of it, became a self-fulfilling prophecy. Teachers and students were well aware of their position in the hierarchy and behaved in accordance to the

placement and its expectations. Reyes (2000) reported that Latinos routinely fell behind and were often pushed out or dropped out rather than face further humiliation. Reyes explained that as one looks at the present system in the United States, he or she will note that certain tests label, track, and group Hispanics to the detriment of the educational community. Furthermore, Reyes noted that this perpetuates a downward spiral for the minority student and the forward momentum of educators.

Reyes (2000) reported that in 1948, the *Assistant Superintendent's Report* (Association of Assistant Superintendents, 1948) claimed that the education of Puerto Rican students had been the subject of studies and reports by the public school system, by government, and by the Puerto Rican advocacy associations. The conclusion, according to Reyes, of all of these reports, was uniform: The failure of Puerto Rican students to do well, a high dropout rate, academic underachievement, and a lack of English language proficiency. From this report, the leadership and organizations refused to accept the "blame the victim" ideology (Reyes, p. 80). The leadership, according to Reyes, issued a challenge to the public school system and to the society at large to meet the needs of the children, to reform the structural arrangements, the organizational culture and funding policies. As the years progressed, these challenges continued to exist.

In meeting the challenges, the courts have been instrumental in helping to achieve goals not just for Hispanics but for all minorities. The courts took on a leadership role to create a system that was considered fair and equal. "Litigation is and probably will be the primary means for culturally and linguistically diverse

populations (e.g., Hispanics) to establish equity within the school education system." (Brice, 2002, p. 15) The cases that came before the courts dealt with equal protection under the law and education as a property right not to be denied. From these decisions, Brice noted that the courts found special language programs were necessary if schools were to provide students with an equal educational opportunity. Since language was the major barrier that prevented success of Hispanic students, Lau vs. Nichols (1974) was an important decision that had an impact on all students where language was a barrier.

Present Day Perspectives

Brice (2002), noted the difference in income and educational attainment. Brice noted that more Hispanics live in poverty than those in the non-Hispanic U.S. population. According to Menchaca (2003), "Each year, approximately 3 to 5 million migrant farm workers and their families leave their homes to follow the crops, hoping to improve their financial situations" (p. 129). Menchaca noted that this resulted in a lack of parental involvement and that the children of Latino migrants tend to be academically unsuccessful. Menchaca noted that comparatively, other Hispanic families face poverty and mobility to a lesser extent but that economics plays a large role towards educational attainment. In addition, Rolon (2000) stated "the suburbanization of goods-producing industries and the increase of highly specialized professional jobs in the cities has reduced job opportunities for Latinos, whose

acquired job skills are fewer and whose educational level is lower than the national average (Rolon, p. 143).

Garcia (2001) noted that here are many perspectives regarding the success and failure of educating Hispanics today. Of major concern are the many theories or theoretical propositions that deal with the learning process. While these theoretical approaches can be attributed to all learners, they are pointed towards Hispanics. According to Garcia, there are five universal theoretical propositions to the learning process. These theories are highly regarded and utilized today. First, Garcia, believed that the learning process progresses through different stages of development and is influenced by experience. Young children and adults learn in different ways. However, all learners have the ability to learn, which is determined by each individual's unique set of experiences. These sets of experiences impact and define the course of learning. Second, what we already know and how we know it, define how we learn from new experiences. Third, the ability to reflect on and control new experiences and determine their significance in accordance to what one already knows is critical for future learning. Fourth, motivational factors are central to learning. Individual interests along with the nature of the teaching are critical. Fifth, learning is both a social and independent activity. The learner is engaged in a socially constructed environment but learns in an independent context. In short, learning needs to be learner centered. Other researchers and educators have utilized this research in an effort to increase the academic success of Hispanics (p177).

In the *Presidents Advisory Commission on Educational Excellence for Hispanic Americans*, (September 2000), there are a variety of statistics and programs that detail the current educational condition of Hispanics. The start of early childhood education, or preschool, encompasses education programs for children up to 5 years of age, and may provide related services to meet children's psychological and health needs. Pre-school can prepare children for a solid education by teaching learning and socialization skills. The federal and state governments, seeing the need to reach Hispanics, are making an investment of 10 billion dollars annually in early childhood programs (Presidents Advisory Commission, September 2000),

According to the report by the *Presidents Advisory Commission on Educational Excellence for Hispanic Americans*, (September 2000), the elementary school years are a period of significant development for the child in all areas of learning and will provide for a successful high school experience. The urbanicity and poverty of Hispanics is highly concentrated, as is the isolation and segregation from whites. As a result, attendance, academic performance, discipline and other related problems confronted by Hispanics is extreme. "Overall, Hispanic students consistently perform below the national average in National Assessment of Educational Progress (NAEP). Disparities begin as early as kindergarten and remain through age 17. By age nine, Hispanic students lag behind their non-Hispanic peers in reading, mathematics and science proficiency" (Presidents Advisory Commission, p. 70).

According to the report by the *Presidents Advisory Commission on Educational Excellence for Hispanic Americans* (2000), a secondary education is considered a crucial step in achieving upward mobility and helps individuals negotiate the path to achievement and economic success. The drop out rate for Hispanics is much higher than for other ethnic groups. “In 1998, 30% of all Latinos 16 through 24 year olds were drop outs (1.5 million), more than double the drop out rate for blacks (14%) and more than three times the rate for whites (8%)” (Presidents Advisory Commission, 2000 p. 71). According to the report, Hispanic students have earned more credits in computer science, foreign languages and English than other groups. In addition, the report explains that despite increases in upper-level course selection among Hispanic high school students, Hispanic students still earn fewer credits than other groups in the subjects of history, science and mathematics. In addition, the report discussed that Hispanics are more likely to have a cell phone than a home computer. The report explains the discrepancy and the result of what importance is being communicated to the Hispanic community and their future endeavors.

Genesee (2000) noted that the knowledge and utilization of current research to improve the second language acquisition of Hispanics is of maximum importance. There has been a longstanding interest among second language and foreign language educators in research on language and the brain. Language learning is a natural phenomenon; it occurs even without intervention. By understanding how the brain learns naturally, language teachers may be better able to enhance their effectiveness

in the classroom. The implications of this brain research for second language learners are integral to their success. “Effective teaching should include a focus on both part and wholes. Instructional approaches that include teaching parts and not wholes or wholes and not parts are misguided, because the brain naturally links local neural activity to circuits that are related to different experiential domains” (Genesee, p. 3). Therefore, teaching of items should not be in isolation. Rather they should be combined with experiences that will lead to comprehension. This causes connections that will lead the second language learner to better mastery and comprehension. Accordingly, brain research cannot prescribe what we should teach, how we should organize complex sequences of teaching, nor how we should work with students with special needs. However, for second language learners, “educators should continue to draw on and develop their own insights about learning based on their classroom experiences and classroom based research” (Genesee, p. 4). Individual differences in learning style may not be a simple matter of personal preference, but rather of individual differences of the hardwiring of the brain and beyond any individual control.

Another theory that can improve the academic performance of students is that of metacognition. The teaching of metacognitive skills is a valuable use of instructional time for second language teachers. When learners reflect upon their learning strategies, they become better prepared to make conscious decisions as to what they can do to improve learning. Strong metacognitive skills empower second language learners. As an example, while teaching the specific reading skill of main

idea comprehension, the teacher can help the students evaluate their strategy use by using a series of four questions. These are “1. What am I trying to accomplish? 2. What strategies am I using? 3. How well am I using the strategies? 4. What else could I do?” (Anderson, 2002, p. 3). This is a strategy that creates an essential skill for second language learners to develop and succeed. The metacognitive strategy is important for success because it gives an indication of which strategies are crucial in determining effectiveness of learning. “Rather than focus students’ attention solely on learning the language, second language teachers can help students learn to think about what happens during the learning process, which will lead them to develop stronger learning skills” (Anderson, p. 1).

Today, many school districts are facing an increasing number of secondary immigrant students who have low level English skills. The students must learn English, take required content courses, and catch up to native English speakers before high school graduation. Some districts have developed newcomer programs that serve students of a second language with a program of intensive language development and academic and cultural orientation from 6-18 months. Then they can be placed in regular school language support and academic programs. While the rationale may differ from site to site, the following reasons seemed to prevail. Second language learners were at risk of educational failure or of dropping out of school. They were over age for their grade level placement because of weak academic skills. The students’ needs surpassed the instructional design of the regular ESL or bilingual program and students had low or no English or native language literacy skills.

"Newcomer programs usually employ experienced staff trained in second language acquisition theory, ESL and sheltered instruction methods, and cross cultural communication" (Short, 1998, p. 3). According to Short, in most cases there is a staff member who is bilingual. There is staff development that will address the second language learner needs so there is a development of literacy skills that can improve curricula and instructional delivery. Native language instruction in the content area is provided by bilingual paraprofessionals. Genesee (2000) noted that there is a debate that a paraprofessional rather than a teacher with the proper credentials delivers instruction. Genesee also noted that the question of success and failure is an important one for Hispanic students in relation to this process.

There are many challenges facing Latinos today. On August 2, 1999, Hillary Rodham Clinton hosted a conference titled A White House Convening on Hispanic Children and Youth. The conference examined the opportunities and challenges faced by Latinos particularly in early childhood development and educational attainment. The conference highlighted the promising efforts across the country to increase the opportunities and address the challenges. The White House Initiative on Educational Excellence for Hispanic Americans together with colleagues in Latino community based organizations, educators, and youth advisors across the United States began to identify and list programs that were successful for Latino youth. "Some of the programs, recommended by our colleagues, were created specifically to serve young Hispanics, while other programs serving broader populations or focusing on raising

student achievement in general have shown strong benefits for Latino young people" (U.S. Department of Education, 2000, p. 1).

While the programs produced evidence of their effectiveness, the problem here is that they lack a solid methodology for evaluation. According to the U.S. Department of Education (2000), success takes place but can be considered lacking due to the inability to repeat a designated method. While that did not seem to be of importance in the conference, what was considered a success was the number of programs and the accompanying evidence the conference submitted. The conference highlighted what works for Latino youth across the country, in the hope that it would facilitate and foster new support for innovative community based programs, attempting to improve education for the Latino community. According to the conference, one of the most important factors was the recognition by individuals on a federal level working with state and local governments to produce funding for programs that will have an impact on Hispanics. With the former First Lady hosting the conference, influence for governmental and financial backing became a reality to reach for success. Even if the programs had only limited success, they were brought into the forefront by this major political gathering.

The review of literature in relation to Hispanic education displayed a split in research among the varying Latino nationalities. Pearl (1991) noted that success and failure differs from Puerto Ricans to Chicanos, to Cubans and the other Hispanic cultures in our society. Furthermore, Pearl explained that when researching the political implications on educational policy two very different problems arise. One is

to maintain interest in a society that is fueled by new fads; a society that has neither vision nor memory. Therefore, research impact in this society will be insignificant or short-lived. “It knows neither where it has been nor where it is going, and woe unto anyone who raises questions about either the past or the future” (Pearl, p. 317). Another factor to consider is whether the society is able to tolerate the research findings. Can a society utilize research that threatens its economic structure because it cannot integrate more educational attainment into its structure? “A society that aspires to policy based on knowledge must build knowledge into its decision making systems” (Pearl, p.317). At the same time, the society will get the education it is willing to invest in. Research findings that require policies more expensive than a society is willing to support are policies that will not be implemented. From a political-economic point of view, changes in education require the ability to influence a large enough constituency to change the restrictions on taxation, more than it depends on any research findings.

Among Hispanic groups, Pearl (1991) noted that Chicanos are considered severely at-risk. Chicano school failure and its success are related to more complex social issues. The shape of the political economy, the environment, conditions of race and ethnic hatred, the use and misuse of technology are factors to be considered. “And unless these issues are an integral part of the education Chicanos and all others receive, educational progress for Chicanos will be slow, uneven, and most likely illusory” (Pearl, p. 318). Pearl noted that this problem is not only for Chicanos but for all Hispanics in America.

Reg Weaver, President of the National Education Association, (ASPIRA 5th Annual Latino Education Conference, 2003) noted that only 1 in 10 Hispanics 25 years or older has a college degree. One in three Hispanic students does not complete high school and the Hispanic dropout rates have not declined since 1972. Weaver (2003) explained that the leadership is concerned about political tactics that spouted the saving of all children. They provided mandates to do so but in actuality, lack the focus and ability to save Hispanic children. According to Weaver, the laws do not take into consideration whether or not a student is proficient in English. The student is expected to take and pass exams at grade level. "Imagine a student who has yet to learn the language, being expected to perform on a high stakes test" (ASPIRA 5th Annual Latino Education Conference, 2003)! Language, resources to provide books, qualified teachers, and remedial or special types of education, are all needed yet not properly funded.

In the case of Latino newcomers, communication is an immediate necessity. At first, bilingual paraprofessionals are hired. Hamann, Wortham, and Murillo Jr. (2002) stated that, "typically, however, the changes and the needed responses are much more profound, extending beyond school sites into the larger community and proving to be much more complex than just a need for language interpreters" (p. 5). Culture is a strong determinant, as is language, in the education of Hispanic students. This concept cannot be ignored. Hamann, Wortham, and Murillo Jr. noted those cultural beliefs about child rearing, household responsibility, and family values were essential in educating the Hispanic child. They must be taken into consideration when

establishing policy that can have an effect on their education. Hamann, Wortham, and Murillo Jr. cited Meier and Stewart (1991), who found that Latino students' performance at school correlates with both the community political power of Latinos and their presence as instructors and administrators. Therefore, these leaders must not only work to create legal and political mandates but must also act as teachers to provide a necessary service for Hispanic children.

In a study by Elias Martinez, it was stated that "the development of educational policy is tied to, and reflects, the cultural, contextual, and political dimensions of the community in which it is embedded." (Hamann, Wortham, & Murillo Jr., 2002, p. 143) Martinez, as cited in Hamann, Wortham, & Murillo Jr., noted that policy is constantly negotiated and reorganized. It was the leadership that negotiated and reorganized the educational policymaking and the implementation of federal Title VII grant dollars for the changing community culture. The necessity of proper leadership to define, interpret, and implement policy is essential for the survival of Hispanic children in the educational community.

Programs and Practices

The ESL practices guide for ESL teachers and administrators required research pertaining to the factors in the development, validation of the product, and the leadership practices necessary to commit and enable faculty and staff to achieve desired results.

It was important to gather data on environmental issues to develop a customized guide of best practices. Lacey and Spencer (2000) conducted a qualitative analysis of Hispanic immigrants attending schools in the United States to determine how their social setting aligned with their academic success. The study revealed a direct influence between students' social setting and their academic and language acquisition process. According to Lacey and Spencer one of the greatest concerns of Hispanic students is "their low status as a group in relationship to the other ethnic groups on campus" (p. 3). Lacey and Spencer noted that Hispanic students complained of hostile and demeaning treatment from the dominant group. As a result, students experienced fear of being mainstreamed and most students were more likely to create a comfort zone with their ESL classes. Some students realized that this comfort zone was a barrier to their learning. One student participant in the Lacey and Spencer study said, "I choose not to be in ESL classes because you don't learn as much. In the ESL classes you speak more Spanish and to tell you the truth I don't like it. I know Spanish already and I am trying to learn English" (p. 4). Other findings in their study indicated that most ESL classes were taught by first year teachers with no special training on how to teach classes for English learners. As a result, there was a lack of teacher sensitivity and respect for the students' native language and culture. This lack of understanding or awareness prevented the academic process of the ELL student. In addition, Lacey and Spencer noted that another barrier to students' learning was that schools were placing students in ESL classes based on their ages rather than their educational levels or English proficiency backgrounds.

Lacey and Spencer (2000) recommended school-wide commitment from principals, administrators, teachers, and parents for the educational success of English learners. Teachers should receive relevant and appropriate training on how to adapt their instruction to make it more comprehensible for English learners. Loeb (2002) stated, “If schools are increasingly held accountable for students’ performance, teacher quality will be at the center of school policy and debates” (p. 2). According to Loeb, administrators should provide new teachers with the supplies they need to perform their jobs. Outdated textbooks should be replaced with newer ones, and increased preparation time should aid or help to correct this problem.

Ashford (2000) emphasized the importance of providing new teachers with mentors. Ashford described a mentoring program as an effective tool for the many challenges encountered by first year teachers. Ashford stated that “lack of support” (p. 71) was one of the major reasons that so many new teachers quit within the first 3 years. “This is the loneliest place I have ever been, is the way one 1st-year teacher described her first year teaching experience” (p. 71). Other implications from the study suggested that mentors should observe first year teachers in the classroom, evaluate their instructional techniques, and offer them peer coaching. This approach provides new teachers with positive feedback that is directly related to the issues they encounter on a daily basis. Administrators were advised to assist new teachers by enrolling them for seminars related to classroom management and content area teaching techniques. Ashford added, “Salary and status are less important, it really boils down to working conditions” (p. 74).

Denmark and Po*s*en (2000) conducted research on the importance of mentor competencies. According to the authors, “so often, teachers who are asked to mentor a 1st-year teacher or a teacher new to the school have very little training on how to coach and mentor while teaching full time” (p. 1). Clarity of objectives and focused directives provide success for the mentor and mentee teacher relationship. According to Denmark and Po*s*en, mentors should consider the following competencies when mentoring a new teacher:

1. “Understand the mentoring role” (p. 2).
2. “Initiate the relationship” (p. 2).
3. “Establish a climate of peer support” (p. 3).
4. “Model reflective teaching practices” (p. 3).
5. “Apply and share effective classroom management strategies” (p. 3).
6. “Encourage and nurture an appreciation of diversity” (p. 4).
7. “Embrace mentoring as an investment in professional development” (p. 4).

According to Ellis, Worthington, and Larkin (1997), Hispanic students should be considered high-risk students. They suggested the use and implementation of the following principles when teaching high-risk students:

1. “Active instruction” (p. 6).
2. “Meaningful learning” (p. 6).
3. “Over-planning” (p. 6).
4. “Help student to become independent, self-regulated learners through instruction that is targeted to their short and long term goals” (p. 6).

5. “Teach students declarative knowledge, procedural knowledge, and conditional knowledge” (p. 6).

6. “Teach students procedures and techniques for organizing, storing and retrieving information” (p. 6).

7. “Vertical alignment across the curriculum” (p. 6).

Solis (1999) emphasized that ESL teachers are often frustrated at their inability to combine the aspects of research and link it to that of practice. According to Solis, many teachers have had to create new or add on to existing teaching practices to help Hispanic and second language students. Ellis (1997) explained the need to help new teachers to plan appropriately for English Language Learners. ESL teachers must be provided with a series of guidelines they can incorporate into their lesson plans. In addition, strategies and techniques on how to increase student learning, such as communicating goals and objectives to students, asking frequent questions, and providing corrective feedback, should be the primary focus in ESL classroom. Ellis also elaborated that assessment of each student is another important component of effective teaching. Teachers should receive training or information on how to assess their students to see where they are academically and linguistically and build their knowledge and vocabulary acquisition from that point. Ellis noted that using inappropriate tests or techniques to measure students’ content knowledge and linguistic skills prevents effective teaching. “Teachers should ensure that evaluations correctly measure classroom learning according to students’ ability” (Ellis, p. 22).

The process of comprehensible input is referred to as the ability to build learning by using explicit language, pronunciation techniques, picture files, structured collaborative learning, and other techniques. Cummins (2002) noted that language and content learning is not a simple linear process but a "functional diversification, an extension of a learner's communicative and cognitive range" (p.24). Krashen (1995) also referred to this process as the "(I + 1) input hypothesis" (p. 27). The ESOL teacher should recognize the student's individual level of cognitive and linguistic ability with his/her previous social and academic background to expand instruction to a level that extends beyond the student's current level of ability. This will promote academic and linguistic growth. Lack of these techniques can lead to frustration, discouragement, and burnout for many ESL teachers. Every principal should provide teachers with the opportunity to grow as professionals though appropriate staff development. This could mean the careful selection of themes for staff development meetings and guest speakers and consultants who can facilitate and guide teachers with research-informed strategies and practices that will help compliment their teaching practices in the classroom.

Read (1999) conducted a study to detail ESL classroom practices. According to the author, many school principals and administrators were questioning the effectiveness of classroom strategies used by ESL teachers in an effort to meet ELL individual needs. In the study, 20 fourth- and fifth-grade teachers from three elementary schools were gathered to discover strategies to help at-risk students succeed academically. Teachers were asked to answer a survey of 16 questions. One

of the greatest challenges for teachers answering the survey was the question, “How is the lifestyle of these students at-risk labeled” (Read, p.7)? Read indicated that at-risk students come from schools of large minority populations, single families, most are older than their peer groups, they have changed school several times, they display poor grades, and so forth. Read indicated that some ESL students, who are not at risk could become at-risk through periods of growth.

According to Read (1999), educational leaders should focus on building educational resilience to help the at-risk students. Teachers should be able to identify the target group at the beginning of the school year and develop individualized strategies to help each student achieve academically, linguistically, and socially. Read’s study indicated that lack of parental involvement contributed dramatically to this problem. Teachers were encouraged to brainstorm strategies where parents are motivated to participate in their child’s learning. In addition, teachers should use strategies from a combination of approaches that will take into account the different learning styles, cultural background, formal education, and the students’ language proficiency levels as early as possible so that ELL student can receive immediate and proper instruction.

Boothe (2000) believed that leaders of educational institutions can help with this process by developing a diversity program that will not only help students in the beginning, but also throughout the school year. A collaborative climate, with continuous support and guidance from teachers and administrators, was considered a prerequisite for the effectiveness of any educational guide. Faculty and staff

development emphasizing teaching techniques, cultural sensitivity, and an ongoing communication between school counselors, teachers, and parents were cited as leadership strategies that would add an important aspect to this guide. A multicultural curriculum that utilizes an adjustment of practices and the integration of multicultural learning strategies were considered positive practices to create a learning environment. According to Booth, this approach should embrace the student's native culture while providing for a successful acculturation process.

According to Rennie (1993), although the effectiveness of several program models for language minority students is a subject of controversy, a variety of programs can still be effective. The choice should include the needs of the students and the resources available. Martinez (1997) supported this by stating, "Programs are not unitary, but a complex series of components" (p.1). Rennie also noted that the following factors should be considered when selecting or developing a program model or guide:

1. District or school demographics. The total number of language minority students, the number of students from each language background, and their distribution across grades and schools will influence the selection of the type of program to meet the needs of district students. (Rennie, p. 31).

2. Student characteristics. Students' social, economic, and cultural factors in their home country, may have interrupted their schooling, if they attended school in the first place. The needs of these students are quiet different from those of students with a solid academic background. (Rennie, p. 31).

3. District or school resources. Districts that have had a significant enrollment of language minority students will likely have the intellectual capital, teachers, aides, and administrators trained to work the limited proficiency students. Other districts may lack this resource due to the sudden increase of limited language proficient students. Material resources also influence the type of program. Some districts with declining enrollment or new classroom buildings may have the space available for language labs, magnet classes, and resource centers. Others, due to overcrowding, may lack this accommodation. (Rennie, p. 31).

Boyson and Short (2000) noted that teachers and administrators should become aware of the different programs that can help ESL parents assume more active roles in their children's education. According to the authors, there are many types of newcomer programs suited to fit the individualized educational needs of ESL parents. These programs may last from a 1/2 day to a full day or from a 1/2 year to 4 years, and it can be located at a school or at a separate site that has the adequate facilities to fit the parents' needs. The results vary depending on the linguistic and academic skills of the adult. If the parents are academically and linguistically weak, then it may take longer than an individual who has a concept and understanding of the English language.

Osland, Kolb, and Rubin (2001) believed that confidence is what leads to performance. As parents acquire the language skills they need, they become more willing to attend, collaborate, and participate in their child's schooling.

According to Kouzes and Posner (1995),

> The delivery process of the best ESL practices for teachers and administrators will require leadership practices that will challenge the process, inspire a shared vision, enable others to act, model the way, and encourage the heart of all constituents to commit and perform in this change process (p 52).

Bamburg (1995) noted that exemplary school leaders are committed to providing high-quality learning for all students. These leaders will initiate, implement, and integrate programs that will improve access to engaged teaching and learning for all students. Leaders are concerned with issues of equity and access to powerful learning, particularly for those students most at risk of academic failure.

According to Morgan (1996), leaders challenge the process through the use of proactive leadership. Morgan stated that "organizations can get caught in vicious circles whereby victories and strengths become weaknesses, leading to their downfall" (p. 217). Kouzes and Posner (1995) noted that leaders should be able to foresee events and shape through their leadership, practices that will create and meet the different needs of everyone involved with the process. Kouzes and Posner developed the concept that a leader involved in the process of "routinization" becomes a victim to changes as opposed to a leader who initiates changes as a way of creating a new and better way of life.

