Research Report

March 2005

Center for Educational Performance & Accountability

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This report was initially released electronically before being printed in hardcopy format

Florida TaxWatch's Comparative Evaluation of Project CHILD: Phase IV

Executive Summary

Project CHILD (Changing How Instruction for Learning is Delivered) has been a statewide initiative in Florida as well as other states to help improve children's learning for more than 15 years. The CHILD model is designed to enable elementary schools to integrate technology and hands-on active learning into their reading, writing, and mathematics curricula. By 2000, there had been 60 schools across the United States with CHILD model classrooms, including several schoolwide adoptions. CHILD expanded to more than 14,000 students and more than 500 teachers in 2003-2004.

Florida TaxWatch has conducted three previous studies of Project CHILD. Phase I, which compared CHILD and non-CHILD schools with class size as a variable, revealed the program's overall positive effects in neutralizing the presumed negative impact of larger class sizes on student learning. Phase II, which substantiated results from Phase I, also demonstrated that CHILD is a cost-effective program. Phase III showed that Project CHILD would result in significant per student cost savings if expanded to other schools throughout Florida.

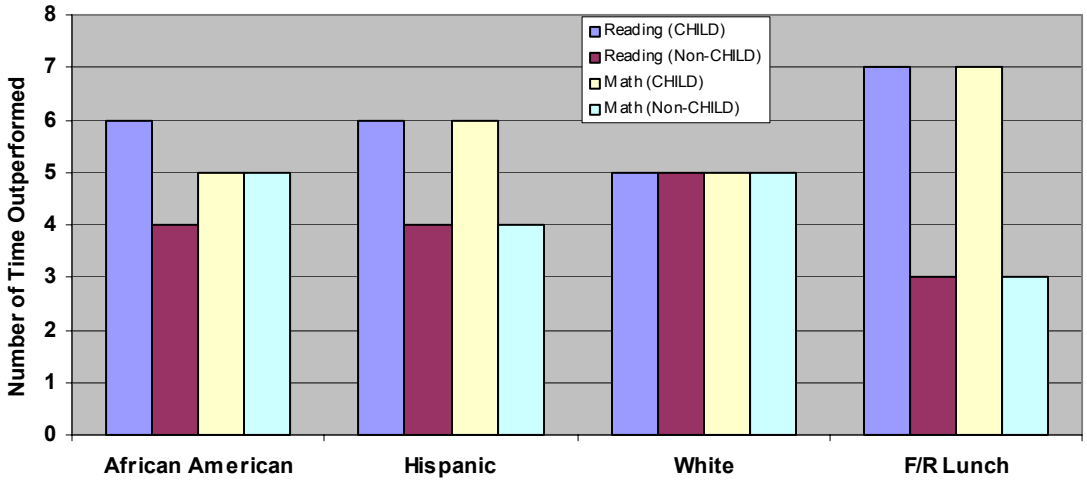
The Phase IV measures the impact of Project CHILD on students' achievement in SAT-9 and FCAT reading and math tests, compared to Non-CHILD students at twelve schools in Osceola and Marion Counties. This study also measures the impact of Project CHILD on academic achievement when scaled up to multiple schools within the same school district to create more synergy between schools, and with the added support of a CHILD District Coordinator.

Phase IV focuses on the following questions: 1) How did CHILD students perform on the Stanford Achievement Test, 9th Edition (SAT-9), which is widely used to measure achievement in curricula taught in Grades 1 through 9 throughout the United States, and the Florida Comprehensive Achievement Test (FCAT), compared to Non-CHILD students? 2) Was there a positive trend for CHILD students when the program was scaled up to multiple schools in 2003-2004? 3) How much learning gain did CHILD and Non-CHILD students have in reading, writing and math as determined by FCAT and SAT-9 tests? 4) Was there a synergistic impact of Project CHILD and the Continuous Improvement Model (CIM) in Marion County schools? Stanford Achievement Test, 9th Edition, (SAT-9) and FCAT test results provided by the Osceola and Marion school districts were used to answer the above questions.

Mean Scale Score Comparisons in Six Osceola County Schools

The number of CHILD students in the six Osceola County elementary schools as a percentage of total students at those schools was 1,330 (30.8 %) in the first year of the study (2002-2003) and, 2,654 (52.3 %) in the second year (2003-2004). The data suggest both a diverse student population in general and slightly more diversity among CHILD students in particular. The proportion of African American and Hispanic was 57.4% for CHILD students and 54.1% for non-CHILD students in the first year. There was similar racial diversity among CHILD students in the second year (2003-2004)

Figure 1. Summary Mean Scale Score Comparisons for CHILD and Non-CHILD Students in Six Osceola County Schools (Years 2002-2003 & 2003-2004)



The summary mean scale score comparisons between CHILD and Non-CHILD

students within the same schools are presented in Figure 1. On all SAT-9 and FCAT reading tests for Grades 1 through 5 over two years, African American and Hispanic CHILD students outperformed their Non-CHILD counterparts six out of ten times. White CHILD students outperformed non-CHILD students five times and economically disadvantaged CHILD students scored better seven times. On the math tests for Grades 1 through 5 in the two years, African American and White CHILD students performed similar to their Non-CHILD counterparts while Hispanic CHILD students outperformed Non-CHILD counterparts six times out of ten and economically disadvantaged CHILD students did better seven times.

Mean Scale Score Comparisons in Six Marion County Schools

The number of CHILD students in the six Marion County elementary schools as a percentage of total students at those schools was 323 (10%) in the first year of the study (2002-2003) and, 1,175 (36.8%) in the second year (2003-2004). The ethnic profile of Non-CHILD students in the first year was 13.9% African American, 4.1% Hispanic, 78.5% White and 3.5% others. For CHILD students it was, 15.8% African American, 3.4% Hispanic, 78% White, and 2.8% others. The data show that students are predominantly White in the subject schools, with a slightly more diverse population among CHILD students. There was no significant change in the ethnic distribution of CHILD and Non-CHILD students in the second year.

Figure 2. Summary Mean Scale Score Comparisons for CHILD and Non-CHILD Students In Six Marion County Schools (Years 2002-2003 & 2003-2004)

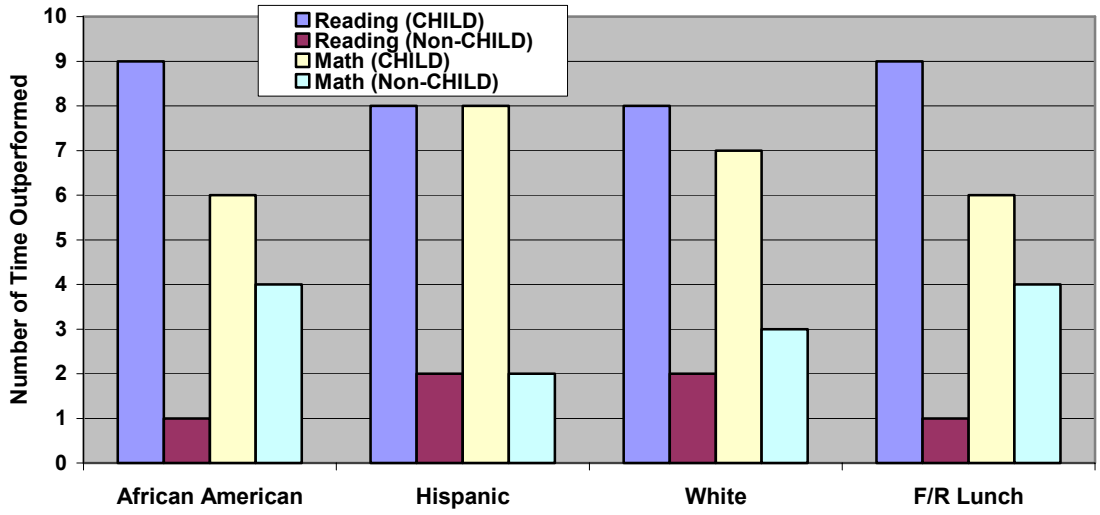


Figure 2 presents summary mean scale score comparisons of the SAT-9 and

FCAT results for CHILD and Non-CHILD students in the six Marion County schools. On SAT-9 and FCAT reading tests for Grades 1 through 5 in the two years, African American and economically disadvantaged CHILD students performed better nine out of ten times compared to their Non-CHILD counterparts. Hispanic and White CHILD students outperformed their counterparts eight of ten times. On the math tests, Hispanic CHILD students exceeded their Non-CHILD counterparts eight out of ten times, followed by White CHILD students with higher scores seven times. Both African American and economically disadvantaged CHILD students outperformed their counterparts six times.

Conclusions

Controlling for ethnicity and economic level, the comparative assessments between CHILD and Non-CHILD students within the same schools and between school districts show the following results:1. Comparing Osceola and Marion County schools, CHILD students had higher performance across the board in the vast majority of cases on the SAT-9 and FCAT reading and math tests.

2. Project CHILD narrowed the achievement gap for poor and minority students versus white students. In both counties, particularly in Marion County, on both reading and math tests, minority and economically disadvantaged CHILD students outperformed their Non-CHILD counterparts in the majority of cases.

3. There is a distinct positive trend in student achievement when CHILD includes more students within a school and within a district. With increasing participation in the second year, mean scale score comparisons indicate that CHILD students performed better on the math and reading tests in both counties compared to the first year.

4. Project CHILD added value to the Continuous Improvement Model (CIM) in the Marion County School District as evidenced by higher performance of CHILD students compared to Non-CHILD students in the same district.

5. The CIM added value to Project CHILD as evidenced by comparison with Osceola County, which did not have CIM. On the reading tests, all CHILD student cohorts in Marion County scored higher than their counterpart CHILD students in the Osceola County. On the math tests, all CHILD cohorts in Marion County except the economically disadvantaged did better than their counterparts in Osceola County.

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Introduction

Education is one of the most important factors influencing Florida's economic and technological competitiveness in a global economy. The success of our schools and their relative strength compared to other states and developed nations is a strong determinant of our place in the world. Therefore, academic achievement is a critical policy issue in Florida.

Today's conventional approach in elementary school classrooms involves a single teacher working with a single grade level for a single year using predominantly textbook-driven teaching materials. There is a growing concern among parents, community leaders and lawmakers that this approach does not address the challenges presented by today's diverse students living in a multimedia world -- and does not utilize available instructional technologies effectively. Project CHILD (Changing How Instruction for Learning is Delivered) has emerged as a response to the need for changes in the conventional teaching approach.

This is the fourth phase of an independent assessment of Project CHILD conducted by Florida TaxWatch (FTW). Different than the previous studies by FTW which compared students from CHILD and non-CHILD schools, this study measures the impact of Project CHILD on students' achievement in SAT-9 and FCAT reading and math tests, compared to Non-CHILD students within the same schools. The study was also designed to measure the impact of Project CHILD on academic achievement when scaled up to multiple schools within the same school district to create more synergy between schools, with the added support of a CHILD District Coordinator.

Project CHILD Initiative

Project CHILD is a statewide initiative to help improve elementary education. It was initially developed in 1988 at the Florida State University (FSU) by Dr. Sarah (Sally) Butzin and originally stood for "Computers Helping Instruction and Learning Development." CHILD is currently operated by the Institute for School Innovation at FSU under the leadership of Dr. Butzin, Founder and Executive Director. In 2000 the

acronym for CHILD was changed to "Changing How Instruction for Learning is Delivered" to more accurately reflect the comprehensive nature of the model.

Original research and development of CHILD was funded by the Legislature from 1988 to 1990, with subsequent dissemination and research funding beginning in 1998. Groups including the U.S. Department of Education's National Diffusion Network and the Georgia Innovation Program have recognized CHILD as an effective instructional management program.

The CHILD model is designed to enable elementary schools to integrate technology and hands-on active learning into their reading, writing, and mathematics curricula. It incorporates a variety of innovative instructional management and delivery strategies to actively engage students, improve their behavior, and heighten their learning. The model is centered on cognitive-based research, continuous progress instruction, authentic assessment, and cooperative, hands-on learning. CHILD instructional materials are aligned with state standards and intensive training of local staff, provided by the Institute for School Innovation.

The CHILD system supplants traditional instructional delivery. Teachers work in teams of three with each becoming a specialist in reading, writing, or mathematics. Subject-focused teachers form cross-grade clusters (K-2 or 3-5) to facilitate standards-based skill articulation and in-depth diversified learning.

There are three classrooms in a cluster – one for reading, one for writing, and one for mathematics. One classroom serves as each student's home base – usually grade specific. After a brief whole-group teacher-directed lesson, students work at six learning stations to practice and apply lesson content using computers and hands-on activities along with textbooks and paper-pencil work Students rotate through the three-cluster classrooms, spending 60-90 minutes on each subject, then returning to their home base for instruction in science and social studies.

Students stay with their cluster team of teachers for three years, thereby allowing them to become very familiar with each student's strengths, learning styles, and needs, thus helping all students to maximize their academic potential. Also, one of the six classroom stations is a Teacher Station where the teacher can work with individual students and small groups for additional instruction as needed.

Literature Review

The CHILD instructional system has undergone extensive evaluation and revision over the past fifteen years. Independent evaluators have demonstrated that CHILD students have higher test scores and better discipline than their counterparts in traditional classrooms. The earliest research, which began in 1988, was performed at two dissimilar elementary schools in Florida: a high achieving school in the Florida Panhandle and the other a low achieving school on Florida's East Coast. Results at both sites were very positive[1].

After the initial three-year study at these two schools, the research was extended to nine elementary schools throughout Florida involving over 1,500 students. Again, the results were positive. Project CHILD students had better test scores in reading, language arts, and mathematics than their counterparts in traditional classrooms. Evaluators reported other positive effects of the program such as better attitudes toward school and learning, and positive comments from parents on random surveys[2]. A subsequent evaluation at the nine sites for two more years showed the positive effects strengthened over time. For example, by the third year "effect sizes" at the nine sites (determined by subtracting mean non-CHILD test scores from mean CHILD scores, then divided by the pooled standard deviation) showed 15 positive effects and zero negative effects across all subjects and grades[3].

As a result of these positive results across all nine sites, Project CHILD was validated as an effective program by the U.S. Department of Education's National Diffusion Network and received funding nationwide dissemination[4]. Schools in 10 states and Alberta, Canada adopted the CHILD model. By 2000, there had been 60 schools across the United States with CHILD model classrooms, including several school-wide

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[1] Orr, C. 1991. Evaluating Restructured Elementary Classes: Project CHILD Summative Evaluation. Paper presented at the Southeast Evaluation Association, Tallahassee, FL.
2 King, F.J. and Butzin, S. 1992. An Evaluation of Project CHILD. Florida Technology in Education Quarterly, Vol. 4, No.4, 45-63.
3 Kromhout, O. 1993. Evaluation Report: Project CHILD 1992-1993. Report to Daniel Memorial Institute, Jacksonville, FL.
4 Butzin, S. Project Child: A Decade of Success for Young Children
http://www.thejournal.com/magazine/vault/A2882D.cfm ,Tallahassee, Florida, 2000

adoptions[5]. CHILD expanded to more than 14,000 students and more than 500 teachers in 2003-2004.

Two longitudinal studies confirmed the success of Project CHILD. The first involved 360 sixth grade students at two middle schools in Okaloosa County, Florida. One hundred eighty students who had participated in Project CHILD in elementary school were matched with students from traditional self-contained classrooms. The CHILD students had higher grade point averages, higher standardized test scores, and more enrollments in advanced mathematics classes[6].