According to Morgan (1996), "Environmental turbulence and change is a product of this ongoing process of enactment" (p. 149). The ability to view the future and prepare employees for the many demands of a continually changing, complex, and diverse society is a prerequisite to organizational success. Morgan noted that

proactive leaders believe in constant improvement and that these leaders know organizational changes are effective as well as the people making those changes. Leaders must model practices and strategies in order to empower and engage those that are a part of the organization.

Another component is the ability to inspire a collective vision. Else (2000) stated three questions every person asks another in a human relationship: "(a) Can I trust you? (b) Do you know what you are talking about? and (c) Do you care about me personally"? (p. 63). These questions are asked in a school setting, and if the answer to any of these questions is no, there is a minimal commitment to the relationship. Bamburg (1995) stated that "For school improvement efforts to be successful, teachers, parents, administrators, and students must share leadership functions. Likewise, the principal's role must change from that of a top down supervisor to a facilitator, architect, steward, instructional leader, coach, and strategic teacher" (Babmberg, 1995, p. 19).

Rossett (1999) discussed the role of a proactive visionary leader as someone who "defines data broadly" (p. 29). Osland (2001) discussed the concept that data should be derived from facts and then drive the results. The leader's ability to gather, evaluate, compare, and present data indicates the discrepancy between the actual and the desired organizational performance. The gap becomes evidence to inspire others to act. Morgan (1996) noted that leaders' who model direct democracy can attract and retain commitment. Morgan stated that "direct democracy is a system where everyone is involved and has an equal right to contribute in the decision making process" (p.

157). According to Else (2000), “school leaders who facilitate stakeholders in developing shared organizational values, trust, and a systems perspective cast the footings for a strong foundation on which school-based decision making is built” (p. 32).

According to Kouzes and Posner (1995), leaders should involve everyone that must live with the results and make it possible for others to do good work by enabling them to act. School leaders should support the development of a collaborative school culture with clear educational goals, processes, structures, and resources that will allow the educational change to grow. Kouzes and Posner stated, “Leadership is a team effort” (p. 10).

Kouzes and Posner (1995) stated that, “The behavior most related to employee productivity is modeling the way” (p. 220). Individuals are able to view the important from the not so important based on the actions of their leader. Therefore, a person who acts like the organization they represent can send a voiceless message through their behavior to all viewers, spectators, and interest holders. Kouzes and Posner noted that based on the results from a survey they conducted, “honesty” was considered the most important element expected of their leaders. Effective leaders model honesty through their behavior to gain the commitment they need to succeed. Kouzes and Posner stated that, “In other words, regardless of what leaders say about their own integrity, people wait to be shown; they observe the behavior” (p. 22).

According to Yukl (1998), proactive leaders can encourage individuals through rational persuasion (logical arguments and factual evidence) to show that a

proposal or a request is feasible and relevant for attaining important tasks. Yukl also noted that apprising influence (personal and professional benefits) is another enabling tactic for employee's commitment. Employees must understand why improvement is necessary. In addition, they must understand the importance of building their skills, how they can benefit from so doing, and, receive the appropriate training, resources, and feedback to enable their performance.

According to Kouzes and Posner (1995), "when striving to raise quality, recover from a disaster, start up a new service, or make dramatic change of any kind, people should benefit when behavior is aligned with cherished goals" (p. 14). Additionally, Kouzes and Posner stated that "leaders must "celebrate victory" as a way to encourage "self-esteem" (p. 14). Other individual and group celebrations, according to Kouzes and Posner, included marching bands, bells, T-shirts, note cards, personal thank-you, stickers, stuffed animals, masks, buttons, toys, and a host of other awards to offer visible signs of encouragement to keep on winning. Kouzes and Posner explained that these are necessary for continued efforts towards success.

School Personnel

In order to achieve positive educational outcomes, schools should be staffed with a sufficient amount of Hispanic instructional personnel. "Hispanic youth comprised more than 12 percent of the U.S. public school population in 1993-1994. However, Hispanic teachers comprised less than 4 percent of the teaching population" (Hispanic American Education, 1996, p. 3). The number of Hispanic counselors and

administrators is low as well. The need to increase Hispanic educators is essential in providing mentors and role models. The articles explained that if there is an increase in the number of Hispanic employees in the public school system, there can be an impact on the dropout rate, grade retention and entrance into post-secondary education and higher education. “Furthermore, Hispanic students evaluated by those sensitive to their culture are far less likely to be assigned to special education classes and far more likely to be identified as gifted” (Hispanic American Education, p. 5).

Rennie (1993) discussed the aspect that the low number of Hispanic educators may be having a dramatic effect on Hispanic students. Rennie noted that it is thought that improving the quality of education for Hispanic students can be achieved through the recruitment of essential personnel that can implement effective and successful programs. Rennie believes that the identification of educational personnel leads to successful programs for Hispanic students. In addition, Hispanic educational personnel will promote academic achievement of Hispanic students and enable the student to develop academic skills. These include “expert instructional leaders and teachers, teachers with high commitment to the educational success of all students and an emphasis on functional communication between teacher and students and among fellow students” (p. 4).

Hispanic educators understand cultural differences, language impairments, and other difficulties inherent to Hispanic students. While training of non-Hispanic educators is important, the recruitment, hiring and retaining of Hispanic educators is essential in creating a school culture that has a positive influence. Duran (1983) stated

that “a teacher’s negative attitudes toward and low expectations of Mexican American students also may contribute to low quality of classroom experiences for Mexican Americans” (p. 46). The results of Duran’s study highlighted the fact that the opportunity to learn in classroom settings for Mexican Americans was inferior to that of their white counterparts.

The recruitment of Hispanic educators is a difficult task. The number of Hispanics in education is extremely low, especially in higher education. Incentives, working conditions, and the culture of the schools are factors that must be addressed. “Even a well-designed, thoughtful, and visionary plan for a district or school will probably fail if the appropriate staff are not hired to implement what has been planned” (Samway & McKeon, 1999, p. 91). When schools develop programs, staff development, and other educational activities, personnel is an important consideration affecting the understanding of Hispanic students and cultural sensitivity. The limitation includes administrators, counselors, and support staff. Schools experience a number of problems when counselors and other personnel do not speak the native language or have knowledge of the home culture. According to Samway and McKeon (1999), having fluent speakers of target languages on staff can be very beneficial and can create a successful environment. The lack of Hispanic educators has led to school systems creating a negative educational experience. While the need exists to change teaching methods, adopt new curricula, and allocate more funding, the immediate need is to educate ourselves about who Hispanic students are and what they need to succeed. “In schools with large numbers of second language learners, differences in

ethnicity, schooling and class between teachers and the communities in which they work can create barriers and misunderstandings" (Miramontes, Nadeau & Commins, 1997, p. 204).

The breakdowns that exist in communication create negative stereotypes that then have an impact on successful interactions and ultimately successful academic achievement. The negative impact then affects the home environment and creates a larger barrier between parents, the community and the school. "A lack of familiarity and comfort with the school setting is one reason that many parents are reluctant to get involved in school activities. Some parents consider teachers to be disinterested and unresponsive to their children" (Miramontes, Nadeau & Commins, 1997, p. 205). It is therefore essential for educational systems to be responsible for recruiting, hiring and retaining essential Hispanic educators that can create a reciprocal relationship with the Hispanic parents and community.

Hispanic educators have an understanding of the dynamics that exist in the family structure, among the family members, and in different social situations. "Issues of status, power and economic circumstances all play a role in shaping the community" (Miramontes, Nadeau & Commins, 1997, p. 209). These authors explained that high mobility rates, community tensions between long term residents and new-coming Hispanics, and differing levels of acculturation are all aspects with which Hispanic educators must become familiar with. A strong instructional program with Hispanic educators can influence these factors and create a successful level of academic achievement.

Ashkraft (2001) noted that it is essential to decrease the ratio between Hispanic educators and Hispanic students in order to have positive mentors and role models as well as have a positive academic environment. Ashkraft believes that a problem of positive educators, mentors, and role models exists in the Albuquerque Public School system. While 47 percent of the students are Hispanic, 70 percent of the teachers are non-Hispanic. Seeing the need, the Albuquerque school system and the University of New Mexico, created a program in 2000 called Pathways to Teaching. The mission is to expand the number of Hispanic teachers receiving a license by 18 percent each year. The program reaches out to education assistants (paraprofessionals) that are employed in the Albuquerque Public School system. They will receive financial and professional support as they pursue state teaching licenses. "In return, they will commit to teaching in New Mexico for at least three years after placement with APS" (Ashkraft, p. 4).

The program recognizes that the support personnel are already committed to education in the public schools and that this initiative not only increases the number of Hispanic educators but will combat the problem of teacher shortages in the future. The initiative also goes to middle and high school students that have an interest in becoming teachers. The Pathways initiative selects a Hispanic teacher to mentor them, arranges for shadowing programs of Hispanic educators, and to allow students to tutor younger students in regular classrooms. In addition, the program establishes a chapter of Future Educators of America to encourage young Hispanics to continue their efforts to become teachers. The chapter has activities that include visits to the

University of New Mexico, participation in youth leadership activities and interaction with students already in education programs at the college level. The initiative will have an impact on Hispanic students and "more Hispanic students will achieve educational goals, preserving one of Albuquerque's most precious resources" (Ashkraft, p. 4).

Lockwood (2000) noted that schools need to employ individuals who can communicate with Hispanic youth. Lockwood stated that "schools and districts must diversify their teaching workforce to include people with the knowledge, language skills, and backgrounds that will enable them to connect with Hispanic students and their parents" (p. 3). In addition, Lockwood stated that colleges and universities that have schools of education need to expand their efforts in the recruitment of students with diverse linguistic backgrounds into teacher programs. The need for a bilingual staff or a monolingual staff that understands the diversity of our children is an important aspect of teacher training and academic achievement of minority students especially those who are of Hispanic heritage. As noted by Lockwood, with the projection of a large number of retirements in the upcoming decade, critical shortages of teachers create a significant opportunity to change the teacher workforce and create diversity. "If talented youth and adults are recruited aggressively into the teacher workforce by universities, districts and state agencies, the transformation of education for Hispanic youth becomes not only possible, but also probable (Lockwood, p 3).

Professional and Staff Development

The Center for Research on Education, Diversity and Excellence (CREDE) explained that district and state education agencies, as well as the schools, must target their resources strategically to provide teachers with the necessary tools to improve Hispanic achievement. CREDE has developed five standards for effective teaching. The standards are applied to professional (staff) development. “Some of the research studies on improving educational outcomes for students and improving schooling have concluded that effective instructional environments depend upon well-trained, reflective teachers who are adequately supported in terms of professional development” (CREDE, 1998 p. 3). CREDE has focused on developing professional communities of learners and lifelong support programs. The knowledge and skill acquisition of educators is incorporated into a framework of teacher growth and development, collaborative programs, and the development of interactive research with a community of educators. The learning process of professional development is part of five standards developed by CREDE (1998). The first standard is the facilitation of learning and development through joint productive activities among leaders and participants. The concept is that teaching and learning are social activities. “Learning takes place when novices and experts work together to solve common problems or produce a common product” (CREDE, 1998, p. 1). The joint effort of professional development includes paraprofessionals, staff and educators.

The second standard promotes learners' expertise in professionally relevant discourse. "Thinking takes place through the medium of language, and helps frame problems in new and important ways" (CREDE, 1998 p.1). The professional development should not include irrelevant jargon if it has no connection to practice, but rather development of a special discourse that becomes common and relevant to problems of education of Hispanics.

The third standard is to "contextualize teaching, learning, and joint productive activity in the experiences and skills of participants" (CREDE, 1998 p.1). Teaching and learning must be contextualized and situated into meaningful activities that are connected to everyday life. They should focus on authentic issues and problems encountered in daily practice. "Professional development should be flexible-to-allow for local differences and diversity-and-concrete-to avoid the syndrome of "that sounds good, but it won't work here" (CREDE, 1998, p.2). Rigid replication of a model fails to account for individual differences that are found in specific schools. Innovation and reform should be addressed collaboratively to account for differences in diversity based upon local school differences.

The fourth standard (CREDE, 1998, p.2) challenges participants toward more complex solutions in addressing problems. Educational practitioners need to develop locally meaningful solutions that deal with sustained problem-solving opportunities rather than quick fix solutions that address simple issues. It challenges teachers to examine problems more deeply and identify those issues at the core. As a result, they

will be able to identify, address and resolve problems from their causes rather than solely addressing the effects.

The fifth standard engages participants through dialogue, especially the instructional conversation. “Instructional conversations are useful for creating responsive learning environments and should be utilized in professional development activities (CREDE, p. 2). There is an interactive, responsive conversation that connects formal schooled knowledge to practical knowledge. It is inclusive of the knowledge that comes from teaching and being immersed in the community of teachers. According to the standard, this is the most important aspect of professional development. It is “connecting the streams of classroom culture and knowledge with more formal knowledge and theory around collaborative problem-solving, that is, joint productive activity” (CREDE, p. 2).

Professional development takes many different forms and contains different components, but with the same emphasis. That emphasis is improving the quality of instruction. Koehnecke (2001) developed five approaches to professional development. The approaches are learning-centered communities that focus on collaboration, accountability and quality assurance. The framework is further enhanced by a systemized format for organizations, their roles, and structures. Koehnecke’s professional development is characterized by a set of norms and practices that support equity, diversity and learning by all students and adults. There are five approaches, termed innovations, that develop a professional understanding and increase the level of skills to improving academic achievement.

One innovation is the commitment to team teaching (Koehnecke, 2001). The individuals involved in the program hold weekly meetings to work together and maintain a professional discourse. A second innovation is the selection of speakers and trainers that can relate to relevant issues such as behavior management, technology and assessment. Koehnecke's professional development includes an important aspect that presenters are "increasing the amount of time spent in public elementary and middle school classrooms where we provide theory and practice" (p. 2).

Koehnecke (2001) noted that the professional development system includes the addition of relevant curriculum such as technology. It also demands that there is a thorough understanding of the inquiry/professional theme. Through the system, educators are afforded the opportunity to utilize theory through practice at school sites. School leaders must also receive professional development to manage the changes that are needed for academic improvement. Leading successful change and improvement includes a number of essential components. First is a clear, strong educational vision and school mission. Second, there needs to be a committed faculty and staff. Third, is to provide a learning environment that promotes high standards for all students to achieve. The fourth component sustains continual professional development to improve learning. The fifth and final component is the creation of partnerships with parents, community, universities and businesses.

Leaders must be trained to develop a collaborative school culture that allows educational change to flourish. "School leaders shape the school culture through their

actions, words and deed; what they get excited about; and the plans and activities to which they devote their energy" (Peterson, 1995. P.2). School leaders must be trained to deal with the dynamics of the change process and help them to provide high quality learning for all students. The leaders must be concerned with issues of equity and access to powerful learning especially for those students that are most at risk of academic failure.

According to Lara and Pande (2001), the quality of teaching has a direct impact on the academic achievement of students. Hispanic students are often taught by teachers who are not prepared to teach students who are in the process of acquiring and learning the English language. "Teachers are either inexperienced to work with students with multiple needs or have not kept up with new developments in instructional pedagogy (Lara & Pande, p.3). Lara and Pande stated that, in general, mainstream teachers lack an understanding of second language acquisition and development. Lara and Pande (2001) noted that there are a significant number of students who are in middle and high school that need specialized second language development. Furthermore, the authors explained that to promote academic success for Hispanic students, there is a critical need for special in-service awareness sessions that include all members of the school community and focus on the needs and characteristics of Hispanic students. In addition, professional development should include the use of teaching strategies that reinforce students' strengths and affirm their cultural background. "It operates on a philosophy based on such principals as respect for the students' culture, language and background; a strong belief that all

students can learn; and equal opportunities for all students to pursue further education (Lara & Pande, p. 5).

Professional development for teachers aimed at improving Hispanic levels of academic achievement must include principles of language and second language acquisition. Teachers need to be trained in the relationship between second language teaching practices and what is known about the process of second language acquisition. “The solution to our problems in language teaching lies not in expensive equipment, exotic methods, sophisticated linguistic analyses, or new laboratories, but in full utilization of what we already have, speakers of the languages using them for real communication” (Krashen, 1995. p. 1).

According to Krashen (1995), language acquisition occurs when language is used for communication. By utilizing this concept and training teachers in language acquisition, they can focus on what is done in the classroom and make necessary changes to improve achievement. Whether a bilingual program, English for Speakers of Other Languages (ESOL) or immersion programs, Krashen stated that subject matter teaching has a tremendous potential to increase language acquisition. However, “there are many aspects of language that are consciously learnable, both in grammar and discourse (Krashen, p. 174).

Again, communication is the key to the development of language acquisition and training in language acquisition theory and application is essential to gain a positive product. Schools have made the opposite assumption of language acquisition through communication. Krashen (2003) stated this assumption as “we first learn

vocabulary, learn to spell, learn grammar, and so forth, and practice in contrived situations to "automatize" them. Only after the "basics" are mastered are we allowed to actually use language for real communication" (Krashen, p. 84). According to Krashen, if we discard our old beliefs and develop the concepts of language acquisition by training educators, we can overcome language obstacles and increase academic achievement of Hispanic students and second language learners.

Multicultural Training

Professional development includes a number of pedagogical strategies that can be used in the classroom to increase the achievement of Hispanic students. Language acquisition, technology enriched instruction, cognitively guided instruction, cooperative learning and other effective teaching practices are essential strategies for training and development and can improve the academic achievement of Hispanic students. However, changes in classroom practices need to be accompanied by the reflection of diversity in the classroom.

There is no single approach or solution for all the educational challenges, but educators must recognize the importance of family and community and the influences they exert on children. There are a number of critical factors outside of the school that influence the outcomes of schooling. "Culturally responsive teaching incorporates the everyday concerns of students, such as important family and community issues, into the curriculum" (Padron, Waxman, & Rivera, 2002, p. 1). Hispanic students feel more comfortable and confident with their work when teachers develop learning activities

based on familiar concepts. When teachers work from the perspective of validating a student's existing knowledge base, the acquisition and retention of new knowledge increases.

This perspective may aid in the development of the students' self-confidence and self-esteem. Hispanic students' life experience and everyday life usually fall outside the realms of the school environment, but culturally responsive teaching makes new subject material relevant and significant. Multicultural training for teachers, as well as all school personnel, helps to transfer school taught knowledge into real life situations and it exposes other students to knowledge of other individuals or cultural groups. "This helps Hispanic students prepare themselves for meaningful social roles in their community and the larger society by emphasizing and connecting both social and academic responsibility" (Padron, Waxman, & Rivera, 2002, p. 1).

Achievement gaps between Hispanics and whites have continued to expand due to teacher expectations as well as students' concept of fulfilling their own negative stereotypes. It was theorized that minority students performed poorly on standardized tests when they had to identify their race. The theory developed by sociologist Claude M. Steele (as cited in Viadero, 2000) is that " the minority students scored low in those instances because they were anxious about fulfilling negative stereotypes about their own racial group, a phenomenon he tagged stereotype threat" (p. 5). Once a student identifies themselves as a minority, they "disidentify" (p. 5) with the academic/educational task and diminish its importance.

Teachers need to encourage Hispanic students to develop biculturally and

bilingually and not have fears as they relate to this aspect. Multicultural training is necessary to alleviate these fears. Teachers must understand that "depriving students of these abilities by insisting on monolingual or monocultural programs of forced assimilation does fundamental damage to their sense of self and to their identity as members of the Latino community" (Jimenez, 2001, p.6). It is necessary to transmit knowledge and a clear message to educators that the knowledge of both Spanish and English is difficult for Hispanics and that the community perspective "to abandon one for the other is at best undesirable and at worst unthinkable" (Jimenez, p.6). Educational institutions must begin to realize that the Hispanic identity is crucial to academic achievement and multicultural training will help to understand, value and actively promote a crucial understanding of how to improve academic achievement.

Robles de Melendez and Ostertag (1997) discussed multicultural training as encompassing a wide range of information in so far as it relates to Hispanics. The term Hispanic encompasses a wide range of people and cultures. The authors explain that to training educators to only understand the Puerto Rican culture would be a negligent act. Within the Hispanic community there are social and economic differences that must be addressed. Educators need to be aware of all of the Spanish speaking countries from which students may come. The authors continue to explain that educators also need to be aware of the diversity that exists within the Hispanic community itself, since each country has its own particular customs and culture. "Now, more than ever, educators of young children recognize that the new complex diversity mandates programs that positively affect the learning processes and social

adjustments of all school children" (Robles de Melendez & Ostertag, p. 34).

Robles de Melendez and Ostertag (1997) explain that training will enable educators to be sensitive to children's cultures. The understanding of culture will begin to diminish stereotyping and develop an anti-biased curriculum. Students in the classroom are exploring and learning how to live in their social environment. This environment varies if it is located in the school, the community, the family and other outside areas. Educators, therefore, must be trained to realize that "all cultures have shared meanings that give direction to the group" (Robles de Melendez & Ostertag, p. 69).

Hernandez (1989) noted that when the classroom is child-centered rather than teacher-centered, the understanding of culture is essential to achievement. In addition, the author explained that multicultural understanding allows us to respond and provide for the needs of children. Hernandez stated, "In order for the classroom to be effective, it must be multicultural. If education is to serve all students, educators must be trained to meet diverse needs and develop the uniqueness of students" (Hernandez, p. 6). There are several contexts in which teaching and learning occur. These contexts include individual, group, class, school, family and community. Each of these contexts are part of a larger context such as individuals within groups, groups within classrooms, classrooms within schools and so on. "For this reason, to understand life in classrooms, one needs to know more than just the unique dynamics experienced by a particular group of students and their teacher" (Hernandez, p. 7).

Educators, trained in multicultural dynamics, recognize that the instructional process must include societal, school, social, and cultural elements to be effective and increase levels of achievement. Multicultural training "is synonymous with effective teaching and educational reform" (Hernandez, 1989, p. 15). Effective teaching will enable teachers to empower students by helping them to become effective learners. By understanding that cultural values influence a student's learning styles, educators can develop learning strategies and more informed strategies for evaluation.

According to Hernandez (1989), teaching methods are culturally influenced. Teachers must not assume that the same methods work effectively with all students and that to ignore the influence of culture on the instructional process will only decrease academic achievement. "To identify methods that work for students in a particular classroom, teachers must use strategies with an analytical eye" (Hernandez, p. 182). When teachers are using a particular strategy in the classroom, they must consider if it is effective with all students or only certain groups as defined by culture or other relevant dimensions. It is difficult to determine what areas of culture are important or useful. Educators generally want to be familiar with groups in the local community and the differences related to language, ethnicity, religion, and other cultural characteristics.

Multicultural training enables teachers to make informed observations to understand classroom events and modify teaching strategies that are culturally appropriate and instructionally sound. "To better understand the lives of their students, teachers need to learn about the history and culture of different groups

represented in their classrooms" (Hernandez, 1989, p. 196). The overall concept of understanding will enable Hispanics and other minority groups to increase levels of academic achievement.

Future Perspectives

Access is not the only issue of concern for future prospects in the education of Hispanics. A variety of personal, family, and cultural factors affect the degree to which equality in access will lead to equality of outcomes. "Although legal changes have affected educational access for Hispanics, it has not led to true equality in such access." (Tashakkori, Ochoa, & Kemper, 1999, p. 253). Political and public opinion shifts in the United States have threatened the direction of affirmative action as well as legal and policy changes. According to the authors, while access is existent in theory for the Hispanic community, in reality it is an illusion, especially with regard to four-year colleges and prestigious universities.

According to Porter (as cited by Martinez & Martinez, 2003), there must be a more focused effort in order to establish true opportunity and to eliminate the present illusory access. "The opportunity can be made available if the self-perceptions of Hispanic students are changed, Hispanic high school students are truly prepared for college and Hispanic youth are educated regarding the process required for preparing and applying to college (Martinez & Martinez, p. 11) Porter confirmed that "lack of awareness of how to prepare, apply and pay for college is one of the greatest barriers facing Hispanic students" (p.12).

Tashakkori, Ochoa, and Kemper (1999) noted that in order to look towards higher education, future reform is necessary in grades K-12. The recommendations include the elimination of grouping by ability and reducing the over representation of Hispanic children in lower track programs. Also, it is necessary to change the criteria for placement in special education programs and to replace the "harmful impacts of many bilingual programs as they are currently operated" (Tashakkori, Ochoa, & Kemper, p. 264).

The processes and practices in education need to be transformed to meet the needs of Latino students, including those who are learning English. High school instruction to meet the needs of Latino students has to be changed. The description of Latino students, teachers that have and use quality instructional practices, and features that are characteristics of positive relationships, need to be addressed in order to create a positive change. One needs to understand the importance of family and community involvement and incorporate it in the new educational models. "Educators must be open and receptive to Latinos, their families, and communities, which add to the beautiful tapestry of diversity" (Emslie, Contereras, & Padilla, 1998, p. 301). While there are many factors that have a positive influence on educational programs, what is needed are programs that build upon students' strengths and skills, provide opportunities for multiple forms of success, and extend opportunities for involvement in the learning process to the family and the total school community. "To the extent that these program components are implemented, there will be a proportionate

progress made in increasing the literacy skills of unschooled Latino youth" (Emslie, Contrearas, & Padilla, p. 323).

According to Garcia (2001),

> "An optimal learning community for Hispanic student populations recognizes that academic learning has its roots in both out of school and in school processes. When diversity is perceived and acted on as a resource for teaching and learning instead of a problem, there is a focus on what students bring to the process that generates an asset-oriented approach rather than a deficit-assessment approach" (Garcia, p. 239).

Garcia (2001) explained that if we encourage this engaging learning environment, previous knowledge is recognized as a resource and a point of departure for acquiring and utilizing new knowledge, rather than a deficit in need of correction and/or elimination.

Conclusion

A variety of authors examined the education of Hispanic students in the public schools. As noted by Padron, Waxman, and Rivera (2002), Hispanics have become the fastest grown minority population and they are receiving attention in the area of academic achievement. Garcia (2001), reflected that there should be a focus on the overall academic achievement of this diverse cultural and ethnic group.

Garcia (2001) discussed the diversity, both culturally and linguistically, which these students bring to the public schools and this is a challenge to both the school

system and to its personnel. Garcia stated “social stratification theories help us understand the powerful social forces that act to advantage some populations of students and to disadvantage others” (Garcia, p. 226). Garcia noted that the overall diversity of the student population has brought to light the question of how to best serve and educate a group that in 2004 is 30 percent of the population.

Education Week (2004) reported that although the number of Hispanic students attending public schools has increased, Hispanic students have the lowest levels of education and the highest dropout rate of any other group. The report addressed this issue and noted that the causes be examined and addressed, so that the situation can be improved and rectified. The ASPIRA 5th Annual Latino Education Conference in 2003 noted that a number of organizations formed in the 1960s and 1970s also saw the need to address the educational needs of Hispanic students. ASPIRA, from the Spanish verb “aspirar”, to aspire, is devoted to the educational and leadership development of Puerto Ricans and other Latino groups. PRLDEF, Puerto Rican Legal Defense and Education Fund, and PREA, Puerto Rican Educators Association, located in the Northeast, also seek to improve the quality of education for Hispanics and to develop future leaders.

Tomlinson (1999) examined strategies that can increase Hispanic achievement, and it was noted that several hold promise. The author described the need to be a focused on literacy. Tomlinson further reported that schools needed to have a respect for Hispanic students and their culture. Schools also needed to communicate high expectations for their academic achievement and a commitment to

design and provide a program that will meet the needs of the students and prove successful. “To address the various learning needs that make up the whole, teachers and students work together in a variety of ways” (Tomlinson, p. 13).

CREDE (1998) focused on professional development and that it must also address the particular needs of Hispanic students. Koehnecke (2001) discusses this component as essential because, according to Koehnecke, it is a well-known and accepted fact that the quality of instruction has a direct impact on the academic achievement of students.

Robles de Melendez and Ostertag (1997) noted that multicultural training must be examined. They addressed the issue that the diversity of the students, need to be reflected in the classroom. According to Jiminez (2001), “Hispanic students need to feel validated, included and connected to their daily educational experience” (Jiminez, p. 37). Jiminez further noted that Hispanic students need to see their everyday life experiences reflected in their learning environment and subject matter. Jiminez wrote that it is critical that all school personnel receive training that will allow them to provide this positive and meaningful experience for Hispanic students. According to Robles de Melendez and Ostertag (1997), “the use of various strategies with multicultural understanding leads to effective pedagogy and will ultimately increase the academic achievement of Hispanic students” (Robles de Melendez & Ostertag, p. 75). They further noted that if a commitment is made to reverse the pattern of poor academic achievement being experienced by Hispanic students, it will require a continued focus on identifying the barriers that continue to prevent them

from succeeding. According to Hernandez (1989), once these barriers are identified, the school system must also make a firm commitment to utilize all of its available resources to meet the needs of the Hispanic student population and resolve the educational crisis.

Calderon (2001) proposed that a goal of any school system should be to prepare self-sufficient, productive members of the society. Calderon stated that educators argue for general principles of teaching and learning (best practices) that are effective for all students. (Calderon, p. 244). Calderon reported that in order to attain this goal it is necessary to set high academic standards and then ensure that all students master them. Cockroft (1995) noted that this is evident when students acquire the knowledge and skills that are necessary to guarantee gainful employment and the ability to pursue fulfilled lives. According to Cockroft, “only when students have the ability to meet this goal, on an equal basis, can a school system claim the success that they have created productive members of the society” (Cockroft, p. 86).

The report from Miami-Dade Public Schools (2001) noted that two primary factors call for a paradigm shift in the way Hispanic children are educated. The first is the rapidly growing number of Hispanics in the United States. Secondly, this is combined with the higher educational demands of current and future jobs in the nation. The report contained information that there is a considerable body of evidence that proved that the differences in achievement observed are not the results of differences in ability to learn but rather they are differences caused by the quality of instruction that students receive in schools. “Students must be recognized for their

abilities in their native language; schools must accommodate instruction to students' learning styles; schools need to set high expectations for success; and schools must become communities of learners where all members act as resources for learning" (Miami-Dade County Public Schools, p. 22). The report concluded that if the programs continue to be funded, the political and legal system persevere on behalf of Hispanic students and their communities, then it is at this point that we might be able to look towards the success of Hispanic students rather than the failure of the public educational system. According to the Miami-Dade report, the achievement gap can be eliminated. Hispanic students can receive what advantaged students receive.

According to Kloosterman (2003), this can be summed up as a sense of connectedness, a sense of well being, a sense of academic initiative and a sense of knowing. This, along with a number of other initiatives, will continue the battle for educational equality and attainment.

According to Pearl (1991), the diversity of the Hispanic population has created its own problem to have a guiding leadership. The diversity of Chicanos, Puerto Ricans, Mexicans and the influx of other Latinos to the United States led to the creation of organizations representing each group. Reyes (2000), noted that rather than have a single organization to represent Hispanics, the factions have their own leaders seeking remedies for their own interest groups. Reyes further stated that "until the Hispanic population can lay common ground and act as one entity, they will fight each other and prevent the necessary leadership from emerging" (Reyes, p. 78).

Reyes noted that this fighting between political groups will prevent the political and legal process from representing Hispanics in their educational endeavors to succeed.

Rennie (1993) noted that the disproportionate representation of Hispanic personnel in the public school system when compared to the percentage of Hispanic students was also cited. Rennie wrote that while improving the quality of education, efforts must also be made to recruit and retain Hispanic personnel at all levels, teachers, counselors, and administrators. Rennie further noted that this initiative can eliminate the lack of understanding and communication between the school, community and home. It can also provide much needed positive role models for Hispanic students.

CREDE (1998) noted that professional development must also address the needs of Hispanic students. The five standards for effective teaching from CREDE were cited (CREDE, p. 8). Five approaches to professional development by Koehnecke (2001) were also examined. According to Koehnecke, this component is essential because it is a well-known and accepted fact that the quality of instruction has a direct impact on the academic achievement of students.

Multicultural training was the last component to be examined. Jiminez (2001) noted that the diversity of the students needs to be reflected in the classroom. According to Jiminez, “Hispanic students need to feel validated, included and connected to their daily educational experience. They need to see their everyday life experiences represented in their learning environment and subject matter” (Jiminez, p. 12). Jiminez further noted that it is critical that all school personnel receive training

that will allow them to provide this positive and meaningful experience for Hispanic students. According to Robles de Melendez and Ostertag (1997), “The use of various strategies with multicultural understanding leads to effective pedagogy and will ultimately increase the academic achievement of Hispanic students” (Robles de Melendez & Ostertag, p. 86).

Previous research indicates that if a commitment is made to reverse the pattern of poor academic achievement being experienced by Hispanic students, it will require a continued focus on identifying the barriers that continue to prevent them from succeeding. Once these are identified, the school system must also make a firm commitment to utilize all of its available resources to meet the needs of the Hispanic student population and resolve the educational crisis.

CHAPTER 3

METHODS AND PROCEDURES

Introduction

The research methods and procedures are described in this chapter. The related components include the purpose, the location of the research, the means used in obtaining the information, the sources of supplemental information, the organization of the data and the subjects of the study. A description of the data collection and the methods for analysis was also included.

Purpose

The purpose of this study was to determine the notable differences of academic achievement among Hispanic students at high schools in the Orange County Public School system with varying differences as determined by the number of Hispanic students, the percentage of free and reduced lunch, and learning community in which they reside. These differences were examined among Hispanics within each high school, and between each high school involved in the study, when comparing data of each school. In order to determine the comparisons and differences among Hispanic students, the purpose of this study was to determine the academic achievement of Hispanic students in seven different high schools in Orange County Public Schools in Orlando, Florida. Academic achievement is determined by FCAT and G.P.A. In addition, the purpose was to determine achievement differences based

upon gender, different socio-economic levels, demographics, and provided services such as sheltered programs, ESOL programs, ESL programs and bilingual programs. There was a comparison between Hispanics and their home school, a comparison between Hispanics in their home school and a comparison between Hispanics from one school as compared to others in the study.

Location of the Research

Ezarik (2001) reported that one of the largest concentrations of Hispanics can be found in Florida. According to *The Orlando Sentinel* (2004), there are 340,000 Hispanics residing in the metropolitan area of Orlando, Florida. The article quotes Martinez-Fernandez, program director for Latin Studies at the University of Central Florida as stating "researching that population is one of the biggest challenges, but also one of the biggest opportunities because nothing has been done" (Ramos, 2004, B2). The location of the research, therefore, was the Orange County Public School system in Orlando, Florida.

The data collected was obtained from public high schools located in Orlando, Florida. Specifically, there are seventeen high schools, including the Florida Virtual School, in the Orange County Public School system in Orlando, Florida. There were five learning communities within the Orange County Public School system. These included the East Learning Community, the West Learning Community, the North Learning Community, the South Learning Community and the Central Learning Community. Seven of the high schools were selected with at least one high school

from each learning community. School 1 was a part of the Central Learning Community. School 2 was part of the East Learning Community. Schools 5 and 7 were part of the West Learning Community. Schools 4 and 6 were a part of the North Learning Community and School 3 was a part of the South Learning Community.

All of the selected sites had significant populations of Hispanic students. In addition, each of the sites had programs for LEP students that required special services to meet their needs. Each individual school was identified through its web sites and school district data banks. Each schools data was provided by the Orange County mainframe and the instructional technology department for Orange County Public Schools in Orlando, Florida.

Data Collection Procedures

The initial data collected for analysis was gathered from Orange County Public Schools mainframe, CICS. This data provided the total number of students at each of the seven schools. Furthermore, the data provided a breakdown of students by ethnicity and gender. Table 1 represented the information gathered from the CICS mainframe of seven high schools in Orange County Public Schools on ethnicity and gender. Table 2 represented the information gathered from the CICS mainframe of the same seven high schools of Orange County Public Schools for the total ethnic number of students at the seven high schools. Included in Table 2 is the percentage of free and reduced lunch provided by the Information Technology department for Orange County Public Schools. The percentage of free and reduced lunch determined

the socio-economic level of each school. In addition, the Information Technology department provided data on each school's average percentage of daily attendance and each school's average FCAT Reading scores and average FCAT Mathematics scores. Table 3 represented the information gathered from the CICS mainframe of the same seven high schools of Orange County Public Schools for the total number of students at the seven high schools and the daily average percentage for attendance at each school. Table 4 represents the information gathered from the CICS mainframe of the same seven high schools of the Orange County Public School system for the total number of students at the seven high schools and their average FCAT Mathematics scores and their average FCAT Reading scores.

Table 3 Ethnic Breakdown by Race and Gender

SCHOOL	WM	WF	BM	BF	HM	HF	OM	OF
School 1	238	178	590	615	403	351	44	48
School 2	577	581	212	197	1019	1006	72	55
School 3	388	425	160	161	682	674	161	173
School 4	992	1014	489	550	310	318	75	65
School 5	962	929	481	496	367	337	97	100
School 6	1132	1125	237	252	269	282	109	105
School 7	757	754	382	411	215	211	152	118

WM = White Male, WF = White Female, BM = Black Male, BF = Black Female, HM = Hispanic Male, HF = Hispanic Female, OM = Other Male, OF = Other Female

Table 4 Ethnicity/Demographics

Totals per School	White	Black	Hispanic	Other	% Free Reduced Lunch
School 1	416	1214	754	92	48.0%
School 2	1158	231	2025	127	34.7%
School 3	813	221	1356	334	27.1%
School 4	2006	1039	628	140	26.5%
School 5	1891	977	704	197	24.8%
School 6	2257	489	551	114	16.6%
School 7	1511	793	426	270	13.8%
Ethnic Totals	White	Black	Hispanic	Other	
	10052	4964	6444	1274	26.7%

Table 5 Total Population and Percentage of Average Daily Attendance

Totals per School	White	Black	Hispanic	Other	Total	% average daily attendance
School 1	416	1214	754	92	2476	93.13 %
School 2	1158	231	2025	127	3541	93.65 %
School 3	813	221	1356	334	2524	94.73 %
School 4	2006	1039	628	140	3813	94.59 %
School 5	1891	977	704	197	3769	96.44 %
School 6	2257	489	551	114	3411	94.95 %
School 7	1511	793	426	270	3000	95.72 %
Ethnic Totals	White	Black	Hispanic	Other	Total	
	1005	4964	6444	1274	12987	

Table 6 Total Population and Mean Scores of FCAT Math and FCAT Reading

Totals per School	White	Black	Hispanic	Other	Total	Avg. FCAT Math/Reading
School 1	416	1214	754	92	2476	273/268
School 2	1158	231	2025	127	3541	293/284
School 3	813	221	1356	334	2524	304/294
School 4	2006	1039	628	140	3813	304/294
School 5	1891	977	704	197	3769	304/296
School 6	2257	489	551	114	3411	324/315
School 7	1511	793	426	270	3000	314/304
Ethnic Totals	White	Black	Hispanic	Other	Total	
	1005	4964	6444	1274	12987	

The additional data that was collected for analysis were gathered from a program developed by the Information Technology department of Orange County Public Schools. This data included each Hispanic student's last name, first name, state identification student number, school attending, grade level LEP designation, and gender. The data also included each Hispanic student's FCAT Reading scores, each Hispanic student's FCAT Mathematic scores, each Hispanic student's Grade Point Averages for each nine weeks for each grade level (9–12), each Hispanic student's Grade Point Averages for the 2002–2003 school year for each grade level (9–12), each Hispanic student's Cumulative Grade Point Averages for each grade level (9–12), and each Hispanic student's percentage of daily attendance. This data was collected and sent in a format that is transferable to the SPSS system for data analysis.

Research Design and Rationale

Research, literature, and government statistics reported on the problems of Hispanic students; these difficulties present the educational system with a high rate of dropouts among high school students. "American born Hispanics have the largest dropout rate of any ethnic or racial group" (Education Week, 2004, p.1). In addition, the report noted that Hispanics had the lowest graduation rate at 52 percent as compared to 72 percent of whites. The explanations for these statistics vary in length and detail but can be linked to language difficulties, high mobility, poor attendance, student and parent apathy, a curriculum that is not prepared to meet the needs of

second language learners as well as cultural differences, illiteracy among family members, lack of role models, lack of proper funding to support programs and interventions, large class sizes, lack of training for teachers and staff and lack of understanding the overall problems with a varied culture. Literature is segmented, but does discuss the different findings that are related to the problems Hispanics face in the educational system. There are discussions of measures that can be taken to solve the problems but they are segmented and prescriptive to a distinct problem. There are no overall solutions as the problems have so many distinctions.

This quantitative study was selected to investigate academic achievement of Hispanic students in distinct schools and areas. The academic achievement was studied between Hispanics and the school as a whole and among Hispanics themselves. Gender and grade level studies were measured to determine progress and sequence. The measurement of achievement between students in an LEP program, on monitor, tested out of LEP programs, and those not receiving services were measured and were essential to determine academic levels of achievement.

The problem addressed in this study was: “What are the differences in academic achievement among Hispanic students in various high schools from data reported by Orange County Public Schools?” The study was guided by the following research questions:

1. Is there a statistically significant difference in the mean Grade Point Averages (G.P.A.) between Hispanic students in each high school?

2a. Is there a relationship between mean Grade Point Average (G.P.A.) and mean Florida Comprehensive Assessment Test Scores (FCAT Reading and FCAT Mathematics 9 - 12) of Hispanic students in seven Orange County Public High Schools?

2b. Can Florida Comprehensive Assessment Test scores for Reading and Mathematics be predicted by Grade Point Average?

2c. Is there a statistically significant relationship between Florida Comprehensive Assessment Test scores (FCAT Reading and Mathematics) and attendance?

3a. Is there a statistically significant difference between mean Grade Point Average for Hispanic students: in seven Orange County Public Schools? Is there a statistically significant difference in mean Grade Point Average based on socio-economic status as determined by the percent of free and reduced lunch data? Is there a statistically significant difference in mean Grade Point Average when gender and socio-economic status are combined?

3b. Is there a statistically significant difference between mean FCAT scores of Hispanic students: in seven Orange County Public Schools (FCAT Reading and FCAT Mathematics grades 9 - 12) based on socio-economic status as determined by the percent of free and reduced lunch data? Is there a statistically significant difference between mean FCAT scores of Hispanic students: in seven Orange County Public Schools (FCAT Reading and FCAT Mathematics grades 9 - 12) when gender and socio-economic status are combined?

4a. Is there a statistically significant difference in Grade Point Average (G.P.A.) of Hispanic students in seven Orange County Public High Schools based on gender?

4b. Is there a statistically significant difference in Florida Comprehensive Assessment Test Scores (FCAT Reading and FCAT Mathematics) of Hispanic students in seven Orange County Public High Schools based on gender?

5a. Is there a statistically significant difference in Grade Point Average (G.P.A.) of Hispanic students in seven Orange County Public High Schools based on Limited English Proficiency (LEP) status?

5b. Is there a statistically significant difference in Florida Comprehensive Assessment Test Scores (FCAT Reading and FCAT Mathematics) of Hispanic students in seven Orange County Public High Schools based on Limited English Proficiency (LEP) status?

6. Is there a statistically significant difference among Hispanic students at seven Orange County Public Schools in Grade Point Average (G.P.A.) when comparing 9th grade Hispanic students to the 10th, 11th and 12th grade students, when comparing 10th grade Hispanic students to 9th, 11th and 12th grade Hispanic students, when comparing 11th grade Hispanic students to 9th, 10th and 12th grade Hispanic students and when comparing 12th grade Hispanic students to 9th, 10th and 11th grade Hispanic students?

7. Is there a statistically significant relationship among Hispanic students when comparing Grade Point Average and percentage of absence? Can Grade Point Average (G.P.A) be predicted by percentage of absence?

Data Collection

The data collection was provided by the Informational Technology Department of the Orange County Public School system in Orlando, Florida. The data collected provided information on free and reduced lunch to determine socio-economic status of the high school, overall percentages and individual percentages for average daily attendance. In addition, overall FCAT Mathematics and Reading scores for each school and individual FCAT Mathematics and Reading scores were provided. Each students G.P.A. for the nine week grading periods for the 2003-2004 school year were provided along with the 2003-2004 cumulative G.P.A and their overall high school G.P.A. The data was used for comparisons and contrast between Hispanic students in the selected schools and between the selected schools.

The data collection was intended to elicit the following details: (a) differences in academic achievement between Hispanic students when compared to academic achievement of all the students in the school they attend, (b) differences in academic achievement between Hispanic students in the school they attend, (c) differences in academic achievement between Hispanic students in various high schools, (d) differences in academic achievement of Hispanic students based on socio-economic status, (e) differences in academic achievement of Hispanic students based on gender,

(f) differences in academic achievement of Hispanic students based on grade level, (g) differences in academic achievement of Hispanic students based on attendance.

Data Analysis

A quantitative analysis was conducted using the information provided by the Informational Technology Department of Orange County Public Schools in Orlando, Florida. The data was transmitted in a format that was exported to the Statistical Package for the Social Sciences (SPSS, 2003)) for analysis. This allowed for a variety of analysis to be discussed in Chapter 4. Alpha levels of .01 were used for the level for significance.

Research Question 1 was addressed by running an independent t-test for grade point averages each of the seven high schools. Included are the mean, degree of freedom, standard deviation and standard error. Significance was reported as being greater than or less than .01.

Research Question 2a and 2b was addressed by running a regression between grade point averages and FCAT Reading and Mathematics in grades 9 – 12 for Hispanic students in the seven high schools being studied. The analysis includes the degree of freedom, F, R, R^2, constant (b), regression formula of Y = constant (b) + cum GPA (FCAT reading scores or Mathematics scores) and level of significance using the level at .01.

Research Question 2c was addressed by running a regression between FCAT Reading and Mathematics in grades 9 – 12 and attendance for Hispanic students in

the seven high schools being studied. The analysis includes the degree of freedom, *F, R, R^2,* constant (b), regression formula of *Y* = constant (b) + FCAT reading scores or Mathematics scores (percentage of absence) and level of significance using the level at .01.

Research Question 3a was addressed by running an Analysis of Variance (ANOVA) comparing grade point averages based on socio-economic status. The analysis includes the mean, degree of freedom, standard deviation, standard error, Partial Eta Squared, and level of significance using the level at .01.

Research Question 3b was addressed by running an Analysis of Variance (ANOVA) comparing FCAT Mathematics and Reading scores for Hispanic students in seven public high schools based on socio-economic status. The analysis includes the mean, degree of freedom, standard deviation, standard error, Partial Eta Squared, and level of significance using the level at .01.

Research Question 4a was addressed by running an Analysis of Variance (ANOVA) comparing grade point averages of Hispanic students in seven high schools based on gender. The analysis includes the mean, degree of freedom, standard deviation, standard error, Partial Eta Squared, and level of significance using the level at .01.

Research Question 4b was addressed by running an Analysis of Variance (ANOVA) comparing FCAT Mathematics and Reading scores of Hispanic students in seven high schools based on gender. The analysis includes the mean, degree of

freedom, standard deviation, standard error, Partial Eta Squared, and level of significance using the level at .01.

Research Question 5a was addressed by running an Analysis of Variance (ANOVA) comparing grade point averages of Hispanic students in seven high schools based on LEP status. The analysis includes the mean, degree of freedom, standard deviation, standard error, Partial Eta Squared, and level of significance using the level at .01.

Research Question 5b was addressed by running an Analysis of Variance (ANOVA) comparing FCAT Mathematics and Reading scores of Hispanic students in seven high schools based on LEP status. The analysis includes the mean, degree of freedom, standard deviation, standard error, Partial Eta Squared, and level of significance using the level at .01.

Research Question 6 was addressed by running an Analysis of Variance (ANOVA) to compare grade point averages between grade levels. If significance was found at the .01 level, a post hoc (Schefe) was performed. The analysis includes the mean, standard deviation, standard error, Partial Eta Squared, and level of significance using the level at .01.

Research Question 7 was addressed by running a regression comparing grade point averages of Hispanic students in seven high schools based on attendance. The analysis includes the degree of freedom, F, R, R^2, constant (b), regression formula of Y = constant (b) + FCAT reading scores or Mathematics scores (attendance) to determine the dependent variable and level of significance using the level at .01.

Summary

The review of literature contained a lack of research when looking at distinct data for Hispanic students. Most literature dealt with specific problems related to the educational environment and characteristics of best educational practices. The use of the statistical analysis of Hispanic students at seven distinct high schools can determine varying levels of success and achievement based on varying influences. The statistical analysis of these variances can better determine the best educational practices that can be used to improve academic achievement.

The narrative summaries provide descriptions of the data. The quantitative data represents realistic variances among seven distinct high schools. Chapter 4 is devoted to the analysis of the data.