A subsequent longitudinal study compared 25 students in Hernando County, Florida, who had participated in Project CHILD from kindergarten through fifth grade with 25 matched students from traditional, self-contained classrooms. By fifth grade the CHILD students had higher standardized test scores in reading, language arts, and the total battery. The most significant differences were in math concepts and reading comprehension[7]

Summary of Previous FTW Studies

Florida TaxWatch has conducted three studies of Project CHILD. Phase I, which compared CHILD and non-CHILD schools with class size as a variable, documented the program's overall positive effects despite having larger class sizes. Phase II, which substantiated results in Phase I, demonstrated that CHILD is a cost-effective program. Phase III showed that Project CHILD would result in significant per student cost savings if expanded to other schools throughout Florida.

Review of Findings From Phase I

Conducted in 1999-2000[8], Phase I compared three diverse and geographically dispersed CHILD elementary schools against three demographically similar schools

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5 Butzin, S. Project Child: A Decade of Success for Young Children http://www.thejournal.com/magazine/vault/A2882D.cfm ,Tallahassee, Florida, 2000

6 Gill, B. 1995. Project CHILD Middle School Follow-up Evaluation: Final Report. Daniel Memorial Institute, Jacksonville, FL.

7 Gill, B. 1998. Hernando County 1997 test score comparisons for fifth grade students enrolled in Project CHILD from kindergarten through grade 5. Report to Hernando County School Board, FL.

[8] Florida TaxWatch's Comparative Evaluation of Project CHILD: Phase I, 2001 http://www.floridataxwatch.org/projchild/projchild1.html

with smaller average class sizes. Results based on the Florida Comprehensive Achievement Test (FCAT) and the Stanford Achievement Test Series, Ninth Edition (SAT 9) indicated that classes at two of the three CHILD schools scored substantially better than their counterparts at traditional schools with smaller class sizes. This was especially true at the John D. Floyd Elementary in Hernando County where technology and CHILD coordinators fully complemented CHILD teachers. Overall, Phase I of the Evaluation indicated that Project CHILD makes a significant positive contribution to student achievement.

Review of Findings From Phase II

Florida TaxWatch's Phase II study, conducted in 2000-2001, included two additional CHILD schools[9]. This evaluation showed a strong correlation between the degree to which CHILD was implemented and test score results in each of the five schools.

A cost-effectiveness analysis suggested that, if fully implemented statewide, the CHILD model with a class size of 30 students would accrue annual savings of more than $4 billion over the traditional class size of 20 students. The statistical assessment indicated that, even with considerably larger enrollments, Project CHILD classes scored significantly higher on the FCAT and SAT than their counterparts at traditional schools.

Review of Findings From Phase III

Florida TaxWatch's Phase III study conducted in 2001-2002 demonstrated that CHILD continued to have a positive impact on student achievement based on standardized test scores and surveys of teachers, students, and parents[10]. This study also documented that substantial cost-savings could be directed back into the classroom if CHILD were expanded to other schools across the state, thereby compounding the positive impact on student achievement.

A Phase III quantitative evaluation showed that students in CHILD schools performed at a significantly higher level as measured by FCAT scores on more than half

[9] Florida TaxWatch's Comparative Evaluation of Project CHILD: Phase II, 2002 http://www.floridataxwatch.org/projchild/projchild2.html

[10] Florida TaxWatch's Comparative Evaluation of Project CHILD: Phase III, 2003 http://www.floridataxwatch.org/projchild/projchild3.html

of the score comparisons, despite the fact that class sizes in the CHILD schools were approximately 30 students versus 20 students in the comparison schools. In other words, if smaller class size made a difference in student achievement, CHILD schools overcame its influence in more than half of the comparisons. The longitudinal analysis of FCAT and SAT 9 score comparisons of one CHILD school and one non-CHILD school demonstrated that student participation in CHILD resulted in very substantial improvement in performance on standardized tests.

A Phase III evaluation of qualitative data concluded that CHILD added value to the educational enterprise in ways that were not fully reflected by focusing on the FCAT as the sole assessment tool. Important clues were provided as to why CHILD may not be optimally implemented in some settings and how this, in turn, can negatively influence student achievement.

Research Questions and Methodology

Florida TaxWatch's Phase IV study of Project CHILD was designed to compare the performance of CHILD and Non-CHILD students in twelve Osceola and Marion County schools. This study focused on the following questions: 1) How did CHILD students perform on SAT-9 and FCAT tests compared to Non-CHILD students? 2) Was there a positive trend for CHILD students when the program was scaled up to multiple schools in 2003-2004? 3) How much learning gain did CHILD and Non-CHILD students have in reading, writing and math as determined by FCAT and SAT-9 tests? 4) Was there a synergistic impact of Project CHILD and the Continuous Improvement Model (CIM) recently implemented in Marion County schools?

Stanford Achievement Test, 9th Edition, (SAT-9) and FCAT test results provided by the Osceola and Marion school districts were used to help answer the above questions. For Grades 1-2, SAT-9 scale scores in reading and math and for Grades 3-5, FCAT Sunshine State Standards scale scores in reading, writing and math were used to compare the performance of CHILD and non-CHILD students. Kindergarten students are not tested in these two districts.

The SAT-9 is used to measure achievement in curricula taught in Grades 1 through 9 throughout the United States. This norm-referenced test is used by the State of

Florida as part of the FCAT, whose scores assess the quality of education in elementary, middle and high schools throughout Florida. The FCAT has three components[11]:

(1) Sunshine State Standards (SSS), a criterion-referenced test that assesses student achievement in reading and mathematics against SSS standards for each grade.

(2) A component that measures students' writing ability.

(3) A Norm-Referenced Test (NRT) which provides achievement data to compare students' performance in reading and mathematics with the performance of students in the nation as a whole. Reports of results to students, schools and school districts are in mean scores on a scale of 100 to 500. Additionally, FCAT Reading SSS scores are reported as achievement level (1-low through 5-high). Students in Grades 3 through 10 take both the FCAT SSS and NRT components. Students in Grades 4, 8, and 10 take the FCAT Writing component.

In 2001, an FCAT developmental scale score (DSS) was created to place achievement scores from Grades 3 through 10 on a continuum scale as a tool to make comparisons across grades. In this study, for Grades 2 and 3, student learning gains were measured by subtracting first grade SAT national percentile rank (NPR) scores from second grade scores and second grade scores from third grade scores; for Grades 4 and 5, gains were measured by a similar process shown below:

Learning gains for grade 2 and 3 = 2004 mean SAT NPR scores for grade 2 (or 3) – 2003 mean SAT NPR scores for grade 1 (or 2) Learning gains for grade 4 and 5 = 2004 mean FCAT DSS for grade 4 (or 5) – 2003 mean FCAT DSS for grade 3 (or 4)

Due to high student mobility, almost 30% of students without test data in both the 2003 and 2004 datasets were dropped from the measurement of learning gains.

While FCAT developmental scale scores were developed to measure the success of students across grades, it is important to mention several limitations of these scores[12]. First, the content of tests is not the same for all grades. As a result, changes in developmental scores do not necessarily reflect learning gains. In order to measure

[11] Florida Department of Education Website: http://www.firn.edu/doe/sas/fcat.htm, retrieved on January 15, 2005.

[12] Hoffman, R. G., Wise, L. L., Thacker, A. A., Ford, L. A.: Florida Comprehensive Assessment Tests, Technical Report on Vertical Scaling for Reading and Mathematics, Harcourt Educational Measurement, San Antonia, Texas, January 2003.

learning gains more accurately, tests covering the same material must be taken before and after each grade. A single test can serve as a post-test for its grade and a pre-test for the next grade if there is adequate overlap in content between grades. Since the FCAT DSS relies on such assumptions despite some variation in curriculum coverage across grades, caution must be exercised in interpreting DSS as an absolute measurement of learning gains.

Secondly, DSS is converted from scale scores; therefore, there is overlap in DSS across grades. In other words, developmental scale scores do not necessarily increase across grades. As shown in Table 1, minimum and maximum DSS for Grade Three are 86 and 2,514 (respectively); for Grade Four 295 and 2,638; and for Grade Five 474 and 2,713. Due to overlap in DSS across grades, a student could have the same developmental score while being in a high achievement level in both grades. For instance, if a student scores 450 in third grade and 420 in fourth grade, the DSS for this student could be the same for both grades. In this case, "learning gain" measured as the difference between DSS in the fourth and third grades would be zero. This does not mean, however, that the student gained nothing in fourth grade.

Table 1. Comparison of Scale Scores and Developmental Scores

	Reading DSS			Math DSS		
Scale Score	Grade 3	Grade 4	Grade 5	Grade 3	Grade 4	Grade5
100	86	295	474	375	581	569
500	2,514	2,638	2,713	2,225	2,330	2,456

Florida TaxWatch's Phase IV study focuses on learning gain comparisons between CHILD and Non-CHILD students, not on students' absolute gains across grades. Therefore, the second limitation mentioned above does not impact the analysis featured in this study.

As noted above, the Marion County school district -- in addition to CHILD -- has begun the Continuous Improvement Model (CIM) since 2002-2003, aimed at raising student achievement across the district in grades K-12. The FTW study also seeks to assess whether there is synergy between CHILD and CIM by comparing Marion and Osceola County schools' test scores.

Data Description

SAT-9 and FCAT tests scores from six elementary schools in Marion County (East Marion, Dr. N. H. Jones, Sparr, Ft. McCoy, Ocala Springs and Maplewood) and six elementary schools in Osceola County (Central Avenue, Reedy Creek, Hickory Tree, Deerwood, Cypress, and Partin Settlement) were used in this study in order to answer the research questions mentioned before. In each district two schools had been implementing the CHILD model in some of their classrooms during or prior to the 2002-2003 school year. The other schools were added to the mix in 2003-2004, and also more CHILD classrooms were added that year within the existing CHILD schools.

The number of CHILD students in the six Osceola County elementary schools as a percentage of total students was 1,330 (30.8 %) in the first year of the study (2002-2003) and, 2,654 (52.3 %) in the second year (2003-2004) versus 323 (10%) and 1,175 (36.8%) in the six Marion County schools. All participating students in both school districts were included in the mean scale score comparison but only matched students' scores in both years were used for the learning gain analysis.

Two years' data indicate that the mobility rate, defined as the percentage of students who moved to other schools in the second year, was substantial in both districts: 29.9% in Osceola County and 24.9% in Marion County. High mobility rates are a big limitation on longitudinal analysis of newly implemented educational programs such as CHILD and CIM.

Comparison of CHILD and Non-CHILD Students in Osceola County Schools

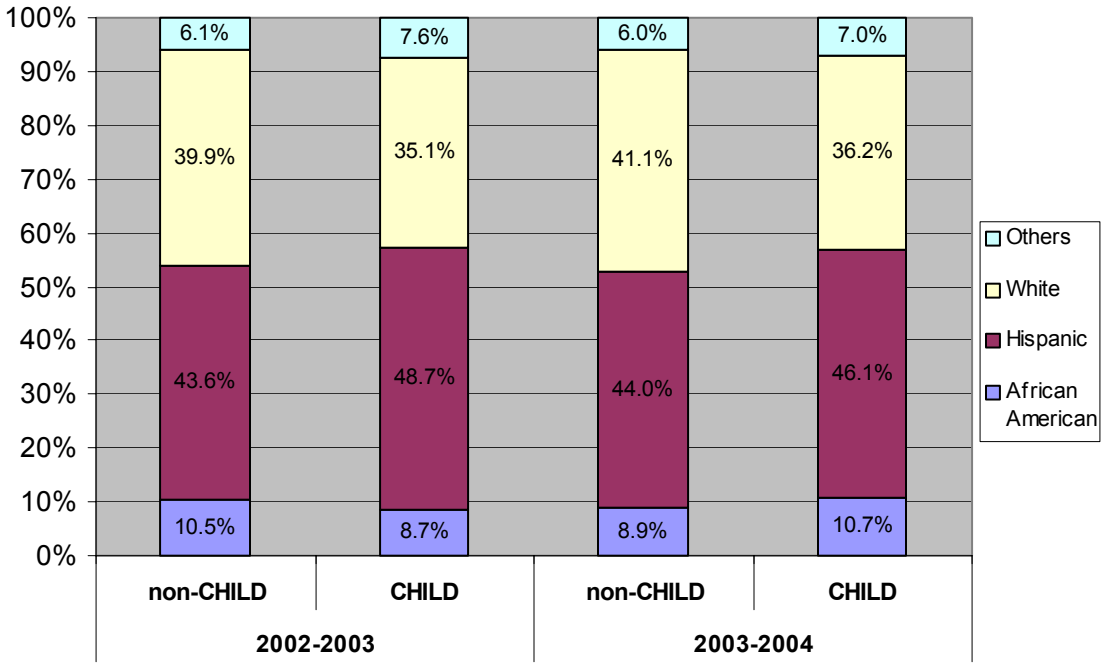
Student Profile

The 2002-2003 profile of CHILD students in the six Osceola County schools was 8.7% African American, 48.7% Hispanic, 35.1% White, and 7.6% others versus 10.5% African American, 43.6% Hispanic, 39.9% White and 6.1% others for Non-CHILD students (See Figure 1).

The data suggest both a diverse student population in general and slightly more diversity among CHILD students in particular. The proportion of African American and Hispanic was 57.4% for CHILD students and 54.1% for non-CHILD students. There was

similar racial diversity in the second year (2003-2004) with an increase in the rate of African Americans among CHILD students to 10.7%.

Figure 1. Ethnic Profile of CHILD and Non-CHILD Students



Likewise, the percentage of students with limited English proficiency (LEP) was higher for CHILD students in both years compared to Non-CHILD students. As seen in Figure 2, the percentage of LEP eligible and LEP monitoring was 13.1% and 8.1%, respectively, for Non-CHILD versus 12.5% and 10%, respectively, for CHILD students in the first year; 10.7% and 8% for Non-CHILD and 14.7% and 9.2% for CHILD students in the second year.