CHAPTER 4

DATA ANALYSIS

Introduction

Chapter 4 presents the analysis of data collected in this study. It must be noted that the data collected from the Instructional Technology Department of Orange County Public Schools (number of male/female Hispanic students) , is different from the data collected from the CICS mainframe of Orange County Public Schools (number of male/female Hispanic students) . The data collected from the CICS mainframe was gathered prior to the Instructional Technology Department's collection and did not account for mobility of students, withdrawals and other causes that might change the numbers of students at each of the seven schools.

The first part of this chapter will describe the populations at each of the seven Orange County Public Schools, the socio-economic status, the average daily attendance for each school, and a comparison of Florida Comprehensive Achievement Test (FCAT) scores between schools and the overall population. Then there is a comparison of each school's Florida Comprehensive Achievement Test (FCAT) scores as compared to their Hispanic population.

The second part of Chapter 4 will be a quantitative analysis of the data gathered from the Instructional Technology Department of Orange County Public Schools in relation to the research questions. The chapter summary provides a brief

overview of the data presented that will become more relevant when the summary, conclusion, implications, and recommendations are discussed in Chapter 5.

Descriptive Analysis

Table 7 categorized the population and demographics for each school, the population and average daily attendance, and the population and the mean FCAT scores for reading and mathematics. The passing score for both FCAT reading and mathematics was 300.

School 1 had a total number of students of n = 2476 with 48% of the students on free and reduced lunch, an average daily attendance $\underline{m}$ = 93.13% with a mean FCAT reading score of $\underline{m}$ = 268 and a mean FCAT mathematics score of $\underline{m}$ = 273.

School 2 had a total number of students of n = 3541 with 34.7% of the students on free and reduced lunch, an average daily attendance of $\underline{m}$ = 93.65%, with a mean FCAT reading score of $\underline{m}$ = 284 and a mean FCAT mathematics score of $\underline{m}$ = 293.

School 3 had a total number of students of n = 2524 with 27.1% of the students on free and reduced lunch, an average daily attendance of $\underline{m}$ = 94.73%, with a mean FCAT reading score of $\underline{m}$ = 294 and a mean FCAT mathematics score of $\underline{m}$ = 304.

School 4 had a total number of students of n = 3813 with 26.5% of the students on free and reduced lunch, an average daily attendance of $\underline{m}$ = 94.59%, with

a mean FCAT reading score of $\underline{m}$ = 294 and a mean FCAT mathematics score of $\underline{m}$ = 304.

School 5 had a total number of students of n = 3769 with 24.8% of the students on free and reduced lunch, an average daily attendance of $\underline{m}$ = 96.44%, with a mean FCAT reading score of $\underline{m}$ = 296 and a mean FCAT mathematics score of $\underline{m}$ = 304.

School 6 had a total number of students of n = 3411 with 16.6% of the students on free and reduced lunch, an average daily attendance of $\underline{m}$ = 94.95%, with a mean FCAT reading score of $\underline{m}$ = 315 and a mean FCAT mathematics score of $\underline{m}$ = 324.

School 7 had a total number of students of n = 3000 with 13.8% of the students on free and reduced lunch, an average daily attendance of $\underline{m}$ = 95.72%, with a mean FCAT reading score of $\underline{m}$ = 304 and a mean FCAT mathematics score of $\underline{m}$ = 314.

Tables 7 categorized the total number of Hispanics that attended each school for the 2003 – 2004 school year, the total number of Hispanic students that participated in the FCAT reading and mathematics for the 2003 – 2004 school year, the mean FCAT reading and mathematics scores for Hispanics that attended each school for the 2003 – 2004 school year, the number of Hispanic males and the number of Hispanic females that attended each school, the number of Hispanic males that participated in the FCAT reading test for the 2003 – 2004 school year, the number of Hispanic males that participated in the FCAT mathematics test for the

2003 – 2004 school year, the mean FCAT reading and mathematics scores for Hispanic males that attended each school for the 2003 – 2004 school year and the mean FCAT reading and mathematics for Hispanic females that attended each school for the 2003 – 2004 school year.

Table 7 Schools 1 – 7 Data/Information

School	Number	% Free/Reduced Lunch	Average Daily Attendance	Mean FCAT Scores	
				Reading	Math
School 1	2476	48%	93.13%	268	273
School 2	3541	34.7%	93.65%	284	293
School 3	2524	27.1%	94.73%	294	304
School 4	3813	26.5%	94.59%	294	304
School 5	3769	24.8%	96.44%	296	304
School 6	3411	16.6%	94.95%	315	324
School 7	3000	13.8%	95.72%	304	314

Table 8 School 1- 7 Hispanic Male/Female with Mean FCAT Reading and Mathematics Scores

School	Number *n*	FCAT Mean *m*	Std. Deviation *s*
School 1			
Total Hispanic students	636		
Hispanic male students	324		
Hispanic female students	311		
Total Hispanic student FCAT reading	429	269.00	58.6
Total Hispanic student FCAT mathematics	464	264.00	54.2
Hispanic male student FCAT reading	202	266.90	63.4
Hispanic male student FCAT mathematics	225	258.66	59.45
Hispanic female student FCAT reading	226	271.68	54.19
Hispanic female student FCAT mathematics	238	269.03	48.24
School 2			
Total Hispanic students	1730		
Hispanic male students	877		
Hispanic female students	853		
Total Hispanic student FCAT reading	1094	282.25	38.928
Total Hispanic student FCAT mathematics	1222	256.50	38.928
Hispanic male student FCAT reading	556	287.76	53.912
Hispanic male student FCAT mathematics	613	269.87	55.129
Hispanic female student FCAT reading	538	283.73	51.968
Hispanic female student FCAT mathematics	609	279.91	48.207

School	Number *n*	FCAT Mean *m*	Std. Deviation *s*
School 3			
Total Hispanic students	1294		
Hispanic male students	643		
Hispanic female students	651		
Total Hispanic student FCAT reading	827	294.19	51.370
Total Hispanic student FCAT mathematics	923	284.81	52.458
Hispanic male student FCAT reading	413	296.15	54.305
Hispanic male student FCAT mathematics	460	280.63	55.393
Hispanic female student FCAT reading	414	292.23	48.251
Hispanic female student FCAT mathematics	463	288.98	49.076
School 4			
Total Hispanic students	571		
Hispanic male students	277		
Hispanic female students	294		
Total Hispanic student FCAT reading	387	286.91	56.657
Total Hispanic student FCAT mathematics	417	273.97	58.667
Hispanic male student FCAT reading	179	284.42	59.234
Hispanic male student FCAT mathematics	195	270.31	60.169
Hispanic female student FCAT reading	208	289.06	54.395
Hispanic female student FCAT mathematics	222	277.19	57.258

School	Number *n*	FCAT Mean *m*	Std. Deviation *s*
School 5			
Total Hispanic students	652		
Hispanic male students	336		
Total Hispanic student FCAT reading	425	290.85	53.059
Total Hispanic student FCAT mathematics	480	284.95	51.056
Hispanic male student FCAT reading	210	293.09	56.353
Hispanic male student FCAT mathematics	243	282.24	56.204
Hispanic female student FCAT reading	215	288.67	49.666
Hispanic female student FCAT mathematics	237	287.72	45.126
School 6			
Total Hispanic students	479		
Hispanic male students	228		
Hispanic female students	251		
Total Hispanic student FCAT reading	303	298.24	50.213
Total Hispanic student FCAT mathematics	326	289.45	53.406
Hispanic male student FCAT reading	151	297.28	52.663
Hispanic male student FCAT mathematics	163	286.86	60.759
Hispanic female student FCAT reading	152	299.20	47.810
Hispanic female student FCAT mathematics	163	292.05	44.909

School	Number *n*	FCAT Mean *m*	Std. Deviation *s*
School 7			
Total Hispanic students	388		
Hispanic male students	190		
Hispanic female student	198		
Total Hispanic student FCAT reading	239	300.32	47.940
Total Hispanic student FCAT mathematics	272	292.96	52.182
Hispanic male student FCAT reading	109	293.80	56.677
Hispanic male student FCAT mathematics	128	285.55	53.383
Hispanic female student FCAT reading	129	305.39	38.404
Hispanic female student FCAT mathematics	143	299.34	50.488

Quantitative Analysis of Data

This quantitative section investigated academic achievement of Hispanic students in distinct schools and areas. The problem addressed in this study was: "What are the differences in academic achievement among Hispanic students in various high schools from data reported by Orange County Public Schools?" The study was guided by a number of research questions.

Research Question 1

Research question one asked if there was a statistically significant difference in the mean Grade Point Averages (G.P.A.) between Hispanic students in each grade in each high school. Research question one was addressed by running an independent t-test for grade point averages in each of the seven high schools. A *t* –test was conducted instead of an ANOVA because of unequal variances. Included are the mean, degree of freedom, and standard deviation. Significance was reported as being greater than or less than .01.

Table 9 categorized the Grade Point Average (GPA) for each grade level in Schools 1 – 7. All of the *t*'s are of unequal variance. In School 1, a statistically significant mean difference in GPA was found between 9th grade students and 10th grade students. Next, a comparison between 9th grade students and 11th grade students found a statistical significance in mean GPA. Next, a comparison between 9th grade students and 12th grade students found a statistical significance in mean GPA. Next, a

comparison between 10th grade students and 11th grade students found a statistical significance in mean GPA. Next, a comparison between 10th grade students and 12th grade students found a statistical significance in mean GPA was found. Finally, a comparison between 11th grade student and 12th grade students found there was no statistical significance in mean GPA.

In School 2 a statistically significant mean difference was not found between 9th grade students and 10th grade students on cumulative GPA. Next, a comparison between 9th grade students and 11th grade students found statistical significance in mean GPA. Next, a comparison between 9th grade students and 12th grade students found statistical significance in mean GPA. Next, a comparison between 10th grade students and 11th grade students found statistical significance in mean GPA. Next, a comparison between 10th grade students and 12th grade students found statistical significance in mean GPA. Finally, a comparison between 11th grade students and 12th grade students found there was no statistical significance in GPA.

In School three, a statistically significant mean difference was found between 9th grade students and 10th grade students on cumulative GPA. Next, a comparison between 9th grade students and 11th grade students found a statistical significance in mean GPA. Next, a comparison between 9th grade students and 12th grade students found a statistical significance in mean GPA. Next, a comparison between 10th grade students and 11th grade students found a statistical significance in mean GPA. Next, a comparison between 10th grade students and 12th grade students found a statistical

significance in mean GPA. Finally, a comparison between 11th grade students and 12th grade students found there was no statistical significance in mean GPA.

In School 4, a statistically significant mean difference was found between 9th grade students and 10th grade students on cumulative GPA. Next, a comparison between 9th grade students and 11th grade students found a statistical significance in mean GPA. Next, a comparison between 9th grade students and 12th grade students found a statistical significance in mean GPA. Next, a comparison between 10th grade students and 11th grade students found there was no statistical significance in mean GPA. Next, a comparison between 10th grade students and 12th grade students found a statistical significance in mean GPA. Finally, a comparison between 11th grade students and 12th grade students found a statistical significance in mean GPA.

In School 5, a statistically significant mean difference was found between 9th grade students and 10th grade students on cumulative GPA. Next, a comparison between 9th grade students and 11th grade students found a statistical significance in mean GPA. Next, a comparison between 9th grade students and 12th grade students found a statistical significance in mean GPA. Next, a comparison between 10th grade students and 11th grade students found there was no statistical significance in GPA. Next, a comparison between 10th grade students and 12th grade students found a statistical significance in mean GPA. Finally, a comparison between 11th grade students and 12th grade students found there was no statistical significance in mean GPA.

In School 6, a statistically significant mean difference was not found between 9th grade students and 10th grade students on cumulative GPA. Next, a comparison between 9th grade students and 11th grade students found a statistical significance in mean GPA. Next, a comparison between 9th grade students and 12th grade students found a statistical significance in mean GPA. Next, a comparison between 10th grade students and 11th grade students found there was no statistical significance in mean GPA. Next, a comparison between 10th grade students and 12th grade students found a statistical significance in mean GPA. Finally, a comparison between 11th grade students and 12th grade students found there was no statistical significance in mean GPA.

In School 7, a statistically significant mean difference was found between 9th grade students and 10th grade students on cumulative GPA. Next, a comparison between 9th grade students and 11th grade students found a statistical significance in mean GPA. Next, a comparison between 9th grade students and 12th grade students found there was no statistical significance in mean GPA. Next, a comparison between 10th grade students and 11th grade students found there was no statistical significance in mean GPA. Next, a comparison between 10th grade students and 12th grade students found there was no statistical significance in mean GPA. Next, a comparison between 11th grade students and 12th grade students found there was no statistical significance in mean GPA.

In summary, there was a significant difference in mean Grade point Averages when comparing the 9th grade to all other grades in all seven schools. While there was

a significant difference between grades 10, 11 and 12, the most significant difference was with the 9th grade.

Table 9 School 1 - 7 Comparison of Mean GPA Among Grades 9 – 12

School 1 Grade	Number *n*	Mean GPA *m*	Std. Deviation *s*	*t*	df
9	293	1.73	.913		
10	146	2.22	.806	-5.746**	324.17
9	293	1.73	.913		
11	112	2.399	.717	-7.705**	254.22
9	293	1.73	.913		
12	85	2.54	.561	-9.96**	224.24
10	146	2.22	.806		
11	112	2.399	.717	-1.829**	250.35
10	146	2.22	.806		
12	85	2.54	.561	-3.50**	221.55
11	112	2.399	.717		
12	85	2.54	.561	-1.56**	194.78

School 2 Grade	Number *n*	Mean GPA *m*	Std. Deviation *s*	*t*	df
9	589	2.459	.902		
10	505	2.440	.723	.370	1087.30
9	589	2.459	.902		
10	505	2.440	.723	-5.073**	935.99
9	589	2.459	.902		
12	85	2.54	.561	-6894**	793.08
10	505	2.440	.723		
11	366	2.713	.641	-5.854**	834.73
10	505	2.440	.723		
12	278	2.808	.034	-7.796**	686.38

Grade	Number *n*	Mean GPA *m*	Std. Deviation *s*	*t*	df
11	366	2.713	.641		
12	278	2.808	.034	-1.979**	625.34

School 3

Grade	Number *n*	Mean GPA *m*	Std. Deviation *s*	*t*	df
9	464	2.144	.881		
10	280	2.665	.719	-8.778**	677.806
9	464	2.144	.881		
11	270	2.729	.591	-10.74**	717.397
9	464	2.144	.881		
12	280	2.798	.576	-12.224**	737.197
10	280	2.665	.719		
11	270	2.729	.591	-1.143**	534.609
10	280	2.665	.719		
12	280	2.798	.576	-2.410**	532.666
11	270	2.729	.591		
12	280	2.798	.576	-1.379**	545.934

School 4

Grade	Number *n*	Mean GPA *m*	Std. Deviation *s*	*t*	df
9	201	2.117	.931		
10	165	2.441	.756	-3.667**	363.960
9	201	2.117	.931		
11	134	2.491	.714	-4.141**	326.472
9	201	2.117	.931		
12	71	2.734	.451	-7.276**	244.963
10	165	2.441	.756		

Grade	Number *n*	Mean GPA *m*	Std. Deviation *s*	*t*	df
11	134	2.491	.714	-.584**	290.273
10	165	2.441	.756		
12	71	2.734	.451	-3.686**	210.255
11	134	2.491	.714		
12	71	2.734	.451	-2.980**	196.711

School 5

Grade	Number *n*	Mean GPA *m*	Std. Deviation *s*	*t*	df
9	265	2.128	.886		
10	148	2.539	.763	-4.938**	343.370
9	265	2.128	.886		
11	125	2.633	.587	-6.665**	345.993
9	265	2.128	.886		
12	114	2.790	.570	-8.667**	321.493
10	148	2.539	.763		
11	125	2.633	.587	-1.150 **	268.765
10	148	2.539	.763		
12	114	2.790	.570	-3.043**	259.772
11	125	2.633	.587		
12	114	2.790	.570	-2.091**	236.076

School 6

Grade	Number *n*	Mean GPA *m*	Std. Deviation *s*	*t*	df
9	144	2.395	.938		
10	116	2.568	.649	-1.753**	252.563
9	144	2.395	.938		
11	138	2.779	.657	-3.994**	256.822

Grade	Number *n*	Mean GPA *m*	Std. Deviation *s*	*t*	df
9	144	2.395	.938		
12	81	2.866	.490	-4.948**	222.007
10	116	2.568	.649		
11	138	2.779	.657	-2.565**	245.608
10	116	2.568	.649		
12	81	2.866	.490	-3.673**	193.773
11	138	2.779	.657		
12	81	2.866	.490	-1.118**	204.882

School 7

Grade	Number *n*	Mean GPA *m*	Std. Deviation *s*	*t*	df
9	126	2.102	1.006		
10	89	2.659	.764	-4.615**	211.848
9	126	2.102	1.006		
11	103	2.705	.698	-5.340**	221.477
9	126	2.102	1.006		
12	70	2.861	.585	-6.679**	193.562
10	89	2.659	.764		
11	103	2.705	.698	-432**	179.986
10	89	2.659	.764		
12	70	2.861	.585	-1.887**	156.904
11	103	2.705	.698		
12	70	2.861	.585	-1.590**	163.556

All *t's* were unequal variance *t.* * ≤ .05, ** ≤ .01

Research Question 2a and 2b

Research question 2a asked if there was a relationship between mean grade point average (G.P.A.) and mean Florida Comprehensive Assessment Test (FCAT) Scores for Reading (grades 9 – 12) of Hispanic students in each of the seven Orange County Public High Schools. Research question 2b asked if there was a relationship between mean grade point average (G.P.A.) and mean Florida Comprehensive Assessment Test (FCAT) scores for Mathematics (grades 9 - 12) of Hispanic students in each of the seven Orange County Public High Schools. Research Question 2a was addressed by regressing FCAT Reading on GPA in grades 9 – 12 for Hispanic students in each of the seven high schools being studied. Research Question 2b was addressed by regressing FCAT Mathematics on GPA in grades 9 – 12 for Hispanic students in each of the seven high schools being studied. The analysis includes the degree of freedom, *F, R, R^2,* constant (b), regression formula of Y = constant (b) + cumulative GPA (FCAT Reading scores or Mathematics scores) and level of significance using the level at .01.

Table 10 displayed the results of the regression for GPA to predict FCAT Reading scores for School 1 - 7. The variance explained ranged from 19.6% to 46.3% as shown in Table 10.

Table 11 displayed the results of the regression for GPA to predict FCAT Mathematics scores for School 1 - 7. The variance explained ranged from 14% to 30% as shown in Table 11.

In summary, Grade Point Average (GPA) was able to predict FCAT Reading scores and FCAT Mathematics scores. The lower the Grade Point Average, the lower the FCAT Reading score. The higher the Grade Point Average, the higher the FCAT Reading score. The lower the Grade Point Average, the lower the FCAT Mathematics score. The higher the Grade Point Average, the higher the FCAT Mathematics score.

Table 10 Schools 1 – 7 Regression of GPA and FCAT Reading Scores

School	*F*	*R*	R^2	Constant	Regression Coefficient
1	186.955	.552	.305	189.467	38.849
2	268.478	.443	.196	209.142	30.422
3	315.844	.526	.276	213.633	33.801
4	142.190	.519	.270	207.697	34.759
5	187.807	.555	.307	206.406	36.165
6	160.266	.589	.347	206.528	37.244
7	203.934	.680	.463	212.315	37.015
1 – 7	1400.356	.523	.274	206.667	34.410

a. Predictors: (Constant), Grade Point Average (GPA)
b. Dependent Variable: FCAT Reading score

Table 11 School 1 Regression of GPA and FCAT Mathematics Scores

School	*F*	*R*	R^2	Constant	Regression Coefficient
1	149.662	.495	.245	197.812	31.914
2	199.943	.374	.140	209.664	25.639
3	284.655	.486	.236	205.978	32.437
4	140.052	.502	.252	192.701	35.326
5	113.519	.438	.190	218.103	28.251
6	112.494	.508	.258	203.030	34.774
7	115.449	.547	.300	214.475	32.787
1 - 7	1088.774	.458	.209	206.144	30.424

a. Predictors: (Constant), Grade Point Average (GPA)
b. Dependent Variable: FCAT Reading score

Research Question 2c

Research question 2c asked if there was a relationship between Florida Comprehensive Assessment Test (FCAT) Scores for Reading (grades 9 – 12) and percentage of absence of Hispanic students in each of the seven Orange County Public High Schools. In addition, research question 2c asked if there was a relationship between Florida Comprehensive Assessment Test (FCAT) scores for Mathematics (grades 9 - 12) and percentage of absence of Hispanic students in each of the seven Orange County Public High Schools. Research question 2c was addressed by regressing FCAT Reading scores in grades 9 – 12 on percentage of absence and by regressing FCAT Mathematics scores in grades 9 – 12 on percentage of absence for Hispanic students in each of the seven high schools being studied. The analysis includes the degree of freedom, F, R, R^2, constant (b), regression formula of Y = constant (b) + FCAT Reading scores (percentage of absence) to determine the dependent variable and level of significance using the level at .01. The analysis also included the degree of freedom, F, R, R^2, constant (b), regression formula of Y = constant (b) + Mathematics scores (percentage of absence) to determine the dependent variable and level of significance using the level at .01.

Table 12 displayed the results of the regression for percentage of absence to predict FCAT Reading scores for School 1 - 7. The variance explained ranged from 1.9% to 8.7%.

Table 13 displayed the results of the regression for percentage of absence to predict FCAT Mathematics scores for School 1 - 7. The variance explained ranged from 1% to 4.7%

In summary, the percentage of absence was able to predict FCAT Reading scores and FCAT Mathematics scores. The lower the percentage of absence, the lower the FCAT Reading score. The higher the percentage of absence, the higher the FCAT Reading score. The lower the percentage of absence, the lower the FCAT Mathematics score. The higher the percentage of absence, the higher the FCAT Mathematics score.

Table 12 School 1 – 7 Regression of Attendance and FCAT Reading Scores

School	*F*	*R*	R^2	Constant	Regression Coefficient
1	26.050	.240	.057	283.800	-164.740
2	31.278	.166	.028	296.497	-139.355
3	43.446	.224	.050	306.955	-171.336
4	20.662	.226	.051	298.670	-164.934
5	8.248	.138	.019	198.626	-121.640
6	28.575	.294	.087	313.957	-262.451
7	11.346	.214	.046	311.217	-177.260
1 – 7	112.194	.163	.027	288.824	-129.759

a. Predictor: (Constant), percentage absent
b. Dependent Variable: FCAT Reading score

Table 13 School 1 – 7 Regression of Attendance and FCAT Mathematics Scores

School	*F*	*R*	R^2	Constant	Regression Coefficient
1	17.067	.189	.036	274.098	-115.550
2	12.390	.100	.010	280.997	-79.034
3	29.128	.175	.031	295.875	-150.590
4	13.448	.177	.031	283.882	-142.315
5	4.669	.098	.010	290.234	-81.676
6	12.465	.192	.037	300.329	-182.116
7	12.661	.212	.045	304.690	-184.069
1 – 7	182.059	.216	.047	300.956	-171.504

a. Predictor: (Constant), percentage absent
b. Dependent Variable: FCAT Mathematics score

Research Question 3a

Research question 3a asked if there was a statistically significant difference between mean Grade Point Average for Hispanic students: in seven Orange County Public Schools? The question further asked if there was a statistically significant difference in mean Grade Point Average based on socio-economic status as determined by the percent of free and reduced lunch data? In addition, was there a statistically significant difference in mean Grade Point Average when gender and socio-economic status are combined?

Research question 3a was addressed by running an Analysis of Variance (ANOVA) comparing grade point averages based on socio-economic status. In addition, the AVOVA analyzed the comparison of gender and socio-economic status to grade point average. The analysis includes the mean, mean square, degree of freedom, *F*, standard deviation, standard error, Partial Eta Squared, and level of significance using the level at .01. When statistical significance of $p < .01$ was found, because of unequal numbers in each school, a Scheffe Post Hoc was used.

Table 14 displayed compared the mean GPA scores between the seven schools. A significant difference in GPA was found among the seven schools. However, only 4% of the variance in GPA was accounted for by socio-economic status.

As a result of finding significance, a Scheffe post hoc (Table 15) was performed to determine the differences based on observed means in GPA.

School 1 had a significantly lower GPA (2.07) than all other schools. School 2 had a significantly higher GPA (2.56) than schools 1 and 4 ($\underline{m}$ = 2.27) but did not differ from any other school. School 3 ($\underline{m}$ = 2.52) did not differ significantly from any school except School 1. School 4 was significantly different than School 6 (2.62). School 5 ($\underline{m}$ = 2.43) was only different from School 1.