Figure 2. Comparison Between CHILD and Non-CHILD Students by LEP

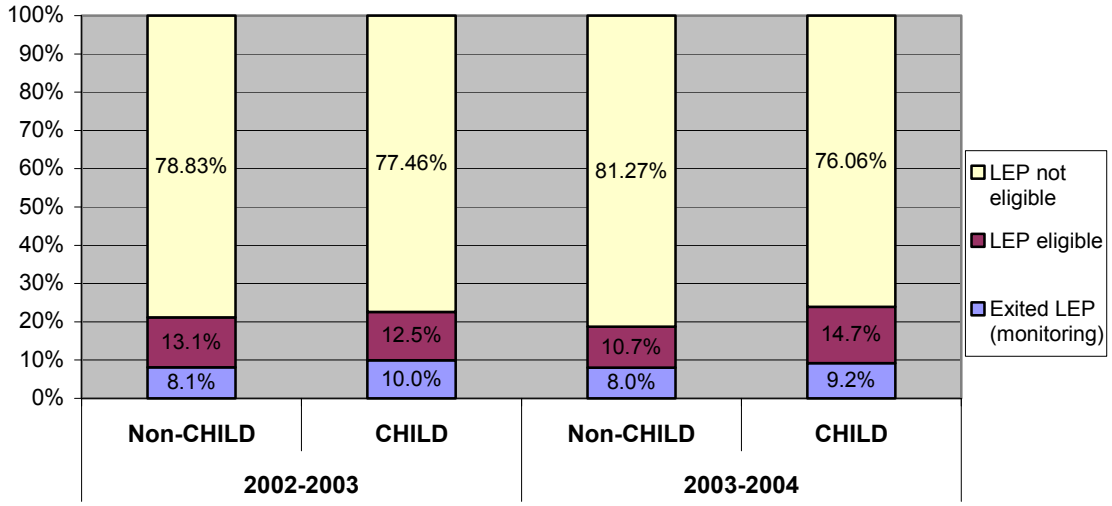
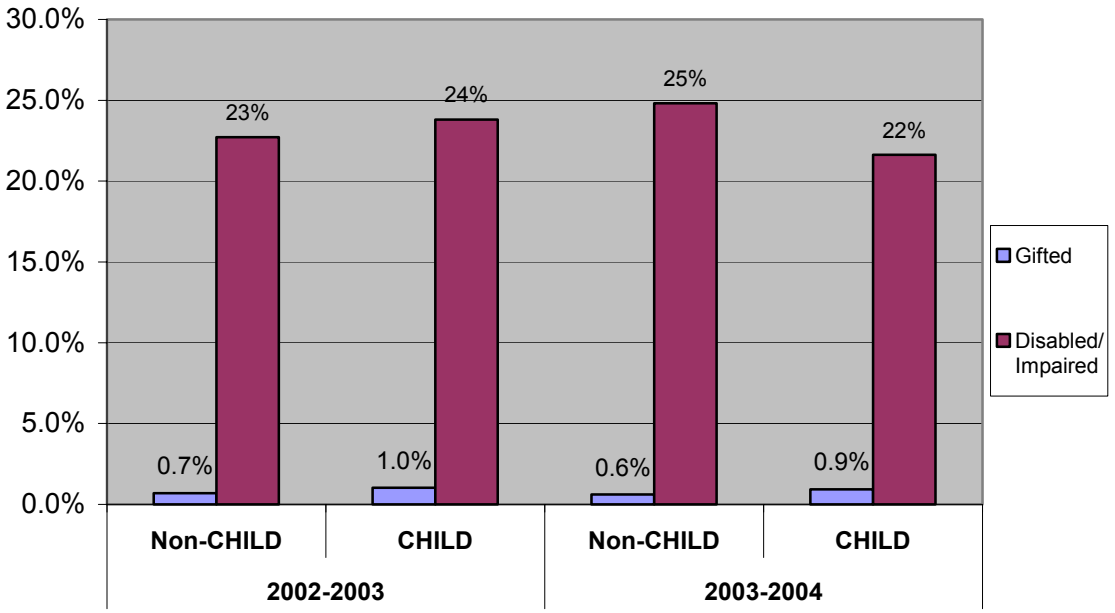


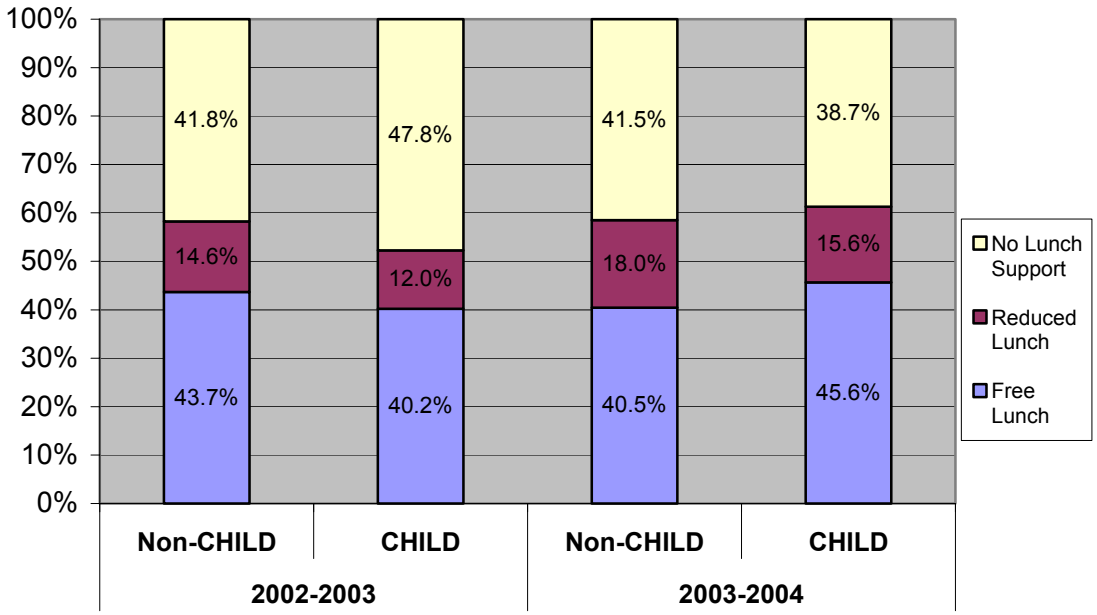
Figure 3 shows that the proportion of gifted students in CHILD was higher by a small percentage (0.3) in both years. The proportion of disabled/impaired students was 23% for Non-CHILD versus 24% for CHILD students in the first year; and 25% for Non-CHILD versus 22% for CHILD students in the second year.

Figure 3. Comparison Between CHILD and Non-CHILD Students by ESE



The percentage of CHILD students who received free lunches increased to 45.6% in the second year from 40.2% in the first year while the rate for Non-CHILD students dropped from 43.7% to 40.5% (see Figure 4). However, the percentage of Non-CHILD students who received reduced lunch supports were slightly higher in both years with 14.6% for Non-CHILD versus 12% for CHILD students in the first year; 18% for Non-CHILD versus 15.6% for CHILD in the second year.

Figure 4. Comparison Between CHILD and Non-CHILD Students by Economic Levels



Mean Scale Score Comparisons

CHILD and Non-CHILD student achievement in grades 1 and 2 is measured by the SAT-9. SAT is a standardized national norm-based test which provides students both numeric and percentiles scores. Mean scale scores used in this section compared CHILD and Non-CHILD achievement by ethnicity and economic level in 2002-2003 and 2003-2004. However, it is important to note that student population in both years was not the same; therefore comparison between the two years must be done with caution. As seen in Table 2, in the six Osceola County schools the percentage of CHILD students increased to 52.3% from 30.8% and in Marion County it increased to 36.8% from 10%, due in part to funding provided by the Florida Legislature. However, such substantial change makes

it difficult to compare test results between the two years. For instance, as seen in Figure 5, Hispanic CHILD students slightly outperformed their Non-CHILD counterparts in the first year, but the achievement gap increased significantly in the second year. This does not mean that Hispanic students who participated in Project CHILD performed worse in the second year. Instead, these results may reflect addition of low performing Hispanic students to Project CHILD classrooms in the second year.

Table 2. The Percentage of CHILD and Non-CHILD Students in the 12 Participating Osceola and Marion County Schools

	Six Osceola County Schools				Six Marion County Schools			
	2002-2003		2003-2004		2002-2003		2003-2004	
	Non-CHILD	CHILD	Non-CHILD	CHILD	Non-CHILD	CHILD	Non-CHILD	CHILD
1st Grade	75.5%	24.5%	50.4%	49.6%	87.0%	13.0%	60.4%	39.6%
2nd Grade	73.5%	26.5%	51.6%	48.4%	82.3%	17.7%	58.0%	42.0%
3rd Grade	62.3%	37.7%	47.2%	52.8%	93.7%	6.3%	69.0%	31.0%
4th Grade	64.9%	35.1%	40.9%	59.1%	93.5%	6.5%	64.8%	35.2%
5th Grade	65.2%	34.8%	47.7%	52.3%	92.9%	7.1%	63.2%	36.8%
Average	69.2%	30.8%	47.7%	52.3%	90.0%	10.0%	63.2%	36.8%

Figures 5 and 6 show the mean scale score difference for Grade 1 in reading and math, which is calculated by subtracting the mean of Non-CHILD students from the mean of CHILD students. On the reading scores, African American, White and economically disadvantaged CHILD students (except for Hispanics) outperformed their counterpart Non-CHILD students in both years. In math, CHILD students in all cohorts outperformed Non-CHILD students in both years. Economically disadvantaged CHILD students had the highest mean score difference in both years, followed by African American students in the first year and White students in the second year.

Figure 5. Mean Difference between CHILD and Non-CHILD Students' SAT Reading Scale Scores (1st Grade)

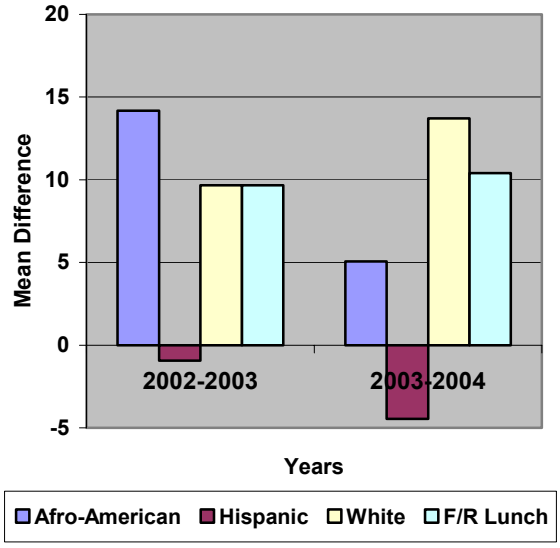


Figure 6. Mean Difference between CHILD and Non-CHILD Students' SAT Math Scale Scores (1st Grade)

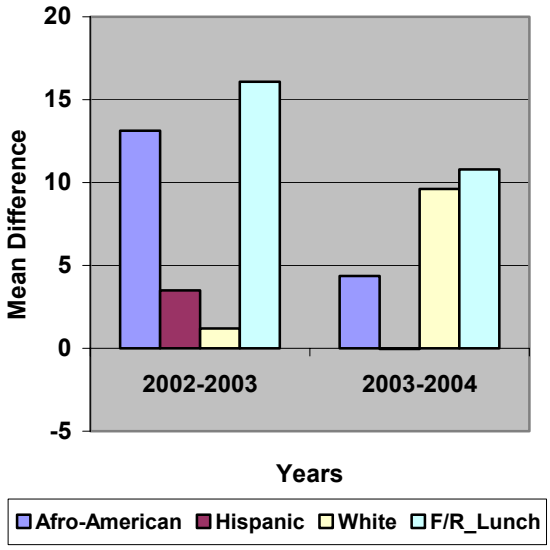


Figure 7 shows that Grade 2 CHILD students in all categories outperformed Non-CHILD students on reading tests in the first year. African-American CHILD students' mean scale score difference was the highest one in the second year. Although economically disadvantaged students had the best score in the first year, they dropped to the lowest score in the second year compared to their Non-CHILD counterparts. On the SAT-9 Math test, as seen in Figure 8, CHILD students had higher scale scores than Non-CHILD students for all categories. The biggest gap was between African-American CHILD and Non-CHILD students in the second year followed by White students.

Figure 7. Mean Difference between CHILD and Non-CHILD Students' SAT Reading Scale Scores (2nd Grade)

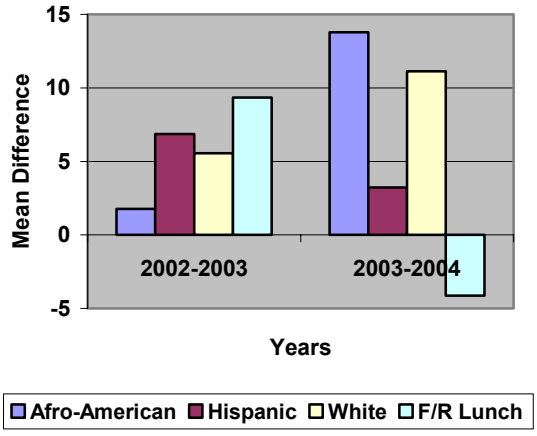
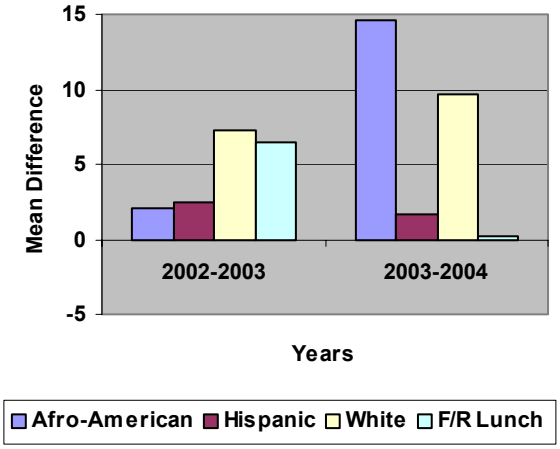


Figure 8. Mean Difference between CHILD and Non-CHILD Students' SAT Math Scale Scores (2nd Grade)



Reading scores for Grade 3 (see Figure 9), show that CHILD students underperformed Non-CHILD students in the first year but outperformed them in the second year for all groups except African-American. It is important to note that African-American CHILD students showed some improvement in the second year, having virtually the same score as their counterpart. Figure 10 shows that similar to their achievement in reading scores, CHILD students underperformed in the first year but outperformed in the second year -- again with the exception of African American students. Economically disadvantaged CHILD students had the highest performance in the second year among all groups.

Figure 9. Mean Difference between CHILD and Non-CHILD Students' FCAT SSS Reading Scale Scores (3rd Grade)

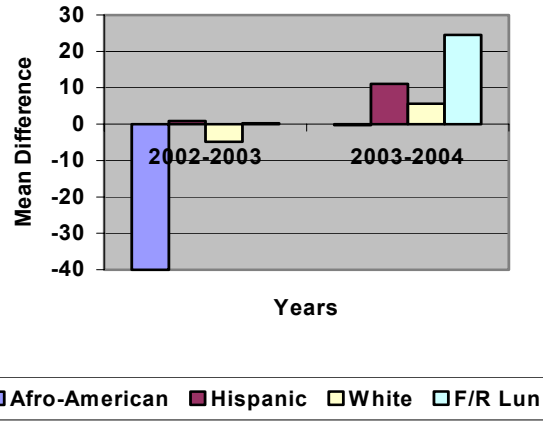


Figure 10. Mean Difference between CHILD and Non-CHILD Students' FCAT SSS Math Scale Scores (3rd Grade)

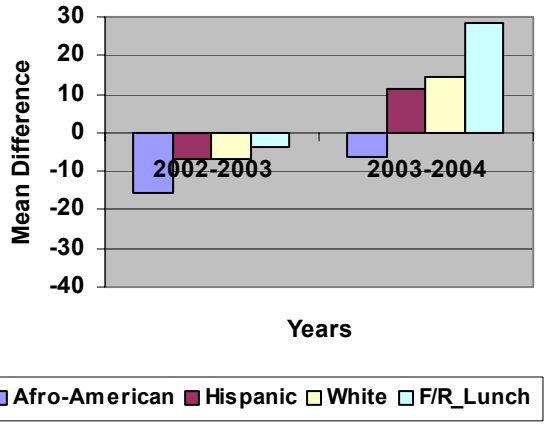


Figure 11 demonstrates that on reading scores, compared to their counterparts, minority CHILD students underperformed in the first year but outperformed in the second year; economically disadvantaged CHILD students outperformed in both years; and White CHILD students had the same mean score in the first year, but had a slightly lower score in the second year. Figure 12 shows that minority and economically disadvantaged CHILD students enjoyed similar improvement in math in the second year while White CHILD students scored lower than their counterparts in both years.