Table 14 Analysis of Variance Between Mean Grade Point Average and Socio-Economic Status

School	Number *n*	%free/reduced lunch	Mean $\underline{m}$	Std. Deviation *s*	Std. Error *se*
1	636	.480	2.07	.8773	.03478
2	1738	.347	2.56	.7672	.0184
3	1294	.271	2.52	.7845	.0218
4	571	.265	2.27	.8103	.0339
5	652	.248	2.43	.8020	.0314
6	479	.166	2.62	.7499	.0437
7	388	.138	2.52	.8608	.0437

Socio-economic Status determined by percentage of students on free and reduced lunch

Table 15 Scheffe: Multiple Comparisons Dependent Variable: Cumulative GPA

School ID	School ID	Mean Difference	Std. Error
School 1	School 2	-.490604(*)	.0369492
	School 3	-.447999(*)	.0386101
	School 4	-.303139(*)	.0459647
	School 5	-.361767(*)	.0444348
	School 6	-.555310(*)	.0482346
	School 7	-.454128(*)	.0513598
School 2	School 3	.042605	.0292746
	School 4	.187465(*)	.0384580
	School 5	.128837	.0366158
	School 6	-.064707	-.064707
	School 7	.036475	.0447671
School 3	School 4	.144860	.0400564
	School 5	.086232	.0382911
	School 6	-.107311	.0426420
	School 7	-.006129	.0461475
School 4	School 5	-.058628	.0456972
	School 6	-.252171(*)	.0494000
	School 7	-.150989	.0524558
School 5	School 6	-.193544	.0479797
	School 7	-.092362	.0511205
School 6	School 7	.101182	.0544558

The mean difference is significant at the .01 level

Table 16 displayed the results of the two-way ANOVA that compared the mean GPA scores between the seven schools based on socio-economic status and gender. The factor of gender displayed a statistically significant result, F (1, 6) = 155.19, $p < .01$. The factors socio-economic status displayed statistically significant results, F (1, 6) = 36.488, $p < .01$. For sex * socio-economic status, F (6, 5734) = 1.43 $p > .01$.The interaction of gender and socio-economic status was not statistically significant and explained less than 1 % of the variance in GPA. In addition, gender ($R^2 < .03$) and socio-economic status ($R^2 < .04$) and their interaction only account for 7 % of the variance in GPA.

Table 16 Test of Between Subject Dependent Variable: Cumulative GPA

Source	Sum of Squares	df	Mean Square	*F*	Sig.	Partia Eta Squared
Corrected Model	266.089	13	20.468	33.342	.000	.070
Intercept	26895.337	1	26895.337	43810.970	.000	.884
GENDER	95.271	1	95.271	155.191	.000	.026
SOCIOECO	134.399	6	22.400	36.488	.000	.037
GENDER * SOCIO ECO	5.425	6	.904	1.473	.183	.002
Error	3520.074	5734	.614			
Total	38831.580	5748				
Corrected total	3786.164	5747				

Dependent variable: cumulative GPA a. R Squared = .070 (Adjusted R Squared = .068)

Table 17 displayed a Scheffe post hoc, which was performed to determine the differences based on observed means in GPA and socio-economic status. A post hoc could not be performed based on gender because there are fewer than three groups. The Scheffe used the socio-economic status in ascending order starting with school 7.

When using School 7 as the dependent variable and compared to the other seven schools, there was a significant difference between School 7 ($\underline{m}$ = .448030) and School 1. School 6 as the dependent variable and compared to the other seven schools, there was a significant difference between School 6 and School 1 (m = 552834), School 6 and School 4 ($\underline{m}$ = .252171) and School 6 and School 5 ($\underline{m}$ = .193544). School 5 as the dependent variable and compared to the other seven schools, there was a significant difference between School 5 and School 1 ($\underline{m}$ = .359290). School 4 as the dependent variable and compared to the other seven schools, there was a significant difference between School 4 and School 1 ($\underline{m}$ = .300663), between School 4 and School 2 (m = 187989). School 3 as the dependent variable and compared to the other seven schools, there was a significant difference between School 3 and School 1 (m = 445523). School 2 as the dependent variable and compared to the other seven schools, there was a significant difference among School 2 and School 1 (m = 488651). School 1 as the dependent variable and compared to the other seven schools, there was a significant difference among all seven schools.

Table 17 Scheffe: Multiple Comparisons Socioeconomic Status and GPA
Dependent Variable: cumulative GPA

Socioeconomic Status %Reduced or Free Lunch	Socioeconomic Status %Reduced or Free Lunch	Mean Difference	Std. Error
School 7 .138	School 6 .166	-.104804	.0535529
	School 5 .248	.088739	.0502777
	School 4 .265	.147367	.0515889
	School 3 .271	.002507	.0453950
	School 2 .347	-.040622	.0440584
	School 1 .480	.448030(*)	.0287970
School 6 .166	School 5 .248	.193544(*)	.0471506
	School 4 .265	.252171(*)	.0485463
	School 3 .271	.107311	.0419051
	School 2 .347	.064182	.0404533
	School 1.480	.552834(*)	.0419051
School 5 .248	School 4 .265	.058628	.0449075
	School 3 .271	-.086232	.0376294
	School 2 .347	-.129361	.0360057
	School 1.480	.359290(*)	.0376294
School 4 .265	School 3 .271	-.144860	.0393642
	School 2 .347	-.187989(*)	.0449075
	School 1.480	.300663(*)	.0393642
School 3 .271	School 2 .347	-.043129	.0287970
	School 1 .480	.445523(*)	.0379629
School 2 .347	School 1 .480	.488651(*)	.0378150

The mean difference is significant at the .01 level

Research Question 3b

Research question 3b asked if there was a statistically significant difference between mean FCAT scores of Hispanic students: in seven Orange County Public Schools (FCAT Reading and FCAT Mathematics grades 9 - 12) based on socio-economic status as determined by the percent of free and reduced lunch data? Question 3b further asked if there was a statistically significant difference between mean FCAT scores of Hispanic students: in seven Orange County Public Schools (FCAT Reading and FCAT Mathematics grades 9 - 12) when gender and socio-economic status are combined?

Research question 3b further analyzed if there was a statistically significant difference in FCAT Reading scores when gender (male/female) and socio-economic status are combined. In addition, research question 3b further analyzed if there was a statistically significant difference in and Mathematics scores when gender (male/female) and socio-economic status are combined.

Research question 3b was addressed by running an Analysis of Variance (ANOVA) comparing FCAT Reading scores based on socio-economic status and by running an Analysis of Variance (ANOVA) comparing FCAT Mathematics scores based on socio-economic status. In addition, the AVOVA analyzed the comparison of gender and socio-economic status to FCAT Reading scores and the AVOVA analyzed the comparison of gender and socio-economic status to FCAT Mathematics scores. The analysis includes the mean, mean square, degree of freedom, *F*, standard deviation, standard error, Partial Eta Squared, and level of significance using the level

at .01. When statistical significance of $p < .01$ was found, because of unequal numbers in each school, a Scheffe Post Hoc was used.

Table 18 displayed the results of the ANOVA that compared the mean FCAT Reading scores between the seven schools based on socio-economic status and gender. For FCAT Reading scores and socio-economic status, F (6, 3705) = 15.153 $p > .01$. There was no statistical significance. However, 2 % of the variance in FCAT Reading scores was accounted for by socio-economic status. The interaction of gender and socio-economic status was not statistically significant.

Table 19 displayed a Scheffe post hoc, which was performed to determine the differences based on observed means in FCAT Reading scores and socio-economic status. A post hoc could not be performed based on gender because there are fewer than three groups. The Scheffe used the socio-economic status in ascending order starting with School 7.

When using School 7 and compared to the other seven schools, there was a significant difference between School 7 and School 1($\underline{m}$ = 30.92). School 6 compared to the other seven schools, there was a significant difference between School 6 and School 1 ($\underline{m}$ = 28.84). School 5 compared to the other seven schools, there was a significant difference between School 5 and School 1 ($\underline{m}$ = 21.45). School 4 compared to the other seven schools, there was a significant difference between School 4 and School 1($\underline{m}$ = 17.51). School 3 compared to the other seven schools, there was a significant difference between School 3 and School 1($\underline{m}$ = 24.79). School 2 compared to the other seven schools, there was a significant difference between

School 2 and School 1 ($\underline{m}$ = 16.35). School 1 compared to the other seven schools, there was a significant difference among all seven schools.

Table 18 Test of Between Subject Dependent Variable: FCAT Reading Scores

Source	Sum of Squares	df	Mean Square	*F*	Sig.	Partial Eta Squared
SOCIOECO	253866.965	6	42311.161	14.955	.000	.024
GENDER	1647.181	1	1647.181	.582	.445	.000
SOCIOECO * GENDER	22034.424	6	3672.404	1.298	.254	.002
Error	10434143.952	3688				
Corrected total	10711154.640	3701				

Dependent variable: FCAT Reading Scores a. R Squared = .026 (Adjusted R Squared = .022)

Table 19 Scheffe: Multiple Comparison Socio-Economic Status and FCAT Reading Scores Dependent Variable: FCAT Reading

Socioeconomic Status %Reduced or Free Lunch	Socioeconomic Status %Reduced or Free Lunch	Mean Difference	Std. Error
School 7 .138	School 6 .166	2.08	4.599
	School 5 .248	9.47	4.298
	School 4 .265	13.41	4.373
	School 3 .271	6.13	3.904
	School 2 .347	14.57	3.793
	School 1 .480	30.92(*)	4.291
School 6 .166	School 5 .248	7.39	3.997
	School 4 .265	11.33	4.078
	School 3 .271	4.05	3.570
	School 2 .347	12.48	3.448
	School 1 .480	28.84(*)	3.989
School 5 .248	School 4 .265	3.94	3.735
	School 3 .271	-3.34	3.173
	School 2 .347	5.10	3.035
	School 1 .480	21.45(*)	3.638
School 4 .265	School 3 .271	-7.28	3.274
	School 2 .347	1.16	3.141
	School 1 .480	17.51(*)	3.727
School 3 .27	School 2 .347	8.43	2.446
	School 1 .480	24.79(*)	3.163
School 2 .347	School 1 .480	16.35(*)	3.025

The mean difference is significant at the .01 level

Table 20 displayed the results of the ANOVA that compared the mean FCAT Mathematics scores between the seven schools based on socio-economic status and gender. For FCAT Mathematics scores and socio-economic status, F (6, 4105) = 16.319 $p > .01$. There was no statistical significance. However, 2 % of the variance in FCAT Mathematic scores was accounted for by socio-economic status. In addition, the interaction of gender and socio-economic status was not significant.

Table 21 displayed a Scheffe post hoc, which was performed to determine the differences based on observed means in FCAT Mathematics scores and socio-economic status. The Scheffe used the socio-economic status in ascending order starting with School 7.

When using School 7 compared to the other seven schools, there was a significant difference among School 7 and School 4 (m = 18.85), School 7 and School 2 (m = 17.95), and School 7 and School 1 (m = 28.84). School 6 compared to the other seven schools, there was a significant difference between School 6 and School 2 (m = 14.58) and School 6 and School 1 (m = 25.47). School 5 compared to the other seven schools, there was a significant difference between School 5 and School 1 (m = 20.96). School 3 compared to the other seven schools, there was a significant difference between School 3 and School 2 (m = 9.94) and School 3 and School 1 (m = 20.83).

Table 20 Test of Between Subject Dependent Variable: FCAT Mathematics

Source	Sum of Squares	df	Mean Square	*F*	Sig.	Partial Eta Squared
SOCIOECO	270799.065	6	45133.177	16.102	.000	.023
SEX	58899.253	1	58899.253	21.014	.445	.005
SOCIOECO * SEX	5237.789	6	872.965	.311	.931	.000
Error	11458137.264	4088	2802.871			
Corrected total	11811892.320	4101				

Dependent variable FCAT Mathematics a. R Squared = .030 (Adjusted R Squared = .027

Table 21 Scheffe Multiple Comparison Socio-economic Status and Dependent Variable: FCAT Mathematics

Socioeconomic Status %Reduced or Free Lunch	Socioeconomic Status %Reduced or Free Lunch	Mean Difference	Std. Error
School 7 .138	School 6 .166	3.37	4.352
	School 5 .248	7.88	4.023
	School 4 .265	18.85(*)	4.131
	School 3 .271	8.01	3.658
	School 2 .347	17.95(*)	3.555
	School 1 .480	28.84(*)	4.049
School 6 .166	School 5 .248	.451	3.800
	School 4 .265	15.48	3.914
	School 3 .271	4.64	3.411
	School 2 .347	14.58(*)	3.300
	School 1 .480	25.47(*)	3.828
School 5 .248	School 4 .265	10.97	3.544
	School 3 .271	.13	2.979
	School 2 .347	10.07	2.852
	School 1 .480	20.96(*)	3.449
School 4 .265	School 3 .271	-10.84	3.124
	School 2 .347	-.90	3.003
	School 1 .480	9.99	3.574
School 3 .271	School 2 .347	9.94(*)	2.309
	School 1 .480	20.83(*)	3.015
School 2 .347	School 1 .480	10.89	2.889

The mean difference is significant at the .01 level

Research Question 4a

Research question 4a asked if there was a statistically significant difference in Grade Point Average (G.P.A.) of Hispanic students in seven Orange County Public High Schools based on gender. Research Question 4a was addressed by running an Analysis of Variance (ANOVA) comparing grade point averages of Hispanic students in seven high schools based on gender. The analysis includes the grand mean, mean square, degree of freedom, *F,* standard error, Partial Eta Square, and level of significance using the level of .01.

Table 22 displayed the ANOVA that compared the Grade Point Averages of all Hispanic male students to the Grade Point Average of all Hispanic female students from the seven high schools. There was a significant difference and 3 % of the variance of Grade Point Average was accounted for by gender. There was a significant difference in GPA based on gender and Hispanic females in all seven schools had higher GPA's than Hispanic males.

Table 22 Schools 1 – 7 Test of Between Subject Dependent Variable: Cumulative GPA

Source	Sum of Squares	df	Mean Square	*F*	Sig.	Partial Eta Squared
GENDER	126.006	1	126.006	197.814	.000	.033
Error	3660.158	5746	.637			
Total	38831.580	5748				
Corrected total	3786.164	5747				

Dependent variable: Cumulative GPA a. R Squared = .033 (Adjusted R Squared = .033)

Table 23 displayed the results of the ANOVA that compared the Grade Point Averages of Hispanic male students to the Grade Point Average of Hispanic female students from School 1. There was a statistically significant difference and 3 % of the variance in Grade Point Average was accounted for by gender between Hispanic male students and Hispanic female students at School 1.

Table 23 displayed the results of the ANOVA that compared the Grade Point Averages of Hispanic male students to the Grade Point Average of Hispanic female students from School 2. There was a statistically significant difference and 3 % of the variance in Grade Point Average was accounted for by gender between Hispanic male students and Hispanic female students at School 2.

Table 23 displayed the results of the ANOVA that compared the Grade Point Averages of Hispanic male students to the Grade Point Average of Hispanic female students from School 3. There was a statistically significant difference and 4 % of the variance in Grade Point Average was accounted for by gender between Hispanic male students and Hispanic female students at School 3.

Table 23 displayed the results of the ANOVA that compared the Grade Point Averages of Hispanic male students to the Grade Point Average of Hispanic female students from School 4. There was a statistically significant difference. And 1 % of the variance in Grade Point Average was accounted for by gender between Hispanic male students and Hispanic female students at School 4.

Table 23 displayed the results of the ANOVA that compared the Grade Point Averages of Hispanic male students to the Grade Point Average of Hispanic female

students from School 5. There was a statistically significant difference and 2 % of the variance in Grade Point Average was accounted for by gender between Hispanic male students and Hispanic female students at School 5.

Table 23 displayed the results of the ANOVA that compared the Grade Point Averages of Hispanic male students to the Grade Point Average of Hispanic female students from School 6. There was a statistically significant difference and 2 % percent of the variance in Grade Point Average was accounted for by gender between Hispanic male students and Hispanic female students at School 6.

Table 23 displayed the results of the ANOVA that compared the Grade Point Averages of Hispanic male students to the Grade Point Average of Hispanic female students from School 7. There was a statistically significant difference and 6 % of the variance in Grade Point Average was accounted for by gender between Hispanic male students and Hispanic female students at School 7.

Table 23 School 1 – 7 Test of Between Subject Dependent Variable: Cumulative GPA

Source	Sum of Squares	df	Mean Square	*F*	Sig.	Partial Eta Squared
School 1						
GENDER	15.633	1	15.633	21.026	.000	.032
Error	470.641	633	.744			
Corrected total	486.274	634				
School 2						
GENDER	38.023	1	38.023	66.853	.000	.037
Error	982.804	1728	.569			
Corrected total	1020.827	1729				
School 3						
GENDER	37.135	1	37.135	63.233	.000	.047
Error	758.754	1292	.587			
Corrected total	795.888	1293				
School 4						
GENDER	3.907	1	3.907	6.002	.000	.010
Error	370.367	569	.651			
Corrected total	374.273	570				

Source	Sum of Squares	df	Mean Square	*F*	Sig.	Partial Eta Squared
School 5						
GENDER	9.704	1	9.704	15.419	.000	.023
Error	409.056	650	.629			
Corrected total	418.759	651				
School 6						
GENDER	7.519	1	7.519	13.724	.000	.028
Error	261.329	477	.548			
Corrected total	268.848	478				
School 7						
GENDER	17.686	1	17.686	25.491	.000	.062
Error	267.124	385	.694			
Corrected total	284.811	386				

Research Question 4b

Research question 4b asked if there was a statistically significant difference in FCAT Reading scores of Hispanic students in seven high schools based on gender. In addition, research question 4b asked if there was a statistically significant difference in FCAT Mathematics scores of Hispanic students in seven high schools based on gender. Research Question 4b was addressed by running an Analysis of Variance (ANOVA) comparing FCAT Reading scores of Hispanic students in seven high schools based on gender. Research Question 4b was also addressed by running an Analysis of Variance (ANOVA) comparing FCAT Mathematics scores of Hispanic students in seven high schools based on gender The analysis included the mean, mean square, degree of freedom, *F,* standard error, Partial Eta Square, and level of significance using the level of .01.

Table 24 displayed the results of the ANOVA that compared the FCAT Reading scores of all Hispanic male students to the FCAT Reading scores of all Hispanic female students from the seven high schools that had reported scores. There was no statistically significant difference found.

Table 24 displayed the results of the ANOVA that compared the FCAT Mathematics scores of all Hispanic male students to the FCAT Mathematics scores of all Hispanic female students from the seven high schools that had reported scores. There was no statistically significant difference found.

Table 25 displayed the results of the ANOVA that compared the Reported FCAT Reading scores of Hispanic male students to the reported FCAT Reading scores of Hispanic female students from School 1. There was no statistically significant difference found.

Table 25 displayed the results of the ANOVA that compared the reported FCAT Mathematics scores of Hispanic male students to the reported FCAT Mathematics scores of Hispanic female students from School 1. There was no statistically

Table 26 displayed the results of the ANOVA that compared the reported FCAT Reading scores of Hispanic male students to the reported FCAT Reading scores of Hispanic female students from School 2. There was no statistically significant difference found.

Table 26 displayed the results of the ANOVA that compared the reported FCAT Mathematics scores of Hispanic male students to the reported FCAT Mathematics scores of Hispanic female students from School 2. There was a statistically significant difference. However, less than 1 % of variance in FCAT Mathematic scores can be accounted for by gender.

Table 27 displayed the results of the ANOVA that compared the reported FCAT Reading scores of Hispanic male students to the reported FCAT Reading scores of Hispanic female students from School 3. There was no statistically significant difference found.

Table 27 displayed the results of the ANOVA that compared the reported FCAT Mathematics scores of Hispanic male students to the reported FCAT Mathematics scores of Hispanic female students from School 3. There was no statistically significant difference found.

Table 28 displayed the results of the ANOVA that compared the reported FCAT Reading scores of Hispanic male students to the reported FCAT Reading scores of Hispanic female students from School 4. There was no statistically significant difference found.

Table 28 displayed the results of the ANOVA that compared the reported FCAT Mathematics scores of Hispanic male students to the reported FCAT Mathematics scores of Hispanic female students from School 4. There was no statistically significant difference found.

Table 29 displayed the results of the ANOVA that compared the reported FCAT Reading scores of Hispanic male students to the reported FCAT Reading scores of Hispanic female students from School 5. There was no statistically significant difference found.

Table 29 displayed the results of the ANOVA that compared the reported FCAT Mathematics scores of Hispanic male students to the reported FCAT Mathematics scores of Hispanic female students from School 5. There was no statistically significant difference found.

Table 30 displayed the results of the ANOVA that compared the reported FCAT Reading scores of Hispanic male students to the reported FCAT Reading

scores of Hispanic female students from School 6. There was no statistically significant difference found.

Table 30 displayed the results of the ANOVA that compared the reported FCAT Mathematics scores of Hispanic male students to the reported FCAT Mathematics scores of Hispanic female students from School 6. There was no statistically significant difference found.

Table 31 displayed the results of the ANOVA that compared the reported FCAT Reading scores of Hispanic male students to the reported FCAT Reading scores of Hispanic female students from School 7. There was no statistically significant difference found.

Table 31 displayed the results of the ANOVA that compared the reported FCAT Mathematics scores of Hispanic male students to the reported FCAT Mathematics scores of Hispanic female students from School 7. There was no statistically significant difference found.

In summary, there is no significant difference in mean FCAT Reading scores and mean FCAT Mathematic scores based on gender in the seven schools with the exception of FCAT Mathematics in School 2. However, the explanation based on variance was very small.

Table 24 Schools 1 - 7 ANOVA: FCAT Reading/FCAT Mathematics Scores (Hispanic Male and Female)

FCAT Reading	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
Between Groups	514.822	1	514.822	.178	.673	.000
Within Groups	10710640	3700	2894.768			
Total	10711155	3701				
FCAT Mathematics						
Between Groups	76358.687	1	76358.687	26.677	.000	.006
Within Groups	117355.34	4100	2862.325			
Total	11811892	4102				

Table 25 School 1 ANOVA: FCAT Reading/FCAT Mathematics Scores (Hispanic Male and Female)

FCAT Reading	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
Between Groups	2442.577	1	2442.577	.708	.400	.002
Within Groups	1468787.9	426	3447.859			
Total	1471230.5	427				
FCAT Mathematics						
Between Groups	12431.425	1	12431.425	4.266	.039	.009
Within Groups	1343520.5	461	2914.361			
Total	1355951.9	462				

Table 26 School 2 ANOVA: FCAT Reading/FCAT Mathematics Scores (Hispanic Male and Female)

FCAT Reading	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
Between Groups	4441.097	1	441.097	1.583	.209	.002
Within Groups	3063337.1	1092	2805.254			
Total	3067778.2	1093				
FCAT Mathematics						
Between Groups	30805.887	1	30805.887	11.483	.001	.001
Within Groups	3272953.2	1220	2682.749			
Total	3303759.1	1221				

Table 27 School 3 ANOVA: FCAT Reading/FCAT Mathematics Scores (Hispanic Male and Female)

FCAT Reading	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
Between Groups	3181.992	1	3181.992	1.206	.272	.001
Within Groups	2176537.8	825	2638.228			
Total	2179719.8	826				
FCAT Mathematics						
Between Groups	16088.894	1	16088.894	5.878	.016	.006
Within Groups	2521096.4	921	2737.347			
Total	2537185.3	922				

Table 28 School 4 ANOVA: FCAT Reading/FCAT Mathematics Scores (Hispanic Male and Female)

FCAT Reading	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
Between Groups	2070.130	1	2070.130	.644	.423	.002
Within Groups	1237010.9	385	3213.015			
Total	1239081.0	386				
FCAT Mathematics						
Between Groups	4908.738	1	4908.738	1.428	1.428	.003
Within Groups	1426882.0	415	3438.270			
Total	1431790.7	416				

Table 29 School 5 ANOVA: FCAT Reading/FCAT Mathematics Scores (Hispanic Male and Female)

FCAT Reading	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
Between Groups	2067.289	1	2067.289	.734	.392	.002
Within Groups	1191601.7	423	2817.025			
Total	1193669.0	424				
FCAT Mathematics						
Between Groups	3601.403	1	3601.403	1.383	.240	.003
Within Groups	1245034.3	478	2604.674			
Total	1248635.7	479				

Table 30 School 6 ANOVA: FCAT Reading/FCAT Mathematics Scores (Hispanic Male and Female)

FCAT Reading	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
Between Groups	279.016	1	279.016	.110	.740	.000
Within Groups	761156.40	301	2528.759			
Total	761435.41	302				
FCAT Mathematics						
Between Groups	2195.448	1	2195.448	.769	.381	.002
Within Groups	924775.36	324	2854.245			
Total	926970.81	325				

Table 31 School 7 ANOVA: FCAT Reading/FCAT Mathematics Scores (Hispanic Male and Female)

FCAT Reading	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
Between Groups	7935.303	1	7935.303	3.496	.063	.015
Within Groups	535712.18	236	2269.967			
Total	543647.48	237				
FCAT Mathematics						
Between Groups	12827.343	1	12827.343	4.767	.030	.017
Within Groups	723875.51	269	2690.987			
Total	736702.85	270				

Research Question 5a

Research question 5a asked if I there was a statistically significant difference in Grade Point Average (G.P.A.) of Hispanic students in seven Orange County Public High Schools based on Limited English Proficiency (LEP) status. The status of Limited English Proficiency is divided into six areas. These areas were LY = limited English, placement into a sheltered LEP class, TN = tested, did not qualify for services, LZ = monitored for two years and was successful academically, LP = LEP, tested and awaiting test results, not receiving services, LF = former LEP student on two year monitor and NS = Hispanic, not tested, no services.