Figure 11. Mean Difference between CHILD and Non-CHILD Students' FCAT SSS Reading Scale Scores (4th Grade)

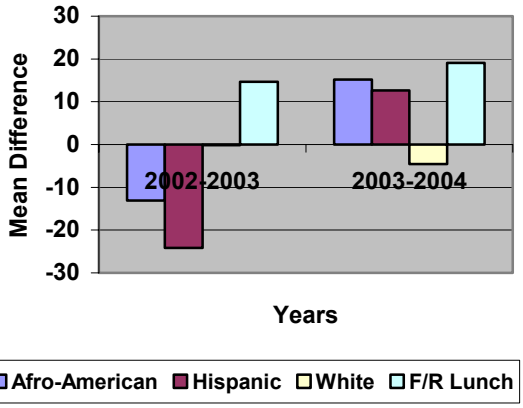


Figure 12. Mean Difference between CHILD and Non-CHILD Students' FCAT SSS Math Scale Scores (4th Grade)

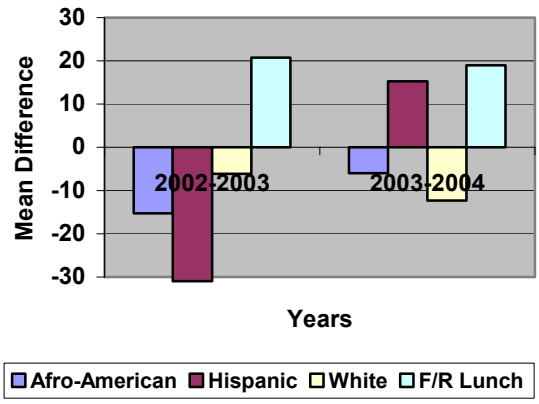
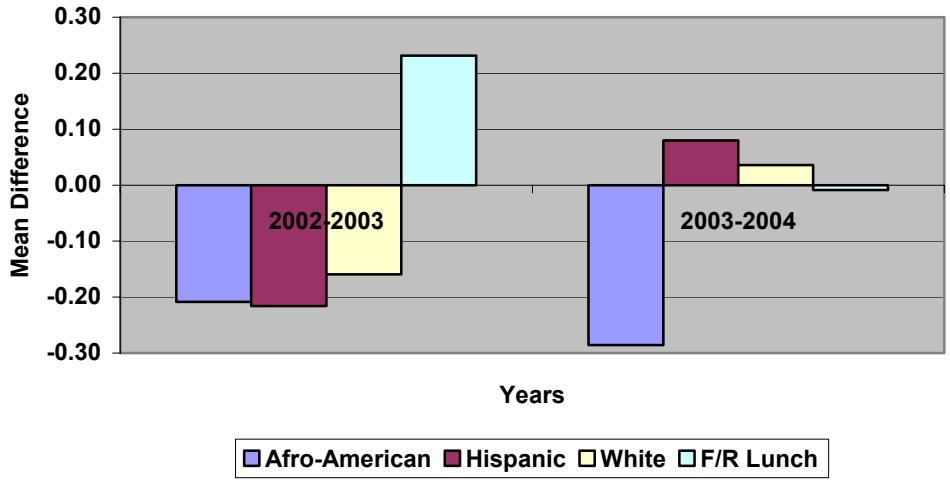


Figure 13 shows that the mean score difference on the FCAT writing test was lower than 0.3 points for all groups. While Hispanic and White CHILD students closed the gap in the second year, African-American CHILD students underperformed in both years. Economically disadvantaged CHILD students had a higher score in the first year and the same score in the second year compared to their Non-CHILD counterparts.

Figure 13. Mean Difference between CHILD and Non-CHILD Students' FCAT Writing Scores (4th Grade)



Figures 14 and 15 show quite a mixed picture for CHILD students' achievement in FCAT reading and math tests for Grade 5. African American CHILD students underperformed in reading in the first year but outperformed in the second year. Hispanic CHILD students outperformed in the first year but slightly underperformed in the second year. White and economically disadvantaged CHILD students underperformed in both years.

In math, minority CHILD students underperformed in the first year but outperformed in the second year while White and economically disadvantaged CHILD students underperformed in both years. Overall, minority CHILD students had higher scores in both Grades 4 and 5 compared to their counterparts.

Figure 14. Mean Difference between CHILD and Non-CHILD Students' FCAT SSS Reading Scale Scores (5th Grade)

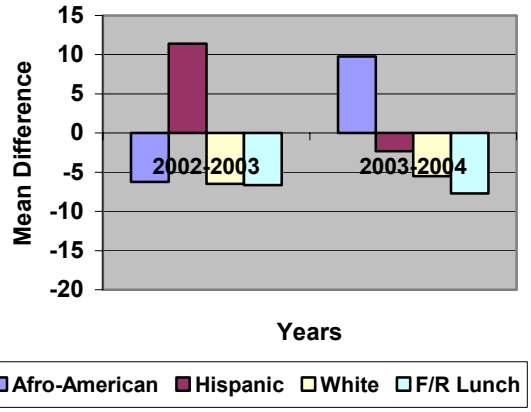
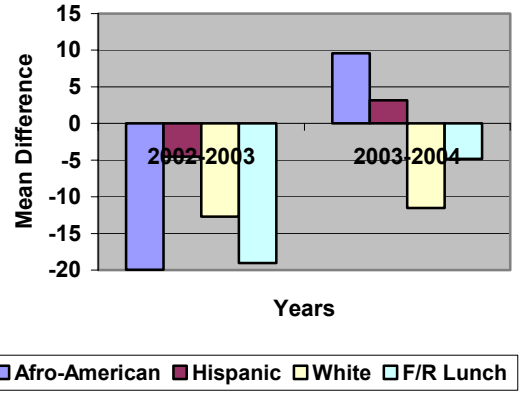


Figure 15. Mean Difference between CHILD and Non-CHILD Students' FCAT SSS Math Scale Scores (5th Grade)



Learning Gains Comparisons

For Grades 2 and 3, SAT-9 percentile scores are used for the learning gains comparison because percentile scores determine where students place nationally on a scale of 0-100. Since students move to each higher grade together, the change in their percentile indicates how they perform compared to other students nationwide. It is important to note that the change in national percentile ranking does not measure learning gains accurately; rather it shows the relative performance of students. However, since there is no score like the FCAT developmental scores for Grades 1-2, we do not have another option to measure learning gains for the second and third graders.

For Grade 2, all CHILD and Non-CHILD students experienced percentile losses in reading scores with the exception of African American Non-CHILD students (see Figure 16). In math, however, all CHILD and Non-CHILD students had percentile gains of up to 5 points. It is worth noting that African American and White CHILD students scored the highest gain on the SAT math test compared to other cohort groups.

Figure 16. Mean SAT Reading Learning Gains for CHILD and Non-CHILD Students (2nd Grade)

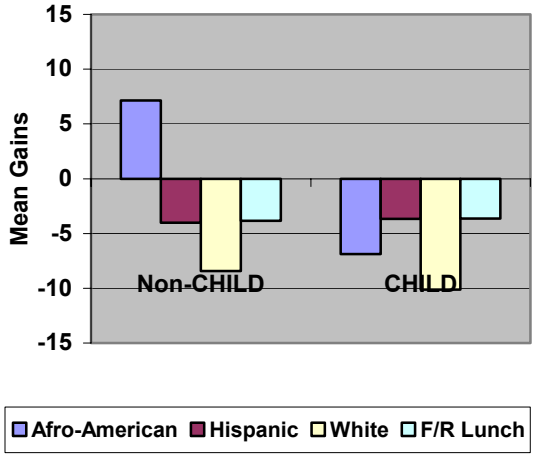
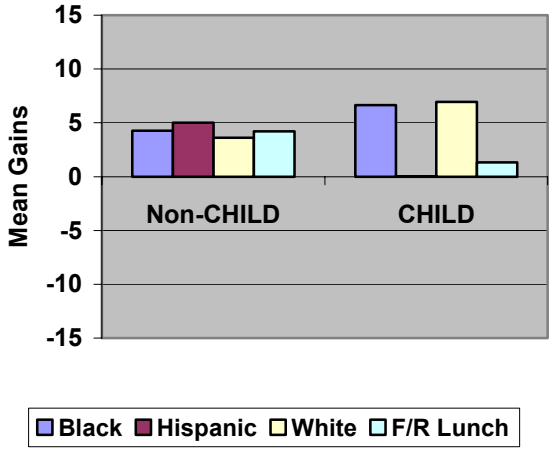


Figure 17. Mean SAT Math Learning Gains for CHILD and Non-CHILD Students (2nd Grade)



Figures 18 and 19 demonstrate that on the 3rd grade reading and math tests, all cohorts of CHILD and Non-CHILD students had a percentile gain, with math scores being significantly higher than reading. Among all CHILD cohorts, minority students experienced the biggest gains on both tests.

Figure 18. Mean SAT Reading Learning Gains for CHILD and Non-CHILD Students (3rd Grade)

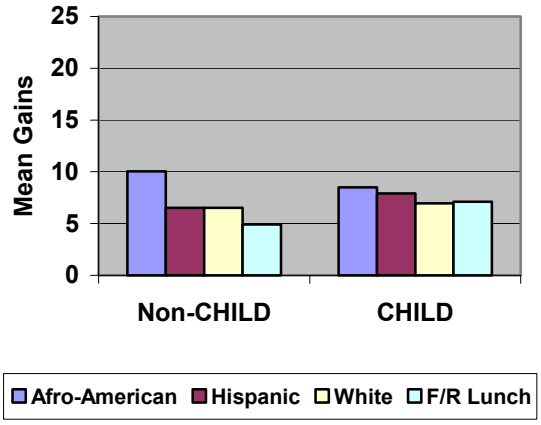
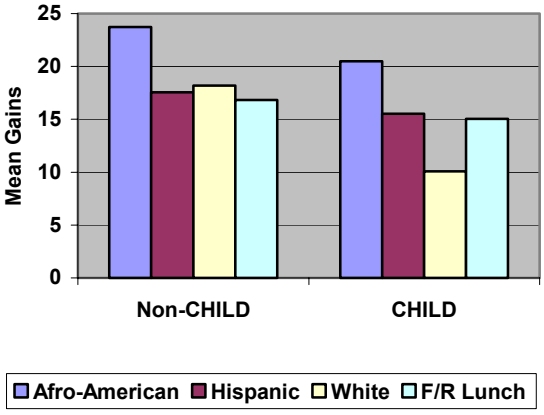


Figure 19. Mean SAT Math Learning Gains for CHILD and Non-CHILD Students (3rdGrade)



As discussed above, FCAT developmental scores were used for the learning gain comparison for Grade 4 and 5. Figures 20 and 21 show that all 4th grade CHILD students

experienced developmental gains on both math and reading tests. Among non-CHILD students, Hispanic, White and economically disadvantaged students experienced gains while African-American students declined on both reading and math. However, it is worth noting that African-American CHILD students scored the highest gain on both tests. For instance, the learning gain difference between African American CHILD and Non-CHILD students was 421 points in reading and 318 points in math.

Figure 20. Mean FCAT Reading Learning Gains for CHILD and Non-CHILD Students (4th Grade)

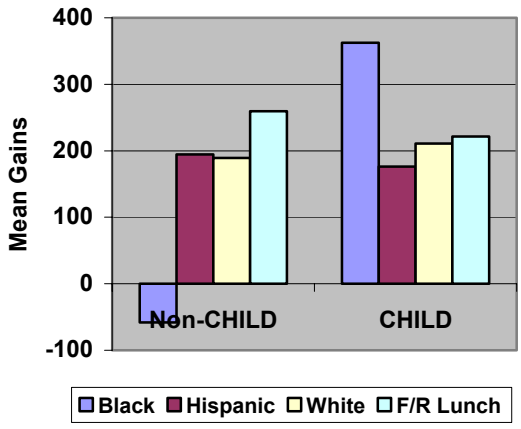


Figure 21. Mean FCAT Math Learning Gains for CHILD and Non-CHILD Students (4th Grade)

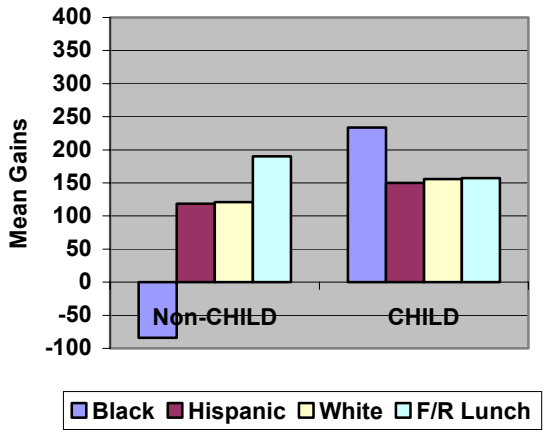


Figure 22 and 23 demonstrate that on the 5th grade FCAT reading and math tests, all cohorts of CHILD and Non-CHILD students had learning gains, with greater progress on math than reading. Each group of CHILD students showed greater progress than Non-CHILD students on both reading and math tests, except that on the math test African-American CHILD and Non-CHILD students had equivalent scores. Hispanic CHILD students experienced the highest learning gains of 129 points in reading and 198 points in math.

Figure 22. Mean FCAT Reading Learning Gains for CHILD and Non-CHILD Students (5th Grade)

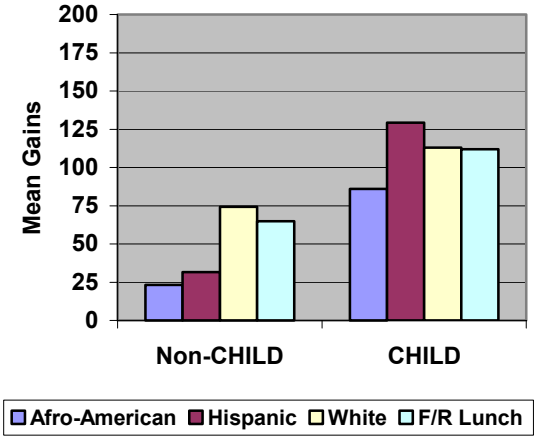
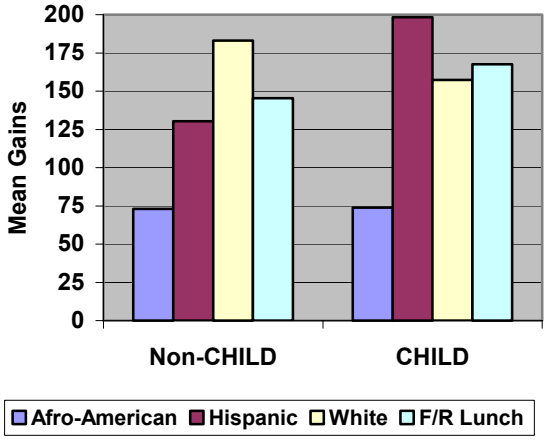


Figure 23. Mean FCAT Math Learning Gains for CHILD and Non-CHILD Students (5th Grade)

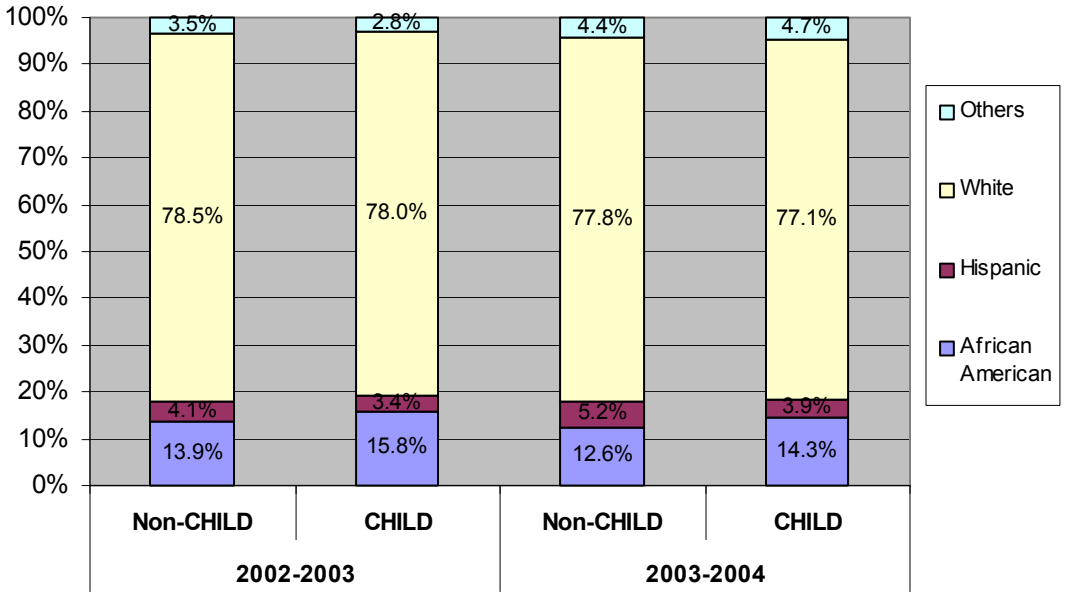


Comparison of CHILD and Non-CHILD Students in Marion County Schools

Students' Profile

The data do not suggest any difference between CHILD and Non-CHILD students in the six Marion county schools in terms of ethnic profiles. As Figure 24 shows, the ethnic distribution of students in Marion County schools in 2002-2003 for non-CHILD students was 13.9% African American, 4.1% Hispanic, 78.5% White and 3.5% others. For CHILD students it was, 15.8% African American, 3.4% Hispanic, 78% White, and 2.8% others. The data suggest that students are predominantly White in those schools with a slightly more diverse population among CHILD students. The racial distribution for CHILD and Non-CHILD students did not change in the second year.

Figure 24. Comparison between CHILD and Non-CHILD Students by Ethnicity



In the six Marion County schools among CHILD and Non-CHILD students, there was a very small percentage of students who were eligible for limited English proficiency (LEP) program in both years or for monitoring for LEP (see Figure 25).

Figure 25. Comparison between CHILD and Non-CHILD Students by LEP

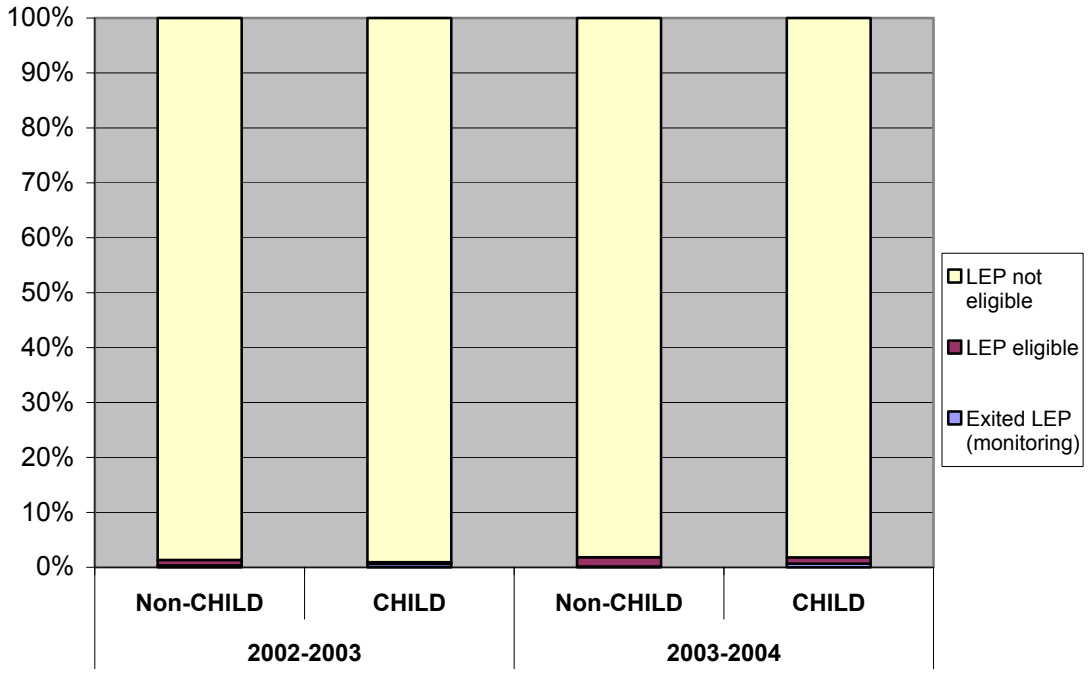
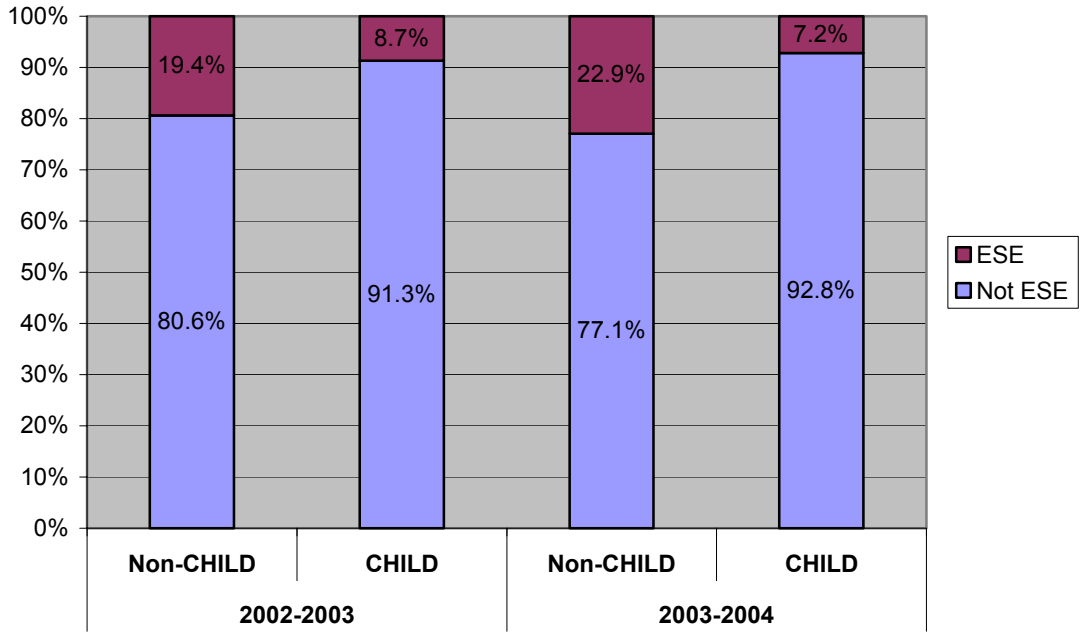


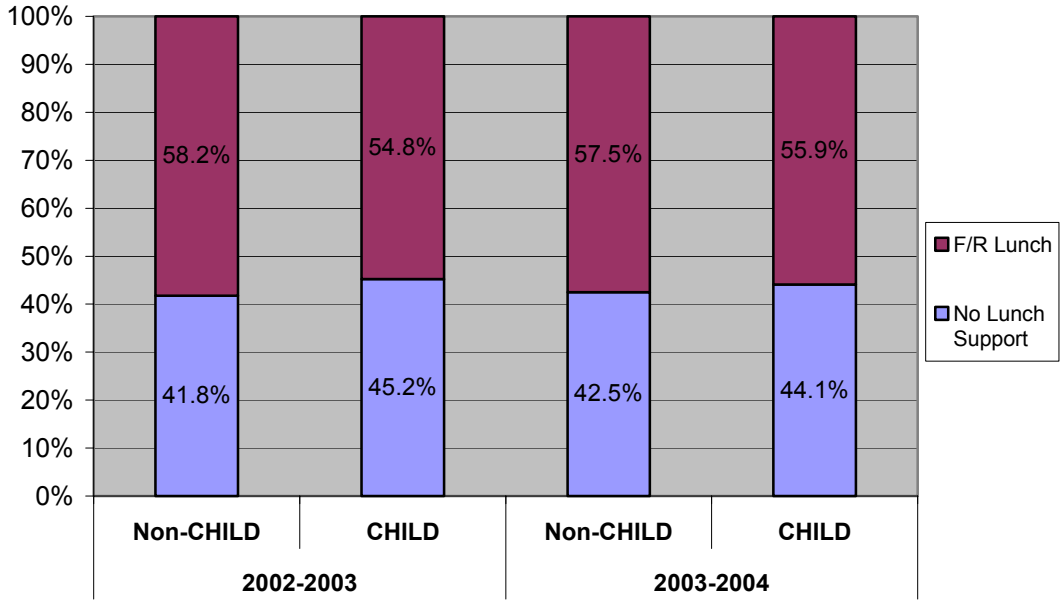
Figure 26 shows that the proportion of disabled/impaired students was 19.4% for Non-CHILD versus 8.7% for CHILD students in the first year; 22.9% for Non-CHILD versus 7.2% for CHILD students in the second year. Unlike CHILD students in Osceola County schools, the data suggest that in Marion County there were more disabled/impaired among Non-CHILD compared to CHILD students.

Figure 26. Comparison by ESE



In 2002-2003, the proportion of students who received free/reduced lunch support was 58.2% for Non-CHILD versus 54.8% for CHILD students. The percentages were virtually the same in the second year: 57.5% and 55.9%, respectively (see Figure 27). This means that the majority of students in those schools were economically disadvantaged.

Figure 27. Comparison between CHILD and Non-CHILD Students by Economic Levels



Mean Scale Score Comparisons

For the six elementary schools in Marion County, mean scale score differences--calculated by subtracting the mean of Non-CHILD students from the mean of CHILD students -- were used to compare achievement by ethnicity and economic level. Similar to the comparison for Osceola County schools, CHILD and Non-CHILD students' achievement in Grades 1 and 2 were measured by the SAT-9 scores and achievement in Grades 3-5 is measured by FCAT SSS scores.

Figures 28 and 29 show a mixed picture for CHILD students' achievement on the FCAT reading and math tests for Grade 1. White and economically disadvantaged CHILD students performed the same on reading tests in the first year and slightly better in the second year than Non-CHILD students. African-American CHILD students outperformed their Non-CHILD counterparts by 15 points in 2002-03 but slightly underperformed them in 2003-04. Conversely, Hispanic CHILD students underperformed Non-CHILD students by 11 points in 2002-03 but outperformed them by 45 points in 2003-04. Figure 29 shows that on math tests, only Hispanic CHILD students significantly outperformed their Non-CHILD counterparts in both years. African-American, White and

economically disadvantaged students underperformed, although not significantly, in both years.

Figure 28. Mean Difference between CHILD and Non-CHILD Students' SAT Reading Scale Scores (1st Grade)

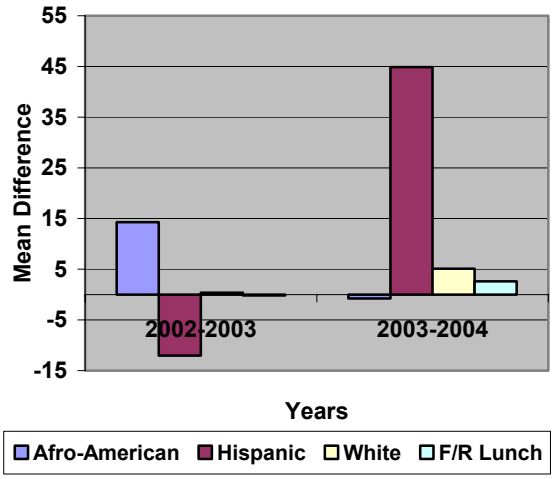


Figure 29. Mean Difference between CHILD and Non-CHILD Students' SAT Math Scale Scores (1st Grade)

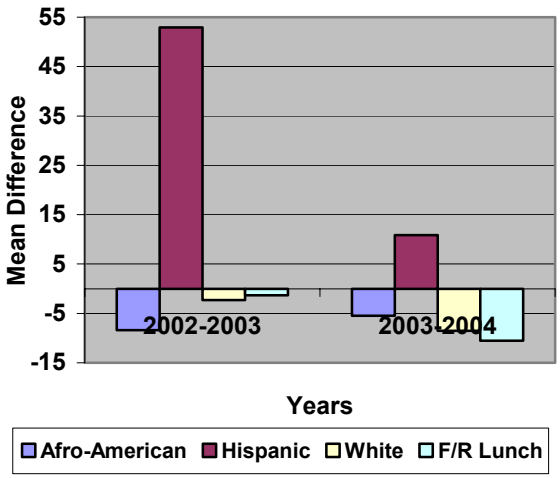


Figure 30 demonstrates that for 2nd grade reading, CHILD students in all cohorts outperformed Non-CHILD students in both years, with Hispanic students having the highest mean score difference. Figure 31 shows that on the SAT math test for grade 2, African-American CHILD students underperformed in both years while Hispanic CHILD students outperformed in both years. White CHILD students slightly underperformed in 2002-03 and slightly outperformed the next year. There was not a significant difference between economically disadvantaged CHILD and Non-CHILD students in either year.

Figure 30. Mean Difference between CHILD and Non-CHILD Students' SAT Reading Scale Scores (2nd Grade)

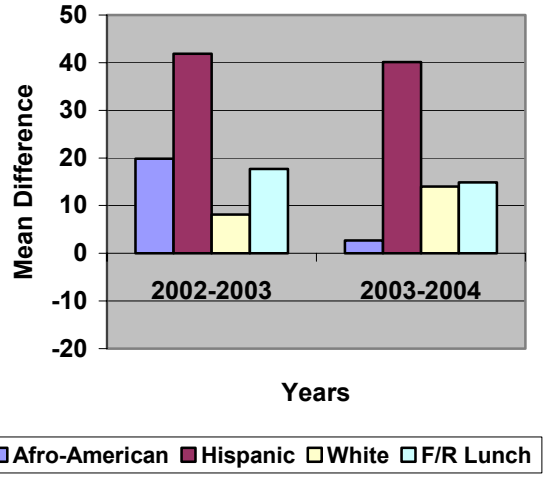
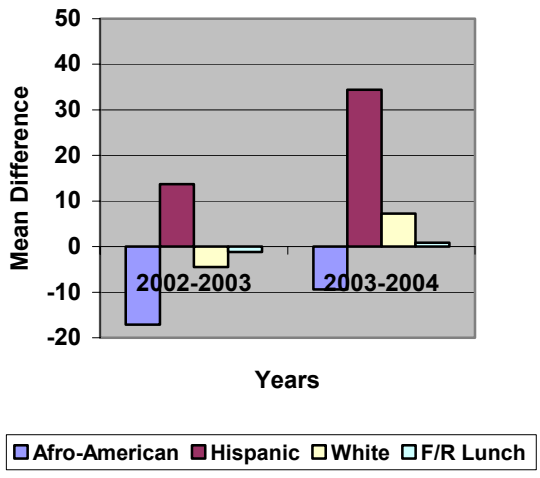


Figure 31. Mean Difference between CHILD and Non-CHILD Students' SAT Math Scale Scores (2nd Grade)



For the 3rd, 4th , and 5th grade, mean score difference of FCAT SSS cores were used to compare achievement between CHILD and Non-CHILD students. Figure 32 shows that on 3rd grade reading scores, CHILD students in all cohorts except Hispanics substantially outperformed in both years. On math scores as shown in Figure 33, African-American CHILD students performed better than Non-CHILD students in the first year. In the second year, CHILD students in all cohorts outperformed Non-CHILD students in math.