Research Question 5a was addressed by running an Analysis of Variance (ANOVA) comparing grade point averages of Hispanic students in seven high schools based on LEP status. The analysis includes the mean, mean square, degree of freedom, *F,* standard error, and level of significance using the level of .01. When statistical significance of $p < .01$ was found, because of unequal numbers in each school, a Scheffe Post Hoc was used.

Table 32 displayed the results of the ANOVA that compared the mean Grade Point Averages of all Hispanic students in the seven high schools to their Limited English Proficiency status.

In Schools 1 – 7 there was a statistically significant difference in mean Grade Point Average among Limited English Proficient students based on their classification. However, only 4 % of the variance in Grade Point Average can be accounted for by LEP classification.

In School 1, there was a statistically significance difference in mean Grade Point Average among Limited English Proficient students based on their classification. However, only 4 % of the variance in Grade Point Average can be accounted for by LEP classification.

In School 2, there was a statistically significance difference in mean Grade Point Average among Limited English Proficient students based on their classification. However, 34 % of the variance in Grade Point Average can be accounted for by LEP classification.

In School 3, there was a statistically significance difference in mean Grade Point Average among Limited English Proficient students based on their classification. However, only 4 % of the variance in Grade Point Average can be accounted for by LEP classification.

In School 4 there was a statistically significance difference in mean Grade Point Average among Limited English Proficient students based on their classification. However, only 6 % of the variance in GPA can be accounted for by LEP classification.

In School 5 there was a statistically significance difference in mean Grade Point Average among Limited English Proficient students based on their classification. However, only 7 % of the variance in GPA can be accounted for by LEP classification.

In School 6 there was a statistically significance difference in mean Grade Point Average among Limited English Proficient students based on their

classification. However, only 2 % of the variance in GPA can be accounted for by LEP classification.

In School 7 there was a statistically significance difference in mean Grade Point Average among Limited English Proficient students based on their classification. However, only 8 % of the variance in GPA can be accounted for by LEP classification..

A Scheffe Post Hoc was performed (Table 33) to determine the differences based on observed means in Grade Point Average using all seven schools.

In Schools 1- 7, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -.421260), there was a significant difference between LY and LZ ($\underline{m}$ = -.341168), there was a significant difference between LY and LF ($\underline{m}$ = -.364829), and there was a significant difference between LY and NS ($\underline{m}$ = -.419552). When using TN and compared to others there was a significant difference between TN and LP ($\underline{m}$ =.497978) When using LZ and compared to others there was a significant difference between LZ and LP ($\underline{m}$ =.417887). When using LP and compared to others, there was a significant difference between LP and TN ($\underline{m}$ = -.497978). There was a significant difference between LP and LF ($\underline{m}$ = .441547). There was a significant difference between LP and NS ($\underline{m}$ =.496271).

In School 1 when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -.380456). There was no other statistically significant difference among LEP status.

In School 2, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -.374989), there was a significant difference between LY and LZ ($\underline{m}$ = -.255273), there was a significant difference between LY and NS ($\underline{m}$ = -.318100).

In School 3, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -.303379), there was a significant difference between LY and LZ ($\underline{m}$ = -.313267), there was a significant difference between LY and LF ($\underline{m}$ = -.525098), there was a significant difference between LY and NS ($\underline{m}$ = -.272981).

In School 4, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -.432946), there was a significant difference between LY and NS ($\underline{m}$ = -.465109).

In School 5 when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -.518419), there was a significant difference between LY and LZ ($\underline{m}$ = -.417734), there was a significant difference between LY and LF ($\underline{m}$ = -.535738).

In School 6, when using LY and compared to the others, there was no statistically significant differences in mean Grade Point Averages..

In School 7, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -.645615), there was a significant difference between LY and LF ($\underline{m}$ = -.741874), there was a significant difference between LY and NS ($\underline{m}$ = -.594937).

In summary, in all seven schools, there was a significant difference in Grade Point Averages among the Limited English Proficiency Classification. It is important to note that the difference mainly occurs when the LY classification is compared to all other classifications. Grade Point Averages are lower for LY students when compared to other classifications.

Table 32 Schools 1 – 7 ANOVA: Cumulative GPA for Hispanic LEP Students

GPA	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
Schools 1- 7						
Between Groups	173.389	5	34.678	55.109	.000	.046
Within Groups	3618.891	5751	.629			
Total	3792.280	5756				
School 1						
Between Groups	21.834	5	4.367	5.892	.000	.045
Within Groups	466.917	630	.741			
Total	488.751	635				
School 2						
Between Groups	34.372	5	6.874	12.874	.000	.034
Within Groups	986.880	1731	.570			
Total	488.751	1736				
School 3						
Between Groups	32.135	5	6.427	10.838	.000	.040
Within Groups	763.754	1288	.593			
Total	795.888	1293				
School 4						
Between Groups	20.806	4	5.202	8.329	.000	.056
Within Groups	353.467	566	.624			
Total	374.273	570				

GPA	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
School 5						
Between Groups	29.398	4	7.349	12.213	.000	.070
Within Groups	389.361	647	.602			
Total	418.759	651				
School 6						
Between Groups	7.550	4	1.888	3.424	.009	.028
Within Groups	261.298	474	.551			
Total	268.848	478				
School 7						
Between Groups	24.324	4	6.081	8.874	.000	.085
Within Groups	262.457	383	.685			
Total	286.781	387				

Table 33 Scheffe: Schools 1 – 7 Hispanic LEP Students Multiple Comparisons
Dependent Variable: Cumulative GPA

LEP Code	LEP Code	Mean Difference	Std. Error
Schools 1 - 7			
LY	TN	-.421260(*)	.0288924
	LZ	-.341168(*)	.0308418
	LP	.076719	.1007023
	LF	-.364829(*)	.0416080
	NS	-.419552(*)	.0344109
TN	LZ	.080092	.0294281
	LP	.497978(*)	.1002784
	LF	.056431	.0405712
	NS	.001708	.0331498
LZ	LP	.417887(*)	.1008573
	LF	-.023661	.0419817
	NS	-.078384	.0348619
LP	LF	-.441547(*)	.1046528
	NS	-.496271(*)	.1020053
LF	NS	-.054724	.0446695
School 1			
LY	TN	-.4380453(*)	.0848116
	LZ	-.337613	.1000391
	LP	-.039598	.1474342
	LF	-.437604	.1216087
	NS	-.148717	.3559936
TN	LZ	.042840	.1038463
	LP	.340855	.1500436
	LF	.057150	.1247594
	NS	.231736	.3570821
LZ	LP	.298015	.1591474
	LF	-.099991	.1355718
	NS	.188896	.3610020
LP	LF	-.398006	.1735187
	NS	-.109119	.3768972
LF	NS	.288886	.3675640

LEP Code	LEP Code	Mean Difference	Std. Error
School 2			
LY	TN	-.374989(*)	.0511376
	LZ	-.255273(*)	.0536753
	LP	-.855102	.3108331
	LF	-.213130	.0691521
	NS	-.318100(*)	.0676898
TN	LZ	.119716	.0479805
	LP	-.480112	.3099005
	LF	.161859	.0648314
	NS	.056890	.0632693
LZ	LP	-.599829	.3103294
	LF	.042143	.0668513
	NS	-.062827	.0653375
LP	LF	.641971	.3133772
	NS	.537002	.3130578
LF	NS	-.104969	.0785491
School 3			
LY	TN	-.303379(*)	.0574602
	LZ	-.313267(*)	.0652081
	LP	.100062	.1814885
	LF	-.525098(*)	.0911999
	NS	-.272981(*)	.0656274
TN	LZ	-.009888	.0640015
	LP	.403440	.1810585
	LF	-.221719	.0903411
	NS	.030398	.0644286
LZ	LP	.413329	.1836644
	LF	-.211831	.0954565
	NS	.040287	.0714245
LP	LF	-.625159	.1944169
	NS	-.373042	.1838136
LF	NS	.252117	.0957434

LEP Code	LEP Code	Mean Difference	Std. Error
School 4			
LY	TN	-.432946(*)	.0967287
	LZ	-.246678	.0960500
	LF	-.030123	.1313678
	NS	-.465109(*)	.1100478
TN	LZ	.186268	.0899236
	LF	.463069	.1269573
	NS	-.032163	.1047434
LZ	LF	.276802	.1264409
	NS	-.218431	.1041169
LF	NS	-.495232	.1373763
School 5			
LY	TN	-.518419(*)	.0845991
	LZ	-.417734	.0835211
	LF	-.535738	.1334018
	NS	-.232405	.0918898
TN	LZ	.100685	.0888626
	LF	-.017319	.1368094
	NS	.286014	.0967704
LZ	LF	-.118004	.1361455
	NS	.185329	.0958294
LF	NS	.303333	.1414339
School 6			
LY	TN	-.297502	.1219711
	LZ	-.313944	.1288499
	LF	-.283637	.1657221
	NS	-.451000	.1231255
TN	LZ	-.016442	.0947564
	LF	.013865	.1408556
	NS	-.153498	.0868123
LZ	LF	.030307	.1468524
	NS	-.137056	.0962378
LF	NS	-.167364	.1418564

LEP Code	LEP Code	Mean Difference	Std. Error
School 7			
LY	TN	-.645615(*)	.1251787
	LZ	-.412048	.1338514
	LF	-.741874(*)	.1691025
	NS	-.594937(*)	.1268119
TN	LZ	.233567	.1247101
	LF	-.096259	.1619632
	NS	.050678	.1171224
LZ	LF	-.329826	.1687559
	NS	-.182889	.1263493
LF	NS	.146938	.1632287

* The mean difference is significant at the .01 level.

Research Question 5b

Research question 5b asked if there is a statistically significant difference in FCAT Reading scores of Hispanic students in seven high schools based on Limited English Proficiency (LEP) status. In addition, research question 5b asked if there is a statistically significant difference in FCAT Mathematics scores of Hispanic students in seven high schools based on Limited English Proficiency (LEP) status. Research Question 5b was addressed by running an Analysis of Variance (ANOVA) comparing FCAT Reading scores of Hispanic students in seven high schools based on LEP status. Question 5b was addressed by running an Analysis of Variance (ANOVA) comparing FCAT Mathematic scores of Hispanic students in seven high schools based on LEP status. The analysis includes the mean, mean square, degree of freedom, *F,* standard deviation, standard error and level of significance using the level at .01. When statistical significance of $p < .01$ was found, because of unequal numbers in each school, a Scheffe Post Hoc was used.

Table 34 displayed the results of the ANOVA that compared the FCAT Reading scores of all LEP students from the seven high schools that had reported scores. There was a statistically significant difference in mean FCAT Reading scores. However, only 15 % of the variance in FCAT Reading scores can be accounted for by LEP.

In School 1, there was a statistically significant difference in mean FCAT Reading scores. However, only 14 % of the variance in FCAT Reading scores can be accounted for by LEP.

In School 2, there was a statistically significant difference in mean FCAT Reading scores. However, only 17 % of the variance in FCAT Reading scores can be accounted for by LEP.

In School 3, there was a statistically significant difference in mean FCAT Reading scores. However, only 13 % of the variance in FCAT Reading scores can be accounted for by LEP.

In School 4, there was a statistically significant difference in mean FCAT Reading scores. However, only 16 % of the variance in FCAT Reading scores can be accounted for by LEP.

In School 5, there was a statistically significant difference in mean FCAT Reading scores. However, only 19 % of the variance in FCAT Reading scores can be accounted for by LEP.

In School 6, there was a statistically significant difference in mean FCAT Reading scores. However, only 9 % of the variance in FCAT Reading scores can be accounted for by LEP.

In School 7, there was a statistically significant difference in mean FCAT Reading scores. However, only 18 % of the variance in FCAT Reading scores can be accounted for by LEP.

In summary, there was a significant difference in mean FCAT Reading scores among students with different Limited English Proficiency classification. Students

designated LY scored lower in FCAT Reading than those students in other classifications.

Table 35 displayed the results of the ANOVA that compared the FCAT Mathematics scores of all LEP students from the seven high schools that had reported scores

In Schools 1 – 7 there was a statistically significant difference in mean FCAT Mathematics scores. However, only 20 % of the variance in FCAT Mathematic scores can be accounted for by LEP.

In School 1, there was a statistically significant difference in mean FCAT Mathematics scores. However, only 18 % of the variance in FCAT Reading scores can be accounted for by LEP.

In School 2, there was a statistically significant difference in mean FCAT Mathematics scores. However, only 22 % of the variance in FCAT Reading scores can be accounted for by LEP.

In School 3, there was a statistically significant difference in mean FCAT Mathematics scores. However, only 17 % of the variance in FCAT Reading scores can be accounted for by LEP.

In School 4, there was a statistically significant difference in mean FCAT Mathematics scores. However, only 26 % of the variance in FCAT Reading scores can be accounted for by LEP.

In School 5, there was a statistically significant difference in mean FCAT Mathematics scores. However, only 19 % of the variance in FCAT Reading scores can be accounted for by LEP.

In School 6, there was a statistically significant difference in mean FCAT Mathematics scores. However, only 20 % of the variance in FCAT Reading scores can be accounted for by LEP.

In School 7, there was a statistically significant difference in mean FCAT Mathematics scores. However, only 18 % of the variance in FCAT Reading scores can be accounted for by LEP.

In summary, there was a significant difference in mean FCAT Mathematics scores among students with different Limited English Proficiency classification. Students designated LY scored lower in FCAT Reading than those students in other classifications.

A Scheffe Post Hoc was performed (Table 36) to determine the differences based on observed means in FCAT Reading scores using all seven high schools.

In Schools 1 – 7, for FCAT Reading, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -50.22), there was a significant difference between LY and LZ ($\underline{m}$ = -34.64), there was a significant difference between LY and LP ($\underline{m}$ = -28.64), there was a significant difference between LY and LF ($\underline{m}$ = -40.47), there was a significant difference between LY and NS ($\underline{m}$ = -50.55). When using TN and compared to others, there was a significant difference between TN and LZ ($\underline{m}$ = 15.58), *se* = 2.4. When using LZ and compared to others, there was a significant difference between LZ and NS ($\underline{m}$ = -15.91).

there was a significant difference between TN and LZ ($\underline{m}$ = 15.58), *se* = 2.4. When using and compared to others, there was a significant difference between LZ and NS ($\underline{m}$ = -15.91).

In School 1, for FCAT Reading, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -44.61), there was a significant difference between LY and LF ($\underline{m}$ = -60.30).

In School 2**,** for FCAT Reading, when using LY as the dependent variable and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -56.84), there was a significant difference between LY and LZ ($\underline{m}$ = -39.43), there was a significant difference between LY and LF ($\underline{m}$ = -35.80), there was a significant difference between LY and NS ($\underline{m}$ = -53.11). When using TN as the dependent variable and compared to others, there was a significant difference between TN and LZ ($\underline{m}$ = 17.41), there was a significant difference between TN and LF ($\underline{m}$ = 21.04).

In School 3**,** for FCAT Reading, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -42.77), there was a significant difference between LY and LZ ($\underline{m}$ = -25.07), there was a significant difference between LY and LF ($\underline{m}$ = -42.53), here was a significant difference between LY and NS ($\underline{m}$ = -42.24).

In School 4**,** for FCAT Reading, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -58.42), there was a

significant difference between LY and LZ (*m* = -37.81), there was a significant difference between LY and NS (*m* = -56.51).

In School 5**,** for FCAT Reading, when using LY and compared to the others, there was a significant difference between LY and TN (*m* = -52.74), there was a significant difference between LY and LZ (*m* = -46.87), there was a significant difference between LY and LF (*m* = -57.98), there was a significant difference between LY and NS (*m* = -40.07).

In School 6**,** for FCAT Reading, when using LY and compared to the others, there was a significant difference between LY and TN (*m* = -37.64), there was a significant difference between LY and NS (*m* = -48.14).

In School 7**,** for FCAT Reading, when using LY and compared to the others, there was a significant difference between LY and TN (*m* = -50.43), there was a significant difference between LY and LF (*m* = -50.15), there was a significant difference between LY and NS (*m* = -43.26).

There was a consistent significant difference in mean FCAT Reading scores for LY students. The mean FCAT Reading score was lower and there was no significant difference among the other classifications.

A Scheffe Post Hoc was performed (Table 37) to determine the differences based on observed means in FCAT Mathematics scores using all seven schools**.**

In Schools 1 – 7**,** for FCAT Mathematics, when using LY compared to the others, there was a significant difference between LY and TN (*m* = -56.62), there was

a significant difference between LY and LZ ($\underline{m}$ = -38.37), there was a significant difference between LY and LP ($\underline{m}$ = -45.69), there was a significant difference between LY and LF ($\underline{m}$ = -41.41), there was a significant difference between LY and NS ($\underline{m}$ = -58.88),.When using TN and compared to others, there was a significant difference between TN and LZ ($\underline{m}$ = 18.25), there was a significant difference between TN and LF ($\underline{m}$ = 15.21). When using LZ and compared to others, there was a significant difference between LZ and NS ($\underline{m}$ = -20.51). When using LF and compared to others, there was a significant difference between LF and NS ($\underline{m}$ = -17.47).

In School 1**,** for FCAT Mathematics, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -49.13), there was a significant difference between LY and LZ ($\underline{m}$ = -31.09), there was a significant difference between LY and LP ($\underline{m}$ = -42.73), there was a significant difference between LY and LF ($\underline{m}$ = -54.04).

In School 2**,** for FCAT Mathematics, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -64.70), there was a significant difference between LY and LZ ($\underline{m}$ = -42.56), there was a significant difference between LY and LF ($\underline{m}$ = -42.54), there was a significant difference between LY and NS ($\underline{m}$ = -58.19), se = 4.9, $p < .01$. When using TN and compared to others, there was a significant difference between TN and LZ ($\underline{m}$ = 22.13), there was a significant difference between TN and LF ($\underline{m}$ = 22.16).

In School 3**,** for FCAT Mathematics, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -48.61), there was a significant difference between LY and LZ ($\underline{m}$ = -29.31), there was a significant difference between LY and LF ($\underline{m}$ = -45.820), there was a significant difference between LY and NS ($\underline{m}$ = -50.960). When using TN and compared to others, there was a significant difference between TN and LZ ($\underline{m}$ = 19.30). , *se* = 4.9. When using LZ and compared to others, there was a significant difference between LZ and NS ($\underline{m}$ = 21.66).

In School 4**,** for FCAT Mathematics, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -74.69), there was a significant difference between LY and LZ ($\underline{m}$ = -63.65), there was a significant difference between LY and LF ($\underline{m}$ = -39.88), there was a significant difference between LY and NS ($\underline{m}$ = -66.75). , *se* = 8.7, $p < .01$. When using TN and compared to others, there was a significant difference between TN and LF ($\underline{m}$ = 34.81).

In School 5**,** for FCAT Mathematics, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -52.65), there was a significant difference between LY and LZ ($\underline{m}$ = -42.41), there was a significant difference between LY and LF ($\underline{m}$ = -46.60), there was a significant difference between LY and NS ($\underline{m}$ = -48.85).

In School 6**,** for FCAT Mathematics, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -59.80), there was a significant difference between LY and LZ ($\underline{m}$ = -34.51). When using LZ and compared to others, there was a significant difference between LZ and NS ($\underline{m}$ = -38.08). When using LF and compared to others, there was a significant difference between LF and NS ($\underline{m}$ = -45.01).

In School 7**,** for FCAT Mathematics, when using LY and compared to the others, there was a significant difference between LY and TN ($\underline{m}$ = -49.98), there was a significant difference between LY and LF ($\underline{m}$ = -55.88), there was a significant difference between LY and NS ($\underline{m}$ = -49.59).

There was a consistent significant difference in mean FCAT Mathematics scores for LY students. In addition, the TN classification had a difference in FCAT Mathematics scores as compared to other classifications. The mean FCAT Mathematics score was lower for LY and TN students and there was no significant difference among the other classifications.