Figure 32. Mean Difference between CHILD and Non-CHILD Students' FCAT SSS Reading Scale Scores (3rd Grade)

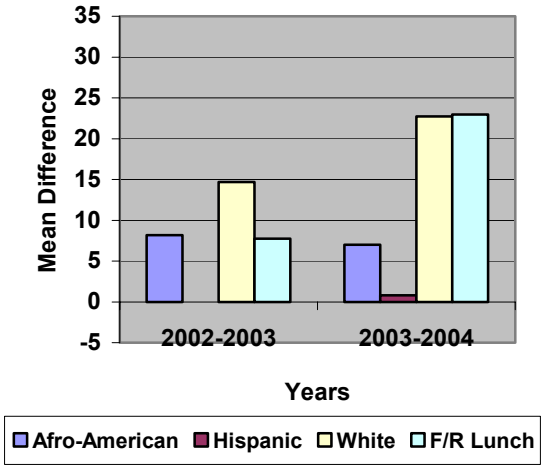
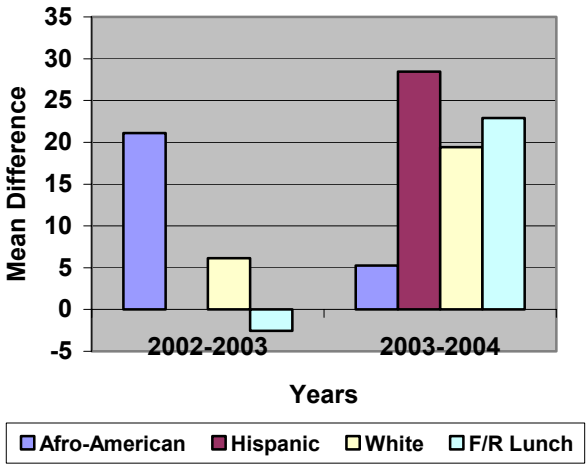


Figure 33. Mean Difference between CHILD and Non-CHILD Students' FCAT SSS Math Scale Scores (3rd Grade)



CHILD students in 4th grade had significantly higher achievement than Non-CHILD students on both reading and math in both years (see Figures 34 and 35). African American CHILD students had the highest mean score difference on the reading tests in the both years. On the math test, African American CHILD students had the highest score difference in the first year while economically disadvantaged CHILD students had it in the second year.

Figure 34. Mean Difference between CHILD and Non-CHILD Students' FCAT SSS Reading Scale Scores (4th Grade)

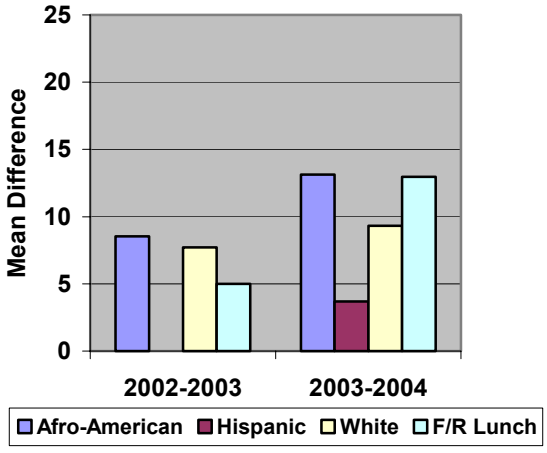
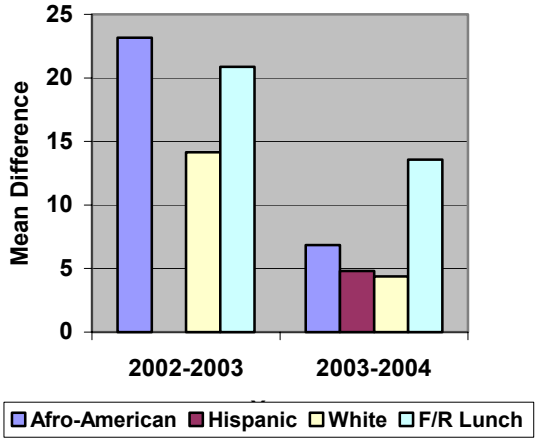


Figure 35. Mean Difference between CHILD and Non-CHILD Students' FCAT SSS Math Scale Scores (4th Grade)



Figures 36 and 37 demonstrate that 5th grade CHILD students had significantly higher achievement on both reading and math in 2003-04. On the reading test, all CHILD student cohorts outperformed their counterparts in both years, with the exception of White CHILD students underperforming in the first year. Likewise, in the second year all CHILD students performed better than their counterparts, except Hispanic CHILD students who underperformed in the first year. Overall, it is fair to say that Project CHILD contributed positively to the achievements of 5th graders on the reading and math tests, with minority and economically disadvantaged students benefiting the most.

Figure 36. Mean Difference between CHILD and Non-CHILD Students' FCAT SSS Reading Scale Scores (5th Grade)

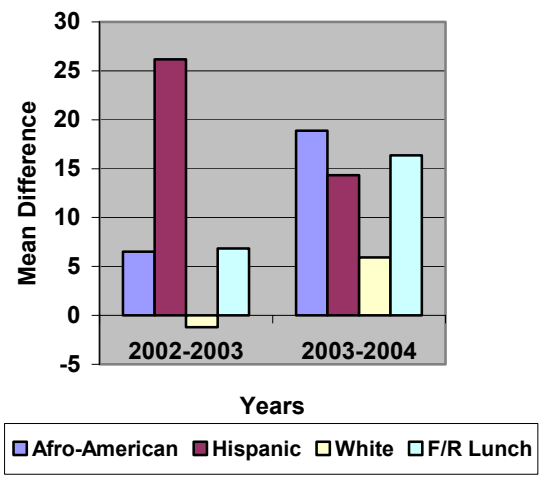
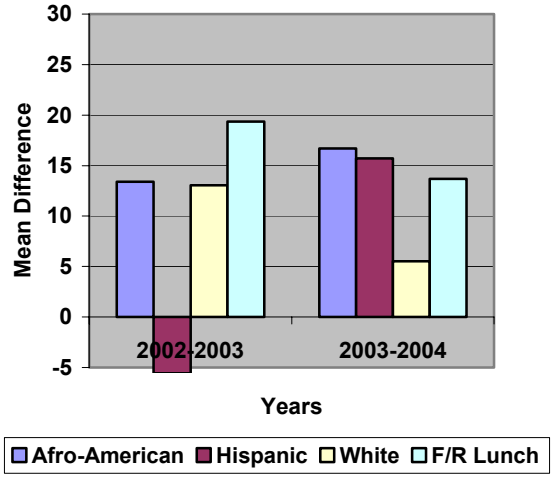


Figure 37. Mean Difference between CHILD and Non-CHILD Students' FCAT SSS Math Scale Scores (5th Grade)



Learning Gains Comparisons

For the six Marion County schools, due to the lack of data regarding SAT-9 national percentile rankings, learning gains were measured for Grades 4 and 5 only. It is important to mention that a limited number of students participated in Project CHILD in both years. Since the real boost in project participation started in 2003-2004, learning gains for new participants should be measured after the end of the 2004-05 academic year.

FCAT developmental scores were used for learning gain comparisons for Grades 4 and 5 in Marion County schools. As shown in Figures 38 and 39, in 4th grade both CHILD and Non-CHILD students in all three cohorts experienced learning gains on both math and reading. CHILD and Non-CHILD students had similar gains -- with African American CHILD students slightly ahead of other cohorts.

Figure 38. Mean FCAT Reading Learning Gains for CHILD and Non-CHILD Students (4th Grade)

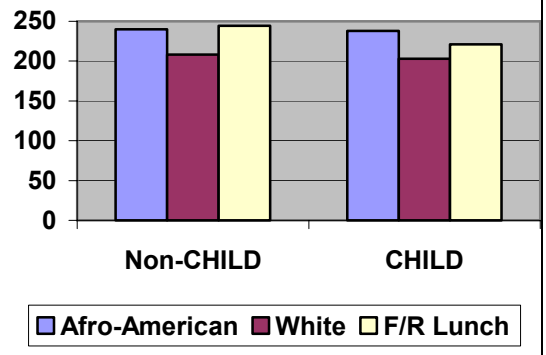
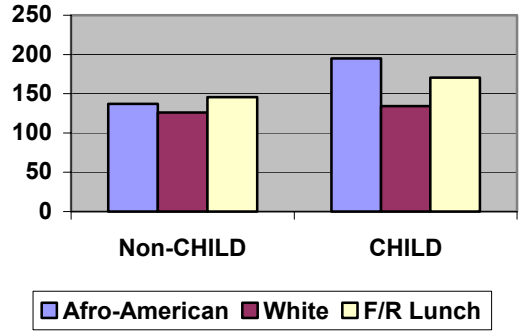


Figure 39. Mean FCAT Math Learning Gains for CHILD and Non-CHILD Students (4th Grade)



Figures 40 and 41 show that both CHILD and Non-CHILD students achieved significant learning gains in all cohorts. Notably, African-American Non-CHILD students made the biggest gains in both reading and math tests among all cohorts. White and economically disadvantaged CHILD students performed slightly better than their Non-CHILD counterparts on the reading test, but experienced similar gains on the math test.

Figure 40. Mean FCAT Reading Learning Gains for CHILD and Non-CHILD Students (5th Grade)

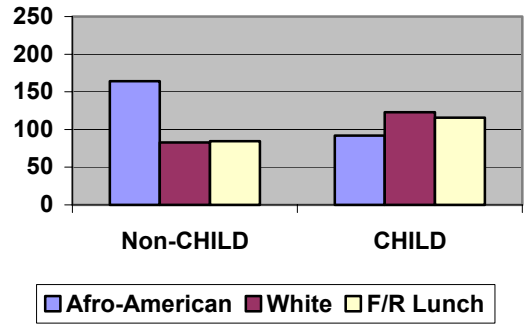
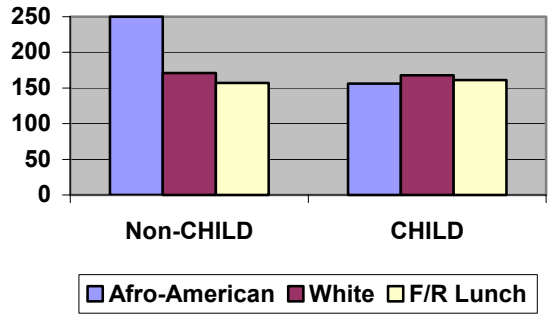


Figure 41. Mean FCAT Math Learning Gains for CHILD and Non-CHILD Students (5th Grade)



Comparison of Osceola and Marion County Findings

Students in Osceola County are more racially diverse than in Marion County. The percentage of students eligible for free or reduced lunch was about the same in Osceola and Marion, both within and outside the CHILD program. However, the LEP student body was much larger in Osceola than in Marion. Due to the demographic differences in the two counties, Florida TaxWatch compared student performance by ethnicity and economic status in analyzing the effectiveness of the CHILD program.

Figure 42 presents a summary mean scale score comparison of CHILD and Non-CHILD students' achievement in the SAT-9 and FCAT across the six Osceola County schools. On all SAT-9 and FCAT reading tests for Grades 1 through 5 over two years, African American and Hispanic CHILD students outperformed their Non-CHILD counterparts six out of ten times. White CHILD students outperformed non-CHILD students five times and economically disadvantaged CHILD students scored better seven times. Overall, minority and economically disadvantaged CHILD students performed better than their Non-CHILD counterparts on the reading tests.

On the math tests for Grade 1 through 5 in the two years, African American and White CHILD students had the same performance as their Non-CHILD counterparts while Hispanic CHILD students outperformed Non-CHILD counterparts six times out of ten and economically disadvantaged CHILD students did better seven times. Overall, the data suggest that Project CHILD helped all student groups -- particularly minorities and the economically disadvantaged.

Figure 42. Summary Mean Scale Score Comparisons for CHILD and Non-CHILD Students in Osceola County Schools (Years 2002-2003 & 2003-2004)

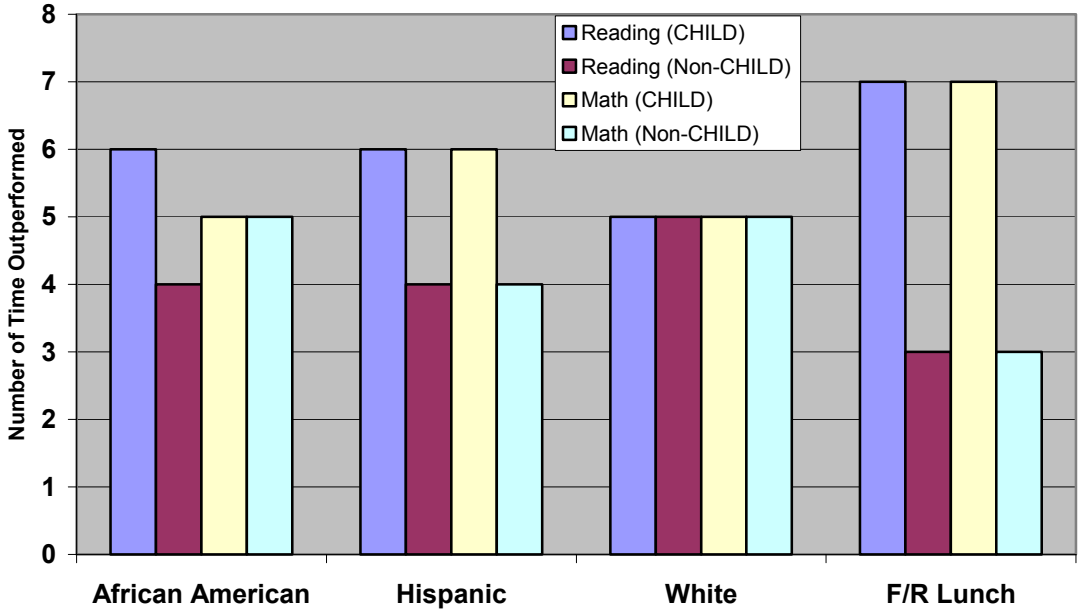
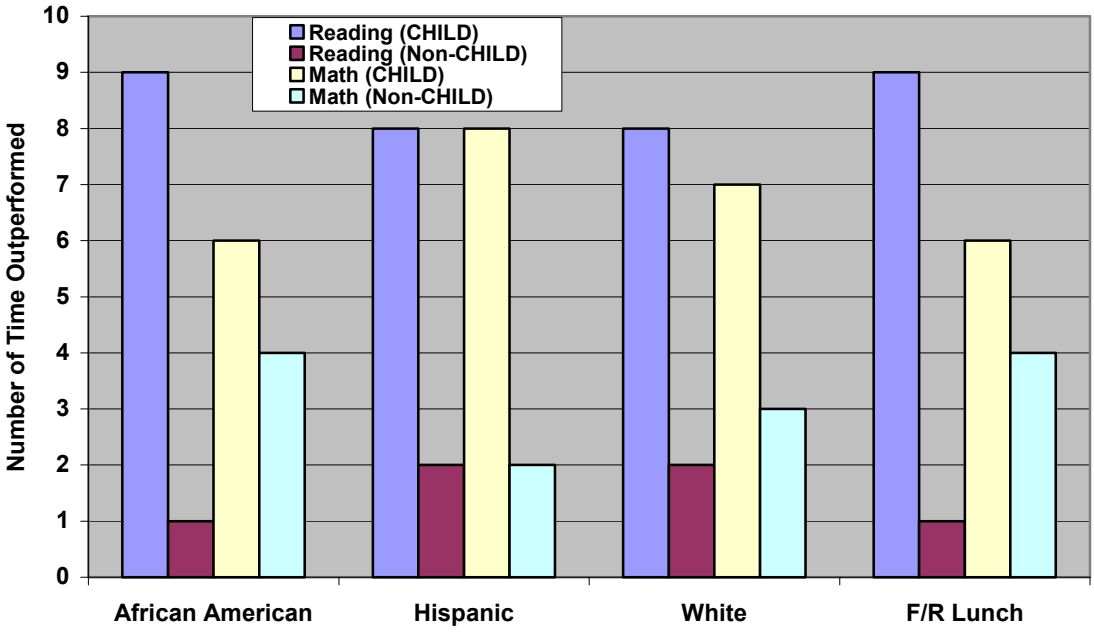


Figure 43 presents summary mean scale score comparisons of SAT-9 and FCAT results for CHILD and Non-CHILD students in the six Marion County schools. On all SAT-9 and FCAT reading tests for Grades 1 through 5 in both years, African American and economically disadvantaged CHILD students performed better nine out of ten times compared to their Non-CHILD counterparts. Hispanic and White CHILD students outperformed their counterparts eight of ten times.

On the math tests, Hispanic CHILD students exceeded their Non-CHILD counterparts eight out of ten times, followed by White CHILD students with higher scores seven times. Both African American and economically disadvantaged CHILD students outperformed their counterparts six times. Overall, all student cohorts -- particularly African American and economically disadvantaged CHILD students -- achieved admirably on the reading tests. Although all CHILD cohort groups did better than their counterparts on the math tests as well, it is important to note that their performance fell behind that of reading tests.

Figure 43. Summary Mean Scale Score Comparisons for CHILD and Non-CHILD Students In Marion County Schools (Years 2002-2003 & 2003-2004)



Comparing the performance of CHILD students in the six Osceola County schools with those in the six Marion County schools, the data analysis suggests the followings:

1. On the reading tests, all CHILD student cohorts in the Marion County schools had higher performance than their counterparts in the Osceola County schools.
2. On the math tests, all CHILD cohorts in the Marion County schools except the economically disadvantaged did better than their counterparts in Osceola County schools.
3. Holding everything else constant, the findings imply that Project CHILD particularly helped minority and economically disadvantaged students in both counties on the reading and math tests.

Since Florida TaxWatch's comparative analysis between the two counties controlled for ethnicity and economic disadvantage, overall higher performance in the Marion County schools could be attributed to another project aimed at raising student

achievement: the Continuous Improvement Model (CIM)[13] which was initiated districtwide in 2002-2003. Findings of a Florida TaxWatch assessment of Marion County's CIM are discussed below.

Continuous Improvement Model in Marion County School District

The CIM initiative consists of several strategic components: teachers analyze students' needs, follow their instructional calendar, do frequent assessments of student performance, engage in student remediation and enrichment, and permanently maintain students' success. The model also requires school principals to monitor classroom and school-wide progress through classroom visits and meetings with teachers, teacher teams and individual students.

A CIM project was implemented in the Brazosport, Texas Independent School District (BISD)[14]. In 1992, BISD reported that between 57% and 64% of Brazosport's economically disadvantaged, Hispanic and students passed the Texas Assessment of Academic Skills (TAAS); which is Texas' counterpart to Florida's FCAT test. Ten years later, BISD reported that an extraordinary 92% to 98% of all BSID students were passing the TASS regardless of ethnicity or socioeconomic status.

BISD incrementally implemented the CIM over three years at the request of school principals while Marion County mandated implementation of the model district-wide in a single year.

Florida TaxWatch evaluated CIM's success in improving student test scores on the FCAT and SAT-9[15] by comparing benchmark data (2001-2002) with first-year data (2002-2003). This comparison showed that on the reading SAT-9, grade-1 students in CIM Year 1 in all cohorts did not score as high as Benchmark Year students. However, the various student cohorts in grade-2 modestly advanced their reading percentile.

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[13] Davenport, Patricia, and Anderson, Gerald. Closing the Achievement Gap. American Productivity & Quality Center, Huston Texas, 2002.

[14] Davenport, Patricia, and Anderson, Gerald. Closing the Achievement Gap. American Productivity & Quality Center, Huston Texas, 2002.

[15] The Marion County School District Implementation Of The Continuous Improvement Model: Special Report. Center For Educational Performance & Accountability (CEPA), Florida TaxWatch Research Institute, Inc., Tallahassee, Florida, 2004 (Submitted for publication)

There were considerable percentile gains in math for all student groups between 2001-02 and 2002-03. However, Minority students in Grade 1 in 2001-02 showed only moderate progress in reducing the achievement gap relative to White students when they reached Grade 2 during the CIM's first year of implementation. Highest among the percentile gains were Free/Reduced Lunch students, closely followed by White students. Each Marion County School District grade level increased its FCAT math and reading scores between 2001-02 and 2002-03 except grade 9 in reading.

A comparison of student achievement statewide showed that Marion County outperformed the statewide average in grades 5 – 8 in 2002-03. However, in the Marion County schools, Grades 3 and 4 scores were lower than the state scores.

The comparison also demonstrated that all MCSD math mean scores in 2001-02, except for Grade 9, were lower than those the statewide mean. By 2002-03, however, MCSD FCAT math scores for grades 3-9 had virtually caught up with or surpassed statewide FCAT math mean scores, a notable accomplishment just one year into the MCSD's district-wide implementation of the CIM. Moreover, MCSD students at almost all grade levels generally posted higher mean score gains in reading than the statewide mean and higher 2002-03 scores than students statewide.

MCSD students did not perform quite as well on the FCAT writing test as the statewide average between 2001-02 and 2002-03 although scores and gain differences were not that substantial. MCSD students posted scores lower than the statewide mean for each grade. A comparison of student achievement statewide and in MCSD for Grades 1 and 2 was not conducted because students in the rest of the state are not required to take standard tests until Grade 3.

MCSD students had higher achievement gaps than the statewide mean both in reading and math in every grade in 2001-02. The FCAT data showed a high achievement gap in the benchmark year but considerable gain by African American students who produced by far the highest mean score gains among all minority student groups in all grades except Grade 9. While the gap was not completely erased in 2002-03, it was substantially reduced. MCSD Hispanic students showed substantial achievement gaps between themselves and White students in the benchmark year, and they only increased their achievement gaps with Whites in 2002-03 in half of the grade levels. Free or

Reduced Lunch Program students overall posted increased achievement gaps in five of the eight grades.

Findings and Conclusions

This Florida TaxWatch study has analyzed the impact of Project CHILD on students' reading and mathematics achievement on SAT-9 and FCAT tests in twelve schools in Osceola and Marion Counties. Controlling for ethnicity and economic level, the comparative assessments between CHILD and Non-CHILD students within the same schools show the following results:

1. CHILD students had higher performance across the board in the vast majority of cases. Although the data suggest that Project CHILD helped students to perform better in both reading and math tests, the results indicate that in Osceola County schools, CHILD students' performance levels on reading tests were slightly higher than on math tests, while in Marion County the difference were significantly higher. This could be because of the increasing emphasis on reading in recent years.

2. CHILD narrows the achievement gap for poor and minority students versus white students. In the Osceola County schools, according to the mean scale score comparison, on all SAT-9 and FCAT reading tests for Grades 1 through 5 over two years, African American and Hispanic CHILD students outperformed their Non-CHILD counterparts six out of ten times, and economically disadvantaged CHILD students scored better seven times. On the math tests, African Americans performed the same as their Non-CHILD counterparts (five times each), but Hispanic CHILD students outperformed Non-CHILD counterparts six times out of ten and economically disadvantaged CHILD students did better seven times. The learning gain comparisons also indicate that minority CHILD students experienced highest percentile gains in SAT-9 in Grades 2 and 3. The learning gains measured by FCAT developmental scores reveals that in Grade 4 African American CHILD students exceeded their Non-CHILD counterparts by 421 points in reading and 318 points in math; and in Grade 5 Hispanic CHILD students experienced the highest learning gains of 129 points in reading and 198 points in math.

In the Marion County schools, on the reading tests, African American and economically disadvantaged CHILD students performed better nine out of ten times compared to their Non-CHILD counterparts, while Hispanic CHILD students outperformed their counterparts eight of ten times. On the math tests, Hispanic CHILD students exceeded their Non-CHILD counterparts eight out of ten times, while African American and economically disadvantaged CHILD students outperformed their counterparts six times.

3. The proportion of students who participated in Project CHILD increased substantially in 2003-2004, with the added support of a CHILD District Coordinator for each district. There is a distinct positive trend when CHILD includes more students within a school and within a district, along with strong district support. Mean scale score comparisons indicate that CHILD students performed better on the math and reading tests in the second year (2003-2004) in both counties.

4. Project CHILD added value to the Continuous Improvement Model (CIM) in the Marion County School District as evidenced by higher performance of CHILD students compared to Non-CHILD students. It is important to note that minority and economically disadvantaged CHILD students in Marion County performed favorably compared to their Non-CHILD counterparts. This means that Project CHILD and CIM could work closely together particularly to narrow minorities' achievement gap.

5. CIM adds value to Project CHILD as evidenced by comparison with Osceola County, which did not have CIM. After controlling for ethnicity and economic disadvantage, the achievement comparison of CHILD students in Osceola and Marion County schools indicates that, on the reading tests, all CHILD student cohorts in Marion County scored higher than their counterpart CHILD students in the Osceola County. On the math tests, all CHILD cohorts in Marion County except the economically disadvantaged did better than their counterparts in Osceola County.

Overall higher performance in Marion County is evidence that CIM added value to Project CHILD. In other words, with CIM, Project CHILD had a relatively higher contribution to student achievement in Marion County compared to Osceola County.

Despite the encouraging findings mentioned above, this Florida TaxWatch study identified some limitation that need to be addressed: First, the reported results were conducted by grade level across twelve schools in Osceola and Marion Counties. The analysis relies on a broad assumption that all schools were implementing Project CHILD to the same degree. Some further analysis, which was not reported in this study because of privacy concerns, indicates that there was major difference in student achievement across schools. This is an evidence to suggest that not every school and every classroom was implementing Project CHILD to the same degree, and that differences in implementation may account for differences in student achievement. There appears to be a strong link between the schools for whom the District Coordinators reported high levels of fidelity to the CHILD model and higher academic achievement.

Secondly, since Project CHILD expanded significantly in 2003-2004, there was not enough two-year data to measure learning gains in Marion County. There is need for further qualitative and quantitative analysis to assess implementation of Project CHILD over multiple years. Additional study is needed to better understand the interaction between CIM and Project CHILD in the long run.

In conclusion, based on the findings of this study, it is likely that the expansion of Project CHILD in Florida will help students in failing and underachieving schools to increase their scores on the SAT-9 and FCAT. Furthermore, Project CHILD will particularly help to narrow the minority achievement gap. Although there is need for further analysis, the preliminary results suggest that the implementation of CIM and Project CHILD together could help Florida schoolchildren to improve their performance even more.

Appendix I: Six Osceola County Schools' Data

Table 3. Mean Scale Scores for the Six Osceola County Schools (2003-2004)

			CHILD student				
			Non-CHILD		CHILD		
			Valid N	Mean	Valid N	Mean	Difference
1. Grade	Asian	SAT Reading SS	12	548	4	552	4
		SAT Math SS	12	546	4	540	-6
	African American	SAT Reading SS	44	529	40	535	5
		SAT Math SS	44	529	41	533	4
	Hispanic	SAT Reading SS	236	533	260	529	-4
		SAT Math SS	243	537	266	537	0
	American Indian	SAT Reading SS	2	487		.	-
		SAT Math SS	2	535		.	-
	Multiracial	SAT Reading SS	32	547	24	555	8
		SAT Math SS	34	553	26	547	-5
	White	SAT Reading SS	145	541	155	554	14
		SAT Math SS	151	545	155	554	10
2. Grade	Asian	SAT Reading SS	11	598	12	599	1
		SAT Math SS	11	586	12	584	-2
	African American	SAT Reading SS	49	585	44	599	14
		SAT Math SS	49	567	44	581	15
	Hispanic	SAT Reading SS	269	581	249	584	3
		SAT Math SS	267	571	250	573	2
	American Indian	SAT Reading SS	2	583	2	588	5
		SAT Math SS	2	568	2	610	42
	Multiracial	SAT Reading SS	28	596	23	607	11
		SAT Math SS	28	582	23	592	10
	White	SAT Reading SS	145	596	145	607	11
		SAT Math SS	145	594	144	604	10
3.Grade	Asian	FCAT Reading SS	4	245	9	300	56
		FCAT Math SS	4	239	9	310	71
		SAT Reading SS	3	638	8	622	-16
		SAT Math SS	3	651	8	647	-4
	African American	FCAT Reading SS	64	258	71	258	0
		FCAT Math SS	64	254	71	247	-6
		SAT Reading SS	45	614	57	613	-1
		SAT Math SS	45	613	58	612	0

	Hispanic	FCAT Reading SS	249	254	304	265	11
		FCAT Math SS	249	248	304	259	12
		SAT Reading SS	183	603	260	612	9
		SAT Math SS	183	608	268	610	2
	American Indian	FCAT Reading SS	2	90	3	287	197
		FCAT Math SS	2	96	3	321	225
		SAT Reading SS	1	520	3	599	79
		SAT Math SS	1	549	3	620	71
	Multiracial	FCAT Reading SS	20	276	29	282	5
		FCAT Math SS	20	294	29	281	-13
		SAT Reading SS	16	623	26	627	4
		SAT Math SS	16	620	27	622	1
	White	FCAT Reading SS	199	299	187	305	6
		FCAT Math SS	199	297	187	311	14
		SAT Reading SS	175	631	174	631	0
		SAT Math SS	175	637	178	635	-1
4.Grade	Asian	FCAT Reading SS	4	310	8	237	-73
		FCAT Math SS	4	333	8	235	-98
		Writing Score	4	3	6	4	0
	African American	FCAT Reading SS	35	275	66	290	15
		FCAT Math SS	35	267	66	261	-6
		Writing Score	32	3	63	3	0
	Hispanic	FCAT Reading SS	192	255	260	268	13
		FCAT Math SS	192	240	260	255	15
		Writing Score	170	3	243	3	0
	American Indian	FCAT Reading SS	1	0		.	-
		FCAT Math SS	1	0		.	-
		Writing Score	0	.		.	-
	Multiracial	FCAT Reading SS	17	305	33	312	7
		FCAT Math SS	17	297	33	295	-2
		Writing Score	16	3	31	3	0
	White	FCAT Reading SS	118	307	163	302	-5
		FCAT Math SS	118	305	163	292	-12
		Writing Score	114	3	153	3	0
5.Grade	Asian	FCAT Reading SS	7	322	14	294	-28
		FCAT Math SS	7	355	14	313	-41
	African	FCAT Reading SS	52	250	56	260	10