Table 34 Schools 1 – 7 ANOVA: FCAT Reading for Hispanic LEP Students

GPA	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
Schools 1 - 7						
Between Groups	1605858.1	5	321171.621	130.463	.000	.150
Within Groups	9120871.8	3705	.629			
Total	3792.280	3710				
School 1						
Between Groups	206612.72	5	41322.544	13.821	.000	.140
Within Groups	1264672.7	423	2989.770			
Total	1471285.4	428				
School 2						
Between Groups	531079.24	5	106215.848	45.675	.000	.173
Within Groups	2546365.0	1095	2325.448			
Total	3077444.3	1100				
School 3						
Between Groups	288415.04	5	57683.007	25.040	.000	.132
Within Groups	1891304.8	821	2303.660			
Total	2179719.8	826				
School 4						
Between Groups	197777.72	4	49444.429	18.139	.000	.260
Within Groups	1041303.3	382	2725.925			
Total	1239081.0	386				

GPA	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
School 5						
Between Group	225000.10	4	56250.026	24.389	.000	.188
Within Groups	968668.85	420	2306.354			
Total	1193669.0	424				
School 6						
Between Groups	72528.666	4	18132.167	7.843	.000	.095
Within Groups	688906.75	298	2311.768			
Total	761435.41	302				
School 7						
Between Groups	98703.553	4	24675.888	12.881	.000	.095
Within Groups	448284.64	234	1915.746			
Total	546988.19	238				

Table 35 Schools 1 – 7 ANOVA: FCAT Mathematics Scores for Hispanic LEP Students

GPA	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
Schools 1 - 7						
Between Groups	2308149.4	5	481629.876	199.033	.000	.195
Within Groups	9520998.0	4105	.629			
Total	11829147	4110				
School 1						
Between Groups	246438.97	5	49287.794	20.273	.000	.181
Within Groups	1113471.8	458	2431.161			
Total	1359910.7	463				
School 2						
Between Groups	742252.98	5	148450.596	70.694	.000	.224
Within Groups	2568190.8	1223	2099.911			
Total	3310443.8	1228				
School 3						
Between Groups	440755.51	5	88151.102	38.558	.000	.174
Within Groups	2096429.8	917	2286.183			
Total	2537185.3	922				
School 4						
Between Group	372361.42	4	93090.356	36202	.000	.174
Within Groups	1059429.3	412	2571.430			
Total	1431790.7	416				

GPA	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
School 5						
Between Group	241863.01	4	60465.751	28.528	.000	.194
Within Groups	1006772.7	475	2119.521			
Total	1248635.7	479				
School 6						
Between Groups	193196.52	4	48299.130	21.129	.000	.208
Within Groups	733774.29	321	2285.901			
Total	926970.81	325				
School 7						
Between Groups	132397.21	4	33099.302	14.594	.000	.208
Within Groups	605538.26	267	2267.934			
Total	737935.47	271				

Table 36 Scheffe: Schools 1 – 7 Multiple Measures FCAT Reading Scores and Hispanic LEP Status FCAT Reading

LEP Code	LEP Code	Mean Difference	Std. Error
Schools 1 – 7 FCAT Reading			
LY	TN	-50.22(*)	2.177
	LZ	-34.64(*)	2.379
	LP	-28.64(*)	7.118
	LF	-40.47(*)	3.176
	NS	-50.55(*)	2.689
TN	LZ	15.58(*)	2.370
	LP	21.58	7.115
	LF	9.75	3.169
	NS	-.33	2.680
LZ	LP	6.00	7.179
	LF	-5.83	3.311
	NS	-15.91(*)	2.847
LP	LF	-11.83	7.481
	NS	-21.91	7.287
LF	NS	-10.08	3.540
School 1			
LY	TN	-44.61(*)	6.345
	LZ	-30.17	8.452
	LP	-26.50	10.655
	LF	-60.30(*)	10.125
	NS	1.55	27.650
TN	LZ	14.44	8.805
	LP	18.11	10.937
	LF	-15.69	10.421
	NS	46.16	27.760
LZ	LP	3.67	12.280
	LF	-30.13	11.823
	NS	31.72	28.316
LP	LF	-33.79	13.486
	NS	28.06	29.050
LF	NS	61.85	28.859
School 2			
LY	TN	-56.84(*)	3.960
	LZ	-39.43(*)	4.214
	LP	-61.26	21.766
	LF	-35.80(*)	5.209
	NS	-53.11(*)	5.392
TN	LZ	17.41(*)	4.011
	LP	-4.41	21.728
	LF	21.04(*)	5.046
	NS	3.73	5.235

LEP Code	LEP Code	Mean Difference	Std. Error
LZ	LP	-21.83	21.776
	LF	3.62	5.248
	NS	-13.69	5.430
LP	LF	25.45	21.990
	NS	8.14	22.034
LF	NS	-17.31	6.233
School 3			
LY	TN	-42.77(*)	4.315
	LZ	-25.07(*)	5.175
	LP	-36.48	12.763
	LF	-43.53(*)	7.779
	NS	-42.24(*)	5.078
TN	LZ	17.71	5.171
	LP	6.29	12.762
	LF	-.76	7.777
	NS	.53	5.074
LZ	LP	-11.42	13.078
	LF	-18.46	8.285
	NS	-17.17	5.823
LP	LY	36.48	12.763
	NS	-7.04	14.310
LF	LY	-5.75	13.040
	TN	43.53(*)	7.779
	LZ	.76	7.777
	LP	18.46	8.285
	NS	7.04	14.310
School 4			
LY	TN	-58.42(*)	7.440
	LZ	-37.81(*)	7.350
	LF	-30.23	9.885
	NS	-56.51(*)	9.264
TN	LZ	20.60	7.331
	LF	28.18	9.871
	NS	1.91	9.248
LZ	LF	7.58	9.803
	NS	-18.69	9.177
LF	NS	-26.28	11.309
School 5			
LY	TN	-52.74(*)	6.713
	LZ	-46.87(*)	6.297
	LF	-57.98(*)	9.539
	NS	-40.07(*)	6.911
TN	LZ	5.87	7.179
	LF	-5.24	10.143
	NS	12.67	7.723
LZ	LF	-11.11	9.872

LEP Code	LEP Code	Mean Difference	Std. Error
	NS	6.80	7.364
LF	NS	17.91	10.275
School 6			
LY	TN	-37.64(*)	8.781
	LZ	-21.81	9.481
	LF	-30.78	12.251
	NS	-48.14(*)	9.243
TN	LZ	15.83	7.712
	LF	6.86	10.940
	NS	-10.50	7.417
LZ	LF	-8.97	11.508
	NS	-26.33	8.233
LF	NS	-17.36	11.313
School 7			
LY	TN	-50.43(*)	7.992
	LZ	-22.40	8.836
	LF	-50.15(*)	11.325
	NS	-43.26(*)	8.129
TN	LZ	28.02	8.776
	LF	.28	11.278
	NS	7.16	8.063
LZ	LF	-27.75	11.891
	NS	-20.86	8.901
LF	NS	6.89	11.375

Table37 Scheffe: Schools 1 – 7 Multiple Measures FCAT Mathematics Scores and Hispanic LEP Status FCAT Reading

LEP Code	LEP Code	Mean Difference	Std. Error
Schools 1 – 7			
LY	TN	-56.62(*)	2.008
	LZ	-38.37(*)	2.162
	LP	-45.69(*)	7.022
	LF	-41.41(*)	2.920
	NS	-58.88(*)	2.491
TN	LZ	18.25(*)	2.182
	LP	10.93	7.028
	LF	15.21(*)	2.935
	NS	-2.26	2.509
LZ	LP	-7.32	7.073
	LF	-3.04	3.042
	NS	-20.51(*)	2.633

LEP Code	LEP Code	Mean Difference	Std. Error
LF	NS	-17.47(*)	3.284
School 1			
LY	TN	-49.13(*)	5.555
	LZ	-31.09(*)	7.212
	LP	-42.73(*)	9.797
	LF	-54.04(*)	8.540
	NS	-38.91	24.899
TN	LZ	18.04	7.652
	LP	6.39	10.126
	LF	-4.91	8.915
	NS	10.21	25.030
LZ	LP	-11.64	11.122
	LF	-22.95	10.032
	NS	-7.82	25.449
LP	LF	-11.31	12.025
	NS	3.82	26.299
LF	NS	15.13	25.857
School 2			
LY	TN	-64.70(*)	3.583
	LZ	-42.56(*)	3.754
	LP	-64.52	20.666
	LF	-42.54(*)	4.738
	NS	-58.19(*)	4.904
TN	LZ	22.13(*)	3.563
	LP	.18	20.633
	LF	22.16(*)	4.588
	NS	6.50	4.760
LZ	LP	-21.96	20.663
	LF	.02	4.723
	NS	-15.63	4.890
LP	LF	21.98	20.864
	NS	6.33	20.903
LF	NS	-15.65	5.680
School 3			
LY	TN	-48.61(*)	4.069
	LP	-47.91	12.653
	LF	-45.82(*)	7.019
	NS	-50.96(*)	4.800
TN	LZ	19.30(*)	4.920
	LP	.70	12.699
	LF	2.79	7.101
	NS	-2.36	4.920
LZ	LP	-18.60	12.952
	LF	-16.51	7.544
	NS	-21.66(*)	5.540

LEP Code	LEP Code	Mean Difference	Std. Error
LP	LF	2.08	13.928
	NS	-3.06	12.952
LF	NS	-5.14	7.544
School 4			
LY	TN	-74.69(*)	6.968
	LZ	-63.65(*)	6.793
	LF	-39.88(*)	9.210
	NS	-66.75(*)	8.722
TN	LZ	11.04	6.894
	LF	34.81(*)	9.284
	NS	7.93	8.800
LZ	LF	23.77	9.153
	NS	-3.11	8.662
LF	NS	-26.88	10.663
School 5			
LY	TN	-52.65(*)	6.019
	LZ	-42.41(*)	5.666
	LF	-46.60(*)	8.826
	NS	-48.85(*)	6.262
TN	LZ	10.24	6.401
	LF	6.05	9.315
	NS	3.80	6.934
LZ	LF	-4.19	9.092
	NS	-6.44	6.631
LF	NS	-2.25	9.474
School 6			
LY	TN	-59.80(*)	8.429
	LZ	-34.51(*)	8.941
	LF	-27.58	11.995
	NS	-72.59(*)	8.787
TN	LZ	25.29	7.330
	LF	32.22	10.847
	NS	-12.79	7.140
LZ	LF	6.93	11.250
	NS	-38.08(*)	7.739
LF	NS	-45.01(*)	11.127
School 7			
LY	TN	-49.98(*)	7.938
	LZ	-23.43	8.965
	LF	-55.88(*)	11.387
	NS	-49.59(*)	8.337
TN	LZ	26.56	9.014
	LF	-5.90	11.426

LEP Code	LEP Code	Mean Difference	Std. Error
NS	.40	8.389	
LZ	LF	-32.46	12.162
	NS	-26.16	9.367
LF	NS	6.30	11.707

* The mean difference is significant at the .01 level.

Research Question 6

Research question 6 asked if there is there was a statistically significant difference among Hispanic students at seven Orange County Public Schools in Grade Point Average (G.P.A.) when comparing 9th grade Hispanic students to the 10th, 11th and 12th grade students, when comparing 10th grade Hispanic students to 9th, 11th and 12th grade Hispanic students, when comparing 11th grade Hispanic students to 9th, 10th and 12th grade Hispanic students and when comparing 12th grade Hispanic students to 9th, 10th and 11th grade Hispanic students.

Research Question 6 was addressed by running an Analysis of Variance (ANOVA) to compare grade point averages between grade levels. If significance was found at the .01 level, a post hoc (Scheffe) was performed. The analysis includes the mean, mean square, degree of freedom, standard deviation, standard error, *F*, Partial Eta Squared, and level of significance using the level at .01.

Table 38 displayed the results of the ANOVA that compared the cumulative Grade Point Averages for grades 9 – 12 for Hispanic students from School 1 -7.

In Schools 1 – 7, there was a statistically significance difference in mean Grade Point Averages among grade levels. However, only 8 % of the variance in GPA can be accounted for by grade level.

In School 1, there was a statistically significance difference in mean Grade Point Averages among grade levels. However, only 14 % of the variance in GPA can be accounted for by grade level.

In School 2, there was a statistically significance difference in mean Grade Point Averages among grade levels. However, only 4 % of the variance in GPA can be accounted for by grade level.

In School 3, there was a statistically significance difference in mean Grade Point Averages among grade levels. However, only 13 % of the variance in GPA can be accounted for by grade level.

In School 4, there was a statistically significance difference in mean Grade Point Averages among grade levels. However, only 6 % of the variance in GPA can be accounted for by grade level.

In School 5, there was a statistically significance difference in mean Grade Point Averages among grade levels. However, only 10 % of the variance in GPA can be accounted for by grade level.

In School 6, there was a statistically significance difference in mean Grade Point Averages among grade levels. However, only 6 % of the variance in GPA can be accounted for by grade level.

In School 7, there was a statistically significance difference in mean Grade Point Averages among grade levels. However, only 12 % of the variance in GPA can be accounted for by grade level.

A Scheffe Post Hoc was performed (Table 39) to determine the differences in Grade Point Averages and grade level for Schools 1 - 7**.**

In Schools 1 – 7, for cumulative Grade Point Average, when using ninth grade and compared to the others, there was a significant difference between ninth grade

and tenth grade (*m* = -.310291), there was a significant difference between ninth grade and eleventh grade (*m* = -.477328), there was a significant difference between ninth grade and twelfth grade (*m* = -.597330). When using tenth grade and compared to the others, there was a significant difference between tenth grade and eleventh grade (*m* = -.167036), there was a significant difference between tenth grade and twelfth grade (*m* = -.287038). When using eleventh grade and compared to the others, there was a significant difference between eleventh grade and twelfth grade (*m* = -.120002).

In School 1**,** for cumulative Grade Point Average, when using ninth grade as and compared to the others, there was a significant difference between ninth grade and tenth grade (*m* = -.490649), there was a significant difference between ninth grade and eleventh grade (*m* = -.664476), there was a significant difference between ninth grade and twelfth grade (*m* = -.8067786).

In School 2**,** for cumulative Grade Point Average, when using ninth grade as and compared to the others, there was a significant difference between ninth grade and eleventh grade (*m* = -.253933), there was a significant difference between ninth grade and twelfth grade (*m* = -.348956). When using tenth grade and compared to the others, there was a significant difference between tenth grade and eleventh grade (*m* = .272122), there was a significant difference between tenth grade and twelfth grade (*m* = -.367144).

In School 3**, f**or cumulative Grade Point Average, when using ninth grade and compared to the others, there was a significant difference between ninth grade and

tenth grade (*m* = -.521075), there was a significant difference between ninth grade and eleventh grade (*m* = -.585182), there was a significant difference between ninth grade and twelfth grade (*m* = -.653910).

In School 4**,** for cumulative Grade Point Average, when using ninth grade as and compared to the others, there was a significant difference between ninth grade and tenth grade (*m* = -.323394), there was a significant difference between ninth grade and eleventh grade (*m* = -.373207), there was a significant difference between ninth grade and twelfth grade (*m* = -.616695).

In School 5**,** for cumulative Grade Point Average, when using ninth grade and compared to the others, there was a significant difference between ninth grade and tenth grade (*m* = -.410483), there was a significant difference between ninth grade and eleventh grade (*m* = -.504610), there was a significant difference between ninth grade and twelfth grade (*m* = -.661282).

In School 6**, f**or cumulative Grade Point Average, when using ninth grade as and compared to the others, there was a significant difference between ninth grade and eleventh grade (*m* = -.384081), there was a significant difference between ninth grade and twelfth grade (*m* = -.471436).

In School 7**,** for cumulative Grade Point Average, when using ninth grade as the dependent variable and compared to the others, there was a significant difference between ninth grade and tenth grade (*m* = -.557553), there was a significant difference between ninth grade and eleventh grade (*m* = -.603489), there was a significant difference between ninth grade and twelfth grade (*m* = -.759504).

In summary, there was a statistically significant difference in mean Grade Point Averages among grade levels. That difference decreased in schools with lower minority populations and higher socio-economic status. In addition, the most significant difference in Grade Point Averages occurred among the 9th grade when compared to all other grade levels.

Table 38 Schools 1 – 7 ANOVA: Cumulative GPA and Grade Level

GPA	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
Schools 1 - 7						
Between Groups	311.681	3	103.894	171.683	.000	.082
Within Groups	3482.033	5754	.605			
Total	3793.714	5757				
School 1						
Between Groups	67.493	3	22.498	33.752	.000	.138
Within Groups	421.258	632	.667			
Total	488.751	635				
School 2						
Between Groups	38.819	3	12.940	22.810	.000	.038
Within Groups	963.652	1734	.567			
Total	1022.471	1737				
School 3						
Between Groups	104.931	3	34.977	65.301	.000	.0132
Within Groups	690.957	1290	.536			
Total	795.888	1293				

GPA	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Square
School 4						
Between Groups	24.998	3	8.333	13.527	.000	.067
Within Groups	349.275	567	.616			
Total	374.273	570				
School 5						
Between Groups	45.750	3	15.250	26.492	.000	.109
Within Groups	373.010	648	.576			
Total	418.759	651				
School 6						
Between Groups	15.989	3	5.330	10.012	.000	.059
Within Groups	252.859	475	.532			
Total	268.848	478				
School 7						
Between Groups	35.436	3	11.812	18.046	.000	.124
Within Groups	251.344	384	.655			
Total	286.781	387				

Table 39 Scheffe: Schools 1 – 7 Multiple Comparison of Grade Level with Dependent Variable: Cumulative GPA

Grade	Grade	Mean Difference	Std. Error
Schools 1 - 7			
9th grade	10th grade	-.310291(*)	.0266137
	11th grade	-.477328(*)	.0278488
	12th grade	-.597330(*)	.0301461
10th grade	11th grade	-.167036(*)	.0300421
	12th grade	-.287038(*)	.0321833
11th grade	12th grade	-.120002(*)	.0332118
School 1			
9th grade	10th grade	-.490649(*)	.0827061
	11th grade	.0906986	.0906986
	12th grade	-.806786(*)	.1005816
10th grade	11th grade	-.173827	.1025511
	12th grade	-.316138	.1113873
11th grade	12th grade	-.142311	.1174439
School 2			
9th grade	10th grade	.018189	.0456774
	11th grade	-.253933(*)	.0501302
	12th grade	-.348956(*)	.0548057
10th grade	11th grade	-.272122(*)	.0517034
	12th grade	-.367144(*)	.0562482
11th grade	12th grade	-.095022	.0599206

Grade	Grade	Mean Difference	Std. Error
School 3			
9th grade	10th grade	-.521075(*)	.0553833
	11th grade	-.585182(*)	.0560193
	12th grade	-.653910(*)	.0553833
10th grade	11th grade	-.064107	.0624239
	12th grade	-.132835	.0618538
11th grade	12th grade	-.068728	.0624239
School 4			
9th grade	10th grade	-.323394(*)	.0824504
	11th grade	-.373207(*)	.0875314
	12th grade	-.616695(*)	.1083551
10th grade	11th grade	-.049813	.0912711
	12th grade	-.293302	.1113979
11th grade	12th grade	-.243488	.1152093
School 5			
9th grade	10th grade	-.410483(*)	.0778563
	11th grade	-.504610(*)	.0823241
	12th grade	-.661282(*)	.0849800
10th grade	11th grade	-.094128	.0921654
	12th grade	-.250800	.0945453
11th grade	12th grade	-.156672	.0982571
School 6			
9th grade	10th grade	-.173051	.0910267
	11th grade	-.384081(*)	.0869153
	12th grade	-.471436(*)	.1013351
10th grade	11th grade	-.211030	.0919053
	12th grade	-.298385	.1056462

Grade	Grade	Mean Difference	Std. Error
11th grade	12th grade	-.087355	.1021251
School 7			
9th grade	10th grade	-.557553(*)	.1120232
	11th grade	-.603489(*)	.1074689
	12th grade	-.759504(*)	.1206043
10th grade	11th grade	-.045936	.1170863
	12th grade	-.201951	.1292479
11th grade	12th grade	-.156015	.1253212

* The mean difference is significant at the .01 level.

Research Question 7

Research question 7 asked if there is a statistically significant relationship among Hispanic students when comparing Grade Point Average and attendance. Can grade point average (G.P.A) be predicted by attendance?

Research Question 7 was addressed by regressing grade point averages of Hispanic students in seven high schools based on percentage of absence. The analysis includes the degree of freedom, F, R, R^2, constant (b), regression formula of Y = constant (b) + Grade Point Average (percentage of absence) to determine the dependent variable and level of significance using the level at .01.

Table 40 displayed the results of the regression for attendance to predict Grade Point Average for School 1 – 7. For schools 1 - 7, 19% explained the variance between percentage of absence and Grade Point Average.

For School 1, 26% of the variance explained the relationship between percentage of absence and Grade Point Average.

For School 2, 19% of the variance explained the relationship between percentage of absence and Grade Point Average.

For School 3, 14% of the variance explained the relationship between percentage of absence and Grade Point Average.

For School 4, 26% of the variance explained the relationship between percentage of absence and Grade Point Average.

For School 5, 16% of the variance explained the relationship between percentage of absence and Grade Point Average.

For School 6, 19% of the variance explained the relationship between percentage of absence and Grade Point Average.

For School 7, 15% of the variance explained the relationship between percentage of absence and Grade Point Average.

For the seven schools, the variance explained ranged from 14% to 26% as shown in Table 40. There was a relationship between the amount of time a student was absent and their mean cumulative Grade Point Average. The lower the percentage of absence, the higher the students Grade Point Average would be. The higher the percentage of absence, the lower the students Grade Point Average would be. Since there is a relationship between the two, a students percentage of absence would determine their Grade Point Average.

Table 40 School 1 – 7 Regression of Attendance and Cumulative Grade Point Average

School	*F*	*R*	R^2	Constant	Regression Coefficient	
Schools 1 – 7		1363.614	.438	.191	2.884	-4.834
School 1		229.112	.515	.265	2.504	-4.474
School 2		409.560	.437	.191	2.962	-4.803
School 3		215.410	.378	.143	2.848	-4.292
School 4		197.619	.508	.258	2.776	-5.424
School 5		121.907	.397	.158	2.754	-4.675
School 6		113.031	.438	.192	2.990	-5.945
School 7		68.357	.388	.150	2.873	-5.007

a. Predictor: (Constant), percentage absent
b. Dependent Variable: cumulative GPA

Chapter Summary

The seven Orange County Public High Schools researched in this dissertation provide a variety of services for Hispanic students. The most prominent programs were bilingual, sheltered and ESL models which, as the research has shown, have been implemented in the public school system for several years. These programs provide services intended to meet the needs of a growing LEP population.

This research has yielded the available achievement data of Hispanic students in each of the seven schools during the 2003 – 2004 school year. When FCAT Reading and Mathematics achievement scores of Hispanic students were compared to the FCAT Reading and Mathematics scores of the entire home school population, it was found that Hispanics scored lower than the remaining population in both areas. In addition, the socio-economic level of the school had a relationship to the FCAT Reading and Mathematics scores for Hispanic students and for the home school population. Examination of individual schools provided information related to significant differences in achievement between male and female Hispanic students. In addition, the research of individual schools provided information towards significant relationships among GPA and FCAT Reading and Mathematics scores and significant relationships between attendance and GPA.

The publicly available data collected for this research sought to determine the level of academic achievement, the differences and relationships in academic achievement of Hispanic students. While not making any determinations on best practices or programs, the research sought a direction and a determination to continue

in the advancements of teaching Hispanic students whether they are designated LEP or not. Chapter 5 will address the interpretations, implications, conclusions, and recommendations related to the findings of this research as they relate to the guiding research questions.

CHAPTER 5

SUMMARY, IMPLICATIONS, AND CONCLUSIONS

Introduction

This chapter will begin with a brief review of the literature as it related to academic achievement of Hispanic students. The emphasis in this study was on the varying levels of achievement among Hispanic high school students. These levels of achievement were measured among the Hispanic high school students and their home school and Hispanic high schools students as compared to seven other schools. The measures of achievement were grade point averages and standardized test scores (FCAT Reading and Mathematics).

This chapter also provides the purpose and summary of this research along with an interpretation of the findings formulated from the data analysis in Chapter 4. The research problems are addressed with the research questions that guided this study. The final section summarizes the research study and includes implications and recommendations for increasing levels of academic achievement of Hispanic students as well as the need for future research.

Summary of Literature Review

Much of the research appeared to be based on historical perspectives and best practices. The research on high school Hispanic students centered on programs designed to increase academic achievement. Second language programs were divided

into bilingual programs, Limited English Programs (LEP), sheltered programs, English as a Second Language (ESL) and English Speakers of Other Languages (ESOL) programs, and immersion programs. All of the programs, when properly implemented, were designed to provide academic and social support.

The research provided insight into the dilemma of cultural differences among Hispanic groups which hindered academic success, the variety of programs that are developed by individual states and districts, and the lack of agreement concerning the most effective program for Hispanic students.

The research provided a focus on the division among researchers as to what a successful program for Hispanic students should be. Some researchers believed that a successful program focused on cultural diversity to promote higher self esteem and native literacy while others promoted a total immersion program along with training for teachers in the area of second language acquisition. The concept of successful programs was also hindered by the heterogeneity of what is considered an homogenous group in the United States. The United States Census of 2000 reported that there were 32 million Hispanics in the United States and they were divided into many subgroups. Brice (2000) noted that linguistic and language differences of each subgroup need to be considered based on their needs. However, most educational programs were based on language difficulties with a disregard for the heterogeneity.

Different levels of determining English language proficiency and the assessment instruments are used according to what was adopted in each district. The research also made a differentiation between those students that were immigrants as

compared to those Hispanic students born in the United States. Regardless of their status, one study reported that Hispanic students "received lower grades, were judged by their teachers to have lower academic abilities, and scored below their classmates on standardized tests of reading and mathematics" (Echevarria & Short. 18).

The research provided an insight into the different Hispanic political entities that are embroiled in disputes to provide legislation for programs that are deemed necessary and effective. While *Lau vs Nichols* (1974) created and provided legislation to address the needs of all LEP students, it did not make a provision or distinction as to what programs are effective or appropriate. This was left to each state and district with their lobby groups and lawmakers which led to an assortment of programs to address the needs of LEP students.

Many of the researchers discussed the challenges to meeting the needs of Hispanic students. There is a concern that immigrants that have come to the United States and entered school have a limited time to meet graduation requirements. In addition, there is a concern regarding the challenges of dealing with culture shock, motivation problems and the second language acquisition process. While there are problems and challenges related to immigrants, there are also the problems and challenges associated with those Hispanic students born in the United States. These problems and challenges of Hispanics born in the United States include cultural differences, motivational problems and the acculturation process.

The challenges to meet the increasing academic demands for educators have continually grown. Chapter 4 revealed some difficulties in measuring academic

achievement of Hispanic students. Inconsistent, disaggregated or even aggregated data led to difficulties in analyzing data and difficulties in measurement. It should be noted that Orange County Public Schools has made a number of reforms to create a more accurate data base for research.

Statement of the Problem

The challenge to meet the needs of Hispanic students requires unique and innovative programs. These needs include second language learners, acculturation process, parent involvement and outreach, cultural diversity among Hispanic groups, and shared visions. The demands for higher accountability and student achievement require that all schools produce measurable gains. In addition, the No Child Left Behind Act of 2001 paired with Florida's A+ Accountability Plan not only requires incremental academic gains, but both address those students in the lower quartile where we find many Hispanic students. Most important and daring to the Florida A+ Accountability Plan is that during the 2004 – 2005 school year, all LEP students participated in the FCAT Reading and Mathematics test, requiring even more measures to improve academic levels of achievement for Hispanic students. Academic standards, assessment and accountability are defined by states and school districts establishing the need to analyze and disaggregate data.

This research pursued a number of goals relevant to high school Hispanic students: (a) to determine the level of academic achievement as determined by grade point average and standardized tests (FCAT Reading and Mathematics) of Hispanic

students compared to others in their own school, (b) to determine the level of academic achievement as determined by grade point average and standardized tests (FCAT Reading and Mathematics) between Hispanic students in seven different high schools with varying proportions of ethnicity/demographics and socio-economic status as determined by free and reduced lunch, (c) to determine the level of academic achievement as determined by grade point average and standardized tests (FCAT Reading and Mathematics) between male Hispanic students and female Hispanic students in their own school. This research was guided by 7 questions. Analysis of the data gathered will respond to the 7 questions.

The Study Population

The targeted population consisted of seven high schools from the five learning communities of the Orange County Public Schools system. The data collected was obtained from public high schools located in Orlando, Florida. Specifically, there are seventeen high schools, including the Florida Virtual School, in the Orange County Public School system in Orlando, Florida. There were five learning communities within the Orange County Public School system. These included the East Learning Community, the West Learning Community, the North Learning Community, the South Learning Community and the Central Learning Community. Seven of the high schools were selected with at least one high school from each learning community. School 1 was a part of the Central Learning Community. School 2 was part of the

East Learning Community. Schools 5 and 7 were part of the West Learning Community. Schools 4 and 6 were a part of the North Learning Community and School 3 was a part of the South Learning Community. For the purpose of this research, the participating seven schools formed the basis for the final descriptive analysis.

Research Questions

This study was guided by seven research questions that examined the achievement level of Hispanic students. The following section will present the findings and conclusions that were reached for each of the Research Questions. Prior to the quantitative analysis, a descriptive analysis was completed to compare the mean FCAT Reading and Mathematics scores of Hispanic high school students to the overall mean FCAT Reading and Mathematics scores of the school they attend.

Conclusions of Descriptive Analysis

The descriptive analysis for each school displayed the results of comparing the mean FCAT Reading scores and FCAT Mathematics scores of Hispanic high school students to the overall mean FCAT Reading scores and FCAT Mathematics scores of the school they attended. The overall conclusion is that Hispanic students scored lower in FCAT Reading scores and FCAT Mathematic scores when compared to the school population. In School 1, the mean FCAT Reading score for Hispanic

students was 262 as compared to the overall mean FCAT Reading score for School 1 of 268. The mean FCAT Mathematics score for Hispanic students was 201 as compared to the overall mean FCAT Mathematics score for School 1 of 273. In School 2, the mean FCAT Reading score for Hispanic students was 282 as compared to the overall mean FCAT Reading score for School 2 of 284. The mean FCAT Mathematics score for Hispanic students was 256 as compared to the overall mean FCAT Mathematics score for School 2 of 293. In School 3, Hispanic students had an equal mean FCAT Reading score. The mean FCAT Reading score for Hispanic students was 294 as compared to the overall mean FCAT Reading score for School 3 of 294. The mean FCAT Mathematics score for Hispanic students was 284 as compared to the overall mean FCAT Mathematics score for School 3 of 304. In School 4, the mean FCAT Reading score for Hispanic students was 286 as compared to the overall mean FCAT Reading score for School 4 of 294. The mean FCAT Mathematics score for Hispanic students was 273 as compared to the overall mean FCAT Mathematics score for School 4 of 304. In School 5 the mean FCAT Reading score for Hispanic students was 290 as compared to the overall mean FCAT Reading score for School 5 of 296. The mean FCAT Mathematics score for Hispanic students was 284 as compared to the overall mean FCAT Mathematics score for School 5 of 304. In School 6 the mean FCAT Reading score for Hispanic students was 298 as compared to the overall mean FCAT Reading score for School 6 of 315. The mean FCAT Mathematics score for Hispanic students was 289 as compared to the overall mean FCAT Mathematics score for School 6 of 324. In School 7 the mean FCAT

Reading score for Hispanic students was 300 as compared to the overall mean FCAT Reading score for School 7 of 304. The mean FCAT Mathematics score for Hispanic students was 292 as compared to the overall mean FCAT Mathematics score for School 7 of 314. With the exception of the mean FCAT Reading scores being the same for School 3, Hispanic students had a lower mean FCAT Reading and Mathematics score.

It was also noted that each school had different scores based on their socio-economic status (based on percentage of students on free and reduced lunch). The schools that had a higher percentage of students on free and reduced lunch had a lower mean score in FCAT Reading and Mathematics than those with a lower percentage of students on free and reduced lunch. Comparatively, the mean FCAT Reading and Mathematics scores of Hispanic students showed the same results. Hispanic students who attended schools with a higher percentage of students on free and reduced lunch had a lower mean FCAT Reading and Mathematics score than those Hispanic students who attended schools with a lower percentage of students on free and reduced lunch. It is also noted that those Hispanic students that attended predominantly white schools had a higher mean FCAT Reading and Mathematics score than those students in predominantly African American and Hispanic schools.

Based upon the data, not only do Hispanics lag behind in standardized test scores than the schools as a whole, but based upon socio-economic status, standardized test scores are lower when the free and reduced population (or minority population) is higher.

Research Question 1

Research question 1 asked if there was a statistically significant difference in the mean Grade Point Averages (G.P.A.) among Hispanic students in each grade in each high school.

An independent *t* test was run to analyze the difference in mean Grade Point Averages among all grade levels. Each grade level for Hispanic students was isolated to see if there was a statistically significant difference.

When the 9th grade Hispanic students were isolated and then compared to other grade levels (10th, 11th and 12th grade Hispanic students) by using a *t* test, there was a significant difference in Grade Point Average. The mean Grade Point Averages are lower in the 9th grade than the other grade levels for each school. The mean Grade Point Averages increase, but when comparing the 10th, 11th and 12th grade Hispanic students, even though there is significance in some schools, the increase between grade levels is not as great.

Research Question 2a and 2b

Research question 2a and 2b asked if there was a relationship between mean grade point average (G.P.A.) and mean Florida Comprehensive Assessment Test (FCAT) Scores for Reading
(grades 9 – 12) and was a relationship between mean grade point average (G.P.A.) and mean Florida Comprehensive Assessment Test (FCAT) scores for Mathematics

(grades 9 - 12) of Hispanic students in each of the seven Orange County Public High Schools.

A regression was run for all seven schools. A regression was run when the cumulative grade point average was the constant and the predictor of the variable FCAT Reading score and a regression was run when the cumulative grade point average was the constant and the predictor of the variable FCAT Mathematic score. A statistically significant relationship was found between cumulative Grade Point Averages and FCAT Reading scores and FCAT Mathematic scores for all seven schools. Based on the data, if the Grade Point Average was low, the FCAT Reading score was low. In addition, if the Grade Point Average was low, the FCAT Mathematic score was low. Conversely, if the Grade Point Average was high, the FCAT Reading score was high and if the Grade Point Average was high, the FCAT Mathematic score was high.

The relationship concluded that Hispanic high school students need to achieve greater levels of academic success in order to not only achieve higher FCAT Reading scores and FCAT Mathematic scores but to achieve passing scores. According to Romo and Falbo (1996), teachers need to keep track of individual students as they progress from one skill level to the next, from one course to the next and from elementary to secondary school. Romo and Falbo stated “students need to have teachers who are aware of their academic histories so that students get the kind of attention they need to make continuous progress toward earning their high school diploma” (p. 67).

Research Question 2c

Research question 2c asked if there was a relationship between Florida Comprehensive Assessment Test (FCAT) Scores for Reading (grades 9 – 12) and attendance and if there was a relationship between Florida Comprehensive Assessment Test (FCAT) scores for Mathematics (grades 9 - 12) and attendance of Hispanic students in each of the seven Orange County Public High Schools. Research question 2c was addressed by running a regression between FCAT Reading scores in grades 9 – 12 and attendance and by running a regression between FCAT Mathematics scores in grades 9 – 12 and attendance for Hispanic students in each of the seven high schools being studied. The constant and the predictor was attendance with the variables being FCAT Reading scores and FCAT Mathematics scores.

It is essential to note that the results of the data analysis show a significant relationship between attendance and FCAT Reading scores and FCAT Mathematics scores. If attendance in school is high, FCAT Reading scores and FCAT Mathematics scores are high. Whereas, if attendance is low, then, FCAT Reading scores and FCAT Mathematics scores are low.

Research Question 3a and 3b

Research question 3a asked if there was a statistically significant difference between mean Grade Point Average for Hispanic students in seven Orange County Public Schools. Question 3a further asked if there was a statistically significant

difference in mean Grade Point Average based on socio-economic status as determined by the percent of free and reduced lunch data. Finally, question 3a asked if there was a statistically significant difference in mean Grade Point Average when gender and socio-economic status are combined.

Research question 3a was addressed by running an Analysis of Variance (ANOVA) comparing grade point averages based on socio-economic status. In addition, the AVOVA analyzed the comparison of gender and socio-economic status to grade point average.

Research question 3b asked if there was a statistically significant difference between mean FCAT scores of Hispanic students in seven Orange County Public Schools (FCAT Reading and FCAT Mathematics grades 9 - 12). Research question 3b further asked if there was a statistically significant difference in mean FCAT scores (Reading and Mathematics) based on socio-economic status as determined by the percent of free and reduced lunch data Finally, question 3b asked if there was a statistically significant difference between mean FCAT scores of Hispanic students in seven Orange County Public Schools (FCAT Reading and FCAT Mathematics grades 9 - 12) when gender and socio-economic status are combined.

Research question 3b was addressed by running an Analysis of Variance (ANOVA) comparing FCAT Reading and Mathematics based on socio-economic status. In addition, the AVOVA analyzed the comparison of gender and socio-economic status to FCAT Reading and Mathematics.

In Schools 1 – 7, there was a statistically significant difference among schools when comparing socio-economic status to Grade Point Averages and when comparing socio-economic status to FCAT Reading scores and FCAT Mathematics scores of Hispanic students. In addition, when gender was included with socio-economic status, a statistically significant relationship was not found to be different than when analyzed separately. Both gender and socio-economic status each had a statistically significant difference but the difference did not change when they were combined.

It is important to note that the data showed that a school with a lower level of socio-economic status as reflected by free and reduced lunch had lower Grade Point Averages, lower FCAT Reading scores, and lower FCAT Mathematics. While the data showed that when gender and socio-economic status were combined, there is no statistically significant difference in Grade Point Average or in FCAT Reading scores and FCAT Mathematics scores, it is important to note that there is a statistically significant difference when they are isolated. Gender is further examined in research questions 4a and 4b.

Research Question 4a and 4b

Research question 4a asked if there was a statistically significant difference in Grade Point Average (G.P.A.) of Hispanic students in seven Orange County Public High Schools based on gender. Research Question 4a was addressed by running an

Analysis of Variance (ANOVA) comparing grade point averages of Hispanic students in seven high schools based on gender.

Research question 4b asked if there was a statistically significant difference in FCAT Reading scores and FCAT Mathematics scores of Hispanic students in seven high schools based on gender. Research Question 4b was addressed by running an Analysis of Variance (ANOVA) comparing FCAT Reading scores and FCAT Mathematics scores of Hispanic students in seven high schools based on gender.

An important aspect of the data is that Hispanic females in all seven schools had higher mean Grade Point Averages, higher mean FCAT Reading scores and higher FCAT Mathematics scores than Hispanic males.

Gender has another impact on educational attainment. Cultural expectation of males and females are important attributes to study in the educational achievement of Hispanic students in order to find solutions to the barriers that impede progress.

Research Question 5a and 5b

Research question 5a asked if I there was a statistically significant difference in Grade Point Average (G.P.A.) of Hispanic students in seven Orange County Public High Schools based on Limited English Proficiency (LEP) status. The status of Limited English Proficiency is divided into six areas. These areas were LY = limited English, placement into a sheltered LEP class, TN = tested, did not qualify for services, LZ = monitored for two years and was successful academically, LP = LEP,

tested and awaiting test results, not receiving services, LF = former LEP student on two year monitor and NS = Hispanic, not tested, no services.

Research question 5b asked if there is a statistically significant difference in Florida Comprehensive Assessment Test Scores (FCAT Mathematics and Reading) of Hispanic students in seven high schools based on Limited English Proficiency (LEP) status. Research Question 5b was addressed by running an Analysis of Variance (ANOVA) comparing FCAT Mathematics and Reading scores of Hispanic students in seven high schools based on LEP status.

There was a statistically significant difference in each of the seven schools among LEP students when comparing LEP status to Grade Point Average. However, the significance varied from school to school. Most of the differences occurred with those students designated LY, limited English with appropriate placement in designated LEP class. However, based upon the school, the LEP programs were different.

There was a statistically significant difference in each of the seven schools among LEP students when comparing LEP status to FCAT Reading scores and FCAT Mathematics scores. In the seven schools, there was a statistically significant difference among the varying LEP designations.

The data showed that there is a difference in mean Grade Point Averages, mean FCAT Reading scores, and mean FCAT Mathematics scores among the different classification of LEP students. It is important to note that the major difference occurs among the LY student compared to the other classifications. In

addition, the data showed that LY students had lower mean Grade Point Averages and lower FCAT Reading scores and FCAT Mathematics scores than the other classifications. Effective teaching was necessary for there to be a gain in academic achievement when those students who are placed in ESOL programs test out and are placed on monitor (tracked by grades and test scores with annual meetings and reviews) and continue in the educational system.

Research Question 6

Research question 6 asked if there is there was a statistically significant difference among Hispanic students at seven Orange County Public Schools in Grade Point Average (G.P.A.) when comparing 9th grade Hispanic students to the 10th, 11th and 12th grade students, when comparing 10th grade Hispanic students to 9th, 11th and 12th grade Hispanic students, when comparing 11th grade Hispanic students to 9th, 10th and 12th grade Hispanic students and when comparing 12th grade Hispanic students to 9th, 10th and 11th grade Hispanic students.

The data showed that there is a statistically significant difference among Hispanic students when comparing the 9^{th} grade to all other grades. However, the differences change when the data is compared to the schools with fewer minorities and a higher socio-economic status. In the lower socio-economic schools and those with a higher rate of minorities, the differences in Grade Point Averages exist among all grade levels. In schools with a higher socio-economic status and smaller percentage of minorities, the difference exists when the 9^{th} grade is compared to the

other grades. There is a smaller difference or no difference in the other grade levels in those schools. In all schools, the 9th grade has a lower mean Grade Point Average than the other grades. There is a progression in Grade Point Average in grades 10 – 12; however, it is not as prevalent in schools with a higher socio-economic and lower minority population. It is important to note that the number of students decreases from grade 9 to grade 12 (30% to 50%) which impacts the data.

There is little or no research that isolates the 9th grade level to determine why they have less academic achievement than the other grade levels. Nor is there research to explain why the Grade Point Averages in grades 10 – 12 have very little variance.

Research Question 7

Research question 7 asked if there is a statistically significant relationship among Hispanic students when comparing Grade Point Average and attendance. Can grade point average (G.P.A) be predicted by attendance?

A regression analysis was performed. The predictor and constant was the percentage of absenteeism and cumulative Grade Point Average was the variable. The analysis showed that there was a statistically significant relationship between attendance and cumulative Grade Point Average.

Recommendations for Future Research

The following recommendations are suggested as possibilities for future research related to academic levels of achievement for Hispanic high school students.

1. It is recommended that further research be conducted in the area of academic achievement among Hispanic students, but to disaggregate Hispanics to look for distinct differences. Most former research grouped Hispanics as a whole or referred to Puerto Ricans and Mexicans. Further research needs to break down Hispanics into the varying nationalities to determine academic differences.

2. It is recommended that further research be conducted in the area of comparing LEP students and the acquisition of language proficiency and academic achievement. Most research in this area was not able to determine a system to monitor progress and achievement.

3. It is recommended that further research take place analyzing Hispanic students' level of achievement after LEP students are placed on monitor and later mainstreamed. In addition, it is recommended that further research take place analyzing Hispanic student's level of achievement for Hispanic students who do not qualify for LEP service.

4. It is recommended that further research take place to determine why there is a disparity in numbers of 9th grade Hispanic students and 12th grade Hispanic students.

5. It is recommended that further research take place with Hispanic students that drop out of school to determine if they seek GED, vocational, occupational and other options. This can be accomplished with e*m*it surveys and tracking.

6. It is recommended that a longitudinal study follow 9th grade students from the high schools in one or more counties, or in other states, through four years. The study could measure levels of academic achievement by Grade Point Average and FCAT Reading score and FCAT Mathematics score of Hispanic students. The study can disaggregate Hispanics and study differences in academic achievement by gender.

7. It is recommended that further research take place to determine how effective testing, classification and placement to receive services are in schools, districts, and states.

Calderon (2001) noted that the use of reading strategies specifically designed for use by Latino students is essential as a researched-based program for effectiveness in increasing academic achievement. In addition, Calderon noted that fifty-six percent of Latino 17-year-olds are classified as functionally illiterate and are classified as at-risk for failure. Even with the classification, the majority are not assessed in time for placement.

Based on the research and data collected, Hispanic students must be tested, classified and receive services in order to increase the level of academic achievement based on standardized test scores.

8. It is recommended that further research take place to determine the efficiency of early recognition and placement. The research has found the necessity to change

the existing educational environment in order to increase academic levels of Hispanic students.

Lockwood (2001) stated, “A comprehensive school wide reform is essential to transform the entire learning environment to achieve academic success” (Lockwood, 2001, p. 101). Lockwood (2001) noted that this essential reform can target incoming 9th grade students to identify their weaknesses and have early intervention. Furthermore, Lockwood noted that early intervention with tutoring, especially one on one tutoring in reading, is a key program component.

The research has shown that early intervention and reading is a key component to success. In addition, Lockwood noted that effective programs continue for future grades so that academic levels of achievement continually increase. Lockwood reminded us that the range of actions that can be taken at a school site vary but must still meet the educational and social needs of Hispanic students. It is this range that increases academic levels of achievement as they relate to grade point average.

9. It is recommended that further research take place to determine if there is progress from one course or skill level to the next.

According to Romo and Falbo (1996), teachers need to keep track of individual students as they progress from one skill level to the next, from one course to the next and from elementary to secondary school. Romo and Falbo stated “students need to have teachers who are aware of their academic histories so that

students get the kind of attention they need to make continuous progress toward earning their high school diploma" (p. 67).

10. It is recommended that further research take place to determine if educational stability influences academic achievement. It is further recommended to further research how to attain educational stability for Hispanic students.

Rumberger and Rodriguez (2002) noted that academic achievement as reflected in grades and test scores are directly affected by educational stability. They further stated that "educational attainment is reflected in years of schooling completed" (Rumberger and Rodriguez, p. 121). Hispanic students must attend school in order to make gains academically.

However, according to Leon and Holman (2002), changes must be made in all schools so that culture, language and learning styles of all children are accepted and valued. In addition "minority students are not penalized for cultural and linguistic differences, nor are they asked to bear the unfair burden of conforming to a school culture by the abandonment of their own" (Leon and Holman, p. 178.) By making these changes as well as pedogological changes, Hispanic students who attend school increase academic achievement based on standardized test scores.

Appropriate instruction for Hispanic students would increase achievement and create a culture for students to want to attend school. This interaction of effective instruction and attendance would thereby increase achievement.

11. It is recommended that further research take place to determine the causes for high levels of absenteeism of Hispanic students. Cultural differences, gender

differences, family problems and the search for solutions are a necessity to solve the problem of academic achievement.

Gaitan (2004) noted that attendance issues are prevalent for Hispanics. Gaitann stated, “the Latino family’s home environment is affected by the family’s socio-economic standing, which could be serious economic poverty” (Gaitan, p. 46). These conditions alone can determine if the female has to remain home to care for siblings or if the male is absent from school to work and add to the family income.

Brice (2002) discussed cultural differences, isolation, language difficulties, communication difficulties and feelings of a non-responsive environment as causes for high levels of absenteeism. Before effective programs can be introduced, research towards solving these issues is essential.

Summary

The examination of academic achievement of Hispanic students is essential in making determinations of best practices. However, the evaluation of the effectiveness of programs or the level of academic achievement continues to be problematic without disaggregated data collection and dissemination. Fashola and Slavin (2001) referred to the levels of Hispanic students that drop out of school and the need to find solutions. Fashola and Slavin stated “although it is obviously important to understand the causes and consequences of the Latino dropout rate, we cannot wait until the problem is completely understood to begin solving it” (p. 69).

In retrospect, the researcher examined the education of Hispanic students in the public schools. As Hispanics become the largest growing minority population,

they are receiving attention in all areas. It is logical that there should be a focus on the overall academic achievement of this diverse cultural and ethnic group.

The diversity, both culturally and linguistically, that these students bring to the public schools is a challenge to both the system and to its personnel. The overall diversity of the student population has brought to light the question of how to best serve and educate a group that is 30 percent of the population.

It has been stated that although the number of Hispanic students attending public schools has increased, Hispanic students have the lowest levels of education and the highest dropout rate of any group. This statement demands that the causes be examined and addressed, so that the situation can be improved and rectified.

The available research, literature and government statistics report on the problems Hispanic students are confronted with in the present day educational system. These difficulties present the educational system with a high rate of dropouts among high school students. Education Week (2004) stated that "American-born Hispanics have the largest dropout rate of any ethnic or racial group" (Education Week, 2004). In addition, Education Week (2004) reported that Hispanics had the lowest graduation rate at 52 percent. The explanations for these statistics vary in length and detail but can be linked to language difficulties, high mobility, poor attendance, student and parent apathy, a curriculum that is not prepared to meet the needs of second language learners as well as cultural differences, illiteracy among family members, lack of role models, lack of proper funding to support programs and interventions, large class sizes, lack of training for teachers and staff and lack of

understanding the overall problems with a varied culture. The available literature is segmented, but does discuss the different findings that are related to the problems Hispanics face in the educational system. There are discussions of measures that can be taken to solve the problems but they are segmented and prescriptive to a distinct problem. There are no overall solutions as the problems have so many distinctions.

If research efforts continue and refinements are made in terms of best practices, evaluation of programs, aggregated and disaggregated data, and improved methods of collection of data. These efforts and the continued reforms to the educational system can lead to an improvement in the academic achievement of Hispanic students.

APPENDIX

INSTITUTIONAL REVIEW BOARD APPROVAL FORM AND LETTER

Revised 9/04

THE UNIVERSITY OF CENTRAL FLORIDA

INSTITUTIONAL REVIEW BOARD (IRB)

IRB Committee Approval Form

PRINCIPAL INVESTIGATOR(S): Lawrence Fox **IRB #: 04-2151**

PROJECT TITLE: Academic Achievement of Hispanic Students in Orange County Public High Schools: Do Hispanic Students Have Varying Degrees of Academic Success Based on the High School They Attend?

Full Board

[ ] Contingent Approval
Dated: _____

[ ] Final Approval
Dated: _____

[ ] Expiration
Date: _____

Chair

[X] Expedited Approval
Dated: 18 OCT 2004
Cite how qualifies for expedited review: #7
NO subjects -

[ ] Exempt
Dated: _____
Cite how qualifies for exempt status: _____

[X] Expiration
Date: 17 Oct 2005

Committee Members:

Dr. Theodore Angelopoulos: _____
Dr. Ratna Chakrabarti: _____
Dr. Karen Dennis: _____
Dr.Barbara Fritzsche (alt): _____
Dr. Robert Kennedy: _____
Dr. Gene Lee: _____
Ms. Gail McKinney: _____
Dr. Debra Reinhart (alt): _____
Dr. Valerie Sims: _____

IRB Co-Chairs:

Signed: _____
Dr. Sophia Dziegielewski

Signed: _____
Dr. Jacqueline Byers

NOTES FROM IRB CHAIR (IF APPLICABLE): This is pre-existing, de-identified data. SFD

University of Central Florida

Office of Research

November 10, 2004

Lawrence Fox
8603 Georgia Tech Street
Orlando, FL 32817

Dear Mr. Fox:

With reference to your protocol entitled, "Academic Achievement of Hispanic Students in Orange County Public High Schools: Do Hispanic Students Have Varying Degrees of Academic Success Based on the High School They Attend?," I am enclosing for your records the approved, expedited document of the UCFIRB Form you had submitted to our office.

Please be advised that this approval is given for one year. Should there be any addendums or administrative changes to the already approved protocol, they must also be submitted to the Board. Changes should not be initiated until written IRB approval is received. Adverse events should be reported to the IRB as they occur. Further, should there be a need to extend this protocol, a renewal form must be submitted for approval at least one month prior to the anniversary date of the most recent approval and is the responsibility of the investigator (UCF).

Should you have any questions, please do not hesitate to call me at 407-823-2901.

Please accept our best wishes for the success of your endeavors.

Cordially,

Barbara Ward

Barbara Ward, CIM
IRB Coordinator

Copies: IRB office

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