	American	FCAT Math SS	52	253	56	262	10
	Hispanic	FCAT Reading SS	221	246	268	243	-2
		FCAT Math SS	221	267	268	270	3
	American Indian	FCAT Reading SS	1	358		.	-
		FCAT Math SS	1	357		.	-
	Multiracial	FCAT Reading SS	20	301	27	266	-35
		FCAT Math SS	20	311	27	294	-18
	White	FCAT Reading SS	188	292	171	286	-6
		FCAT Math SS	188	314	171	303	-12

Table 4. Mean Scale Scores for the Six Osceola County Schools (2002-2003)

			CHILD student				
			Non-CHILD		CHILD		
			Valid N	Mean	Valid N	Mean	Difference
1.Grade	Asian	SAT Reading SS	11	476	4	482	6
		SAT Math SS	11	485	4	490	4
	African American	SAT Reading SS	60	455	20	470	14
		SAT Math SS	61	471	20	484	13
	Hispanic	SAT Reading SS	317	447	115	447	-1
		SAT Math SS	320	472	113	475	3
	American Indian	SAT Reading SS	2	463	1	416	-47
		SAT Math SS	2	488	1	456	-32
	Multiracial	SAT Reading SS	36	452	13	490	38
		SAT Math SS	35	484	13	499	15
	White	SAT Reading SS	214	460	65	470	10
		SAT Math SS	214	493	65	494	1
2. Grade	Asian	SAT Reading SS	10	563	1	489	-74
		SAT Math SS	11	546	2	527	-19
	African American	SAT Reading SS	83	529	27	530	2
		SAT Math SS	85	528	27	530	2
	Hispanic	SAT Reading SS	281	529	114	536	7
		SAT Math SS	293	534	115	536	2
	American Indian	SAT Reading SS	0	.	1	567	-
		SAT Math SS	0	.	1	556	-
	Multiracial	SAT Reading SS	19	545	12	548	3
		SAT Math SS	19	538	13	538	0
	White	SAT Reading SS	249	550	78	556	6

		SAT Math SS	255	551	81	558	7
3.Grade	Asian	FCAT Reading SS	6	326	5	301	-24
		FCAT Math SS	6	316	5	322	6
		SAT Reading SS	2	617	3	573	-43
		SAT Math SS	2	585	3	592	7
	African American	FCAT Reading SS	50	264	21	224	-40
		FCAT Math SS	50	251	21	235	-16
		SAT Reading SS	41	584	12	586	2
		SAT Math SS	42	566	12	572	6
	Hispanic	FCAT Reading SS	187	256	140	257	1
		FCAT Math SS	187	257	140	250	-7
		SAT Reading SS	148	572	114	576	4
		SAT Math SS	149	565	114	564	-1
	Multiracial	FCAT Reading SS	20	314	14	287	-27
		FCAT Math SS	20	319	14	270	-48
		SAT Reading SS	15	601	11	596	-5
		SAT Math SS	15	585	11	576	-9
	White	FCAT Reading SS	199	290	100	285	-5
		FCAT Math SS	199	294	100	287	-7
		SAT Reading SS	176	594	83	597	3
		SAT Math SS	177	589	83	590	1
4.Grade	Asian	FCAT Reading SS	10	325	6	347	22
		FCAT Math SS	10	313	6	318	5
		Writing Score	10	4	6	4	0
	African American	FCAT Reading SS	46	262	18	249	-13
		FCAT Math SS	46	241	18	226	-15
		Writing Score	44	3	15	3	0
	Hispanic	FCAT Reading SS	186	265	106	241	-24
		FCAT Math SS	186	258	106	227	-31
		Writing Score	173	3	96	3	0
	American Indian	FCAT Reading SS	1	366		.	-
		FCAT Math SS	1	341		.	-
		Writing Score	1	4		.	-
	Multiracial	FCAT Reading SS	15	287	17	309	22
		FCAT Math SS	15	272	17	298	26
		Writing Score	14	3	17	3	0
	White	FCAT Reading SS	207	296	105	295	0

		FCAT Math SS	207	290	105	284	-6
		Writing Score	194	4	99	3	0
5.Grade	Asian	FCAT Reading SS	7	277	5	240	-37
		FCAT Math SS	7	333	5	263	-70
	African American	FCAT Reading SS	48	247	21	240	-6
		FCAT Math SS	48	271	21	251	-20
	Hispanic	FCAT Reading SS	174	241	122	252	11
		FCAT Math SS	174	270	122	266	-5
	Multiracial	FCAT Reading SS	14	222	11	265	42
		FCAT Math SS	14	240	11	277	37
	White	FCAT Reading SS	232	299	94	293	-6
		FCAT Math SS	232	315	94	302	-13

Table 5. 2002-03 SAT NP Scores by Ethnicity (Grade 1, 2 & 3)

					Non-CHILD		CHILD	
					Valid N	Mean	Valid N	Mean
Grade	1.Grade	Ethnicity	Asian	SAT Reading NP	8	48	3	66
				SAT Math NP	8	33	3	47
			African American	SAT Reading NP	34	42	14	54
				SAT Math NP	34	28	14	36
			Hispanic	SAT Reading NP	210	46	91	45
				SAT Math NP	211	32	90	36
			Multiracial	SAT Reading NP	24	51	7	72
				SAT Math NP	23	42	7	53
			White	SAT Reading NP	149	55	48	65
				SAT Math NP	149	47	48	51
	2.Grade	Ethnicity	Asian	SAT Reading NP	7	45	1	13
				SAT Math NP	7	37	2	20
			African American	SAT Reading NP	52	35	16	35
				SAT Math NP	53	25	16	21
			Hispanic	SAT Reading NP	170	35	80	37
				SAT Math NP	176	29	81	31
			Multiracial	SAT Reading NP	12	52	10	49
				SAT Math NP	12	36	10	35
			White	SAT Reading NP	190	50	59	51
				SAT Math NP	196	45	61	52
	3.Grade	Ethnicity	Asian	SAT Reading NP	2	61	2	40
				SAT Math NP	2	44	2	59
			African	SAT Reading NP	29	38	10	44

			American	SAT Math NP	30	31	10	32
			Hispanic	SAT Reading NP	107	33	87	34
				SAT Math NP	108	28	88	29
			Multiracial	SAT Reading NP	13	55	7	58
				SAT Math NP	13	42	7	47
			White	SAT Reading NP	131	47	66	48
				SAT Math NP	131	49	66	50

Table 6. 2003-04 SAT NP Scores by Ethnicity (Grade 1, 2 & 3)

					Non-CHILD		CHILD	
					Valid N	Mean	Valid N	Mean
Grade	1.Grade	Ethnicity	Asian	SAT Reading NP	1	1		.
				SAT Math NP	1	9		.
			African American	SAT Reading NP	4	17	4	20
				SAT Math NP	4	8	4	21
			Hispanic	SAT Reading NP	19	39	13	37
				SAT Math NP	21	27	13	36
			Multiracial	SAT Reading NP	1	15		.
				SAT Math NP	1	18		.
			White	SAT Reading NP	15	43	7	49
				SAT Math NP	16	39	7	45
	2.Grade	Ethnicity	Asian	SAT Reading NP	4	44	9	62
				SAT Math NP	4	33	9	45
			African American	SAT Reading NP	25	49	30	47
				SAT Math NP	25	32	30	43
			Hispanic	SAT Reading NP	160	42	167	41
				SAT Math NP	158	37	167	36
			Multiracial	SAT Reading NP	19	44	15	59
				SAT Math NP	19	37	15	51
			White	SAT Reading NP	97	47	112	54
				SAT Math NP	97	51	112	58
	3.Grade	Ethnicity	Asian	SAT Reading NP	3	59	7	51
				SAT Math NP	3	70	7	71
			African American	SAT Reading NP	28	45	40	44
				SAT Math NP	28	48	40	41
			Hispanic	SAT Reading NP	117	42	170	45
				SAT Math NP	117	47	175	46
			Multiracial	SAT Reading NP	10	62	14	52
				SAT Math NP	10	56	14	56
			White	SAT Reading NP	134	56	131	58
				SAT Math NP	134	63	134	62

Table 7. Mean SAT Learning Gains for CHILD and Non-CHILD Students(Grade 2&3)

					Non-CHILD		CHILD	
					Valid N	Mean	Valid N	Mean
Grade	2.Grade	Ethnicity	Asian	SAT Reading NP	9	-4		-4
				SAT Math NP	1	0		-2
			African American	SAT Reading NP	4	7	4	-7
				SAT Math NP	4	4	4	7
			Hispanic	SAT Reading NP	19	-4	13	-4
				SAT Math NP	21	5	13	0
			Multiracial	SAT Reading NP	1	-8		-13
				SAT Math NP	1	-5		-2
			White	SAT Reading NP	15	-8	7	-10
				SAT Math NP	16	4	7	7
	3.Grade	Ethnicity	Asian	SAT Reading NP	4	13	9	38
				SAT Math NP	4	33	9	52
			African American	SAT Reading NP	25	10	30	9
				SAT Math NP	25	24	30	20
			Hispanic	SAT Reading NP	160	7	167	8
				SAT Math NP	158	18	167	16
			Multiracial	SAT Reading NP	19	10	15	3
				SAT Math NP	19	20	15	21
			White	SAT Reading NP	97	7	112	7
				SAT Math NP	97	18	112	10

Source: Learning gains were computed based on the information in Table 5 and 6.

Table 8. 2002-03 SAT NP Scores for Free/Reduced Lunch Students (Grade 1, 2 & 3)

			Non-CHILD		CHILD	
			Valid N	Mean	Valid N	Mean
Grade	1.Grade	SAT Reading NP	280	47	89	47
		SAT Math NP	280	32	88	37
	2.Grade	SAT Reading NP	235	38	91	39
		SAT Math NP	243	32	94	32
	3.Grade	SAT Reading NP	163	36	89	34
		SAT Math NP	165	34	91	29

Table 9. 2003-04 SAT NP Scores for Free/Reduced Lunch Students (Grade 1, 2 & 3)

			Non-CHILD		CHILD	
			Valid N	Mean	Valid N	Mean
Grade	1.Grade	SAT Reading NP	28	34	21	38
		SAT Math NP	29	28	21	36
	2.Grade	SAT Reading NP	198	43	199	44
		SAT Math NP	196	37	199	38
	3.Grade	SAT Reading NP	163	43	224	46
		SAT Math NP	163	49	231	47

Table 10. Mean SAT Learning Gains for Free/Reduced Lunch Students (Grade 2 & 3)

			CHILD student			
			Non-CHILD		CHILD	
			Valid N	Mean	Valid N	Mean
Grade	2.Grade	SAT Reading NP	198	-4	199	-4
		SAT Math NP	196	4	199	1
	3.Grade	SAT Reading NP	163	5	224	7
		SAT Math NP	163	17	231	15

Source: Learning gains were computed based on the information in Table 8 and 9.

Table 11. Mean FCAT Learning Gains for CHILD and Non-CHILD Students(Grade 4&5)

				Non-CHILD		CHILD	
				Valid N	Mean	Valid N	Mean
4.Grade	Ethnicity	Asian	FCAT Reading Gain	11	584	11	511
			FCAT Math Gain	11	522	11	338
		African American	FCAT Reading Gain	44	-58	48	363
			FCAT Math Gain	44	-84	48	234
		Hispanic	FCAT Reading Gain	210	194	207	176
			FCAT Math Gain	210	119	207	150
		American Indian	FCAT Reading Gain	1	1,853		.
			FCAT Math Gain	1	1,635		.
		Multiracial	FCAT Reading Gain	19	105	29	223
			FCAT Math Gain	19	117	29	135
		White	FCAT Reading Gain	237	189	202	211
			FCAT Math Gain	237	121	202	156
5.Grade	Ethnicity	Asian	FCAT Reading Gain	5	106	9	-28
			FCAT Math Gain	5	232	9	135
		African American	FCAT Reading Gain	27	23	30	86
			FCAT Math Gain	27	73	30	74
		Hispanic	FCAT Reading Gain	97	32	135	129
			FCAT Math Gain	97	130	135	198

		American Indian	FCAT Reading Gain	1	65		.
			FCAT Math Gain	1	147		.
		Multiracial	FCAT Reading Gain	6	291	19	52
			FCAT Math Gain	6	365	19	165
		White	FCAT Reading Gain	128	74	121	113
			FCAT Math Gain	128	183	121	157

Table 12. Mean FCAT Learning Gains for Free/Reduced Lunch Students (Grade 4&5)

			Non-CHILD		CHILD	
			Valid N	Mean	Valid N	Mean
Grade	4.Grade	FCAT Reading Gain	91	259	175	221
		FCAT Math Gain	91	190	175	157
	5.Grade	FCAT Reading Gain	123	65	190	112
		FCAT Math Gain	123	145	190	168

Appendix II: Six Marion County Schools' Data

Table 13. Mean Scale Scores for the Six Marion County Schools (2003-2004)

			Students			
			Non-CHILD Student		CHILD Student	
			Valid N	Mean	Valid N	Mean
1st Grade	Asian	Reading SS	7	578	2	576
		Math SS	7	555	2	533
	African American	Reading SS	43	555	33	554
		Math SS	43	531	33	525
	Hispanic	Reading SS	14	520	9	565
		Math SS	14	535	9	546
	American Indian	Reading SS	2	510		.
		Math SS	2	522		.
	Multiracial	Reading SS	10	563	11	551
		Math SS	10	556	11	532
	White	Reading SS	273	559	183	564
		Math SS	280	552	185	544
2nd Grade	Asian	Reading SS	7	603	4	607
		Math SS	7	608	4	469
	African American	Reading SS	39	589	35	592
		Math SS	40	581	36	571
	Hispanic	Reading SS	17	578	11	618
		Math SS	17	574	11	608
	American Indian	Reading SS	2	567	1	579
		Math SS	2	573	1	609
	Multiracial	Reading SS	10	583	7	586
		Math SS	10	597	6	576
	White	Reading SS	267	594	206	608
		Math SS	275	589	207	596
3rd Grade	Asian	Reading SS	5	357	6	342
		Math SS	5	380	6	383
	African American	Reading SS	55	292	28	299
		Math SS	55	286	28	292
	Hispanic	Reading SS	19	299	13	300
		Math SS	20	291	13	319
	American Indian	Reading SS	1	388		.
		Math SS	1	349		.
	Multiracial	Reading SS	12	336	4	353
		Math SS	12	331	4	369
	White	Reading SS	351	304	156	327
		Math SS	351	309	156	328
4th Grade	Asian	Reading SS	8	340	2	338
		Math SS	8	376	2	349
		Writing Exp. Score	5	37	0	.

		Writing Narr. Score	3	40	2	46
	African American	Reading SS	42	296	38	309
		Math SS	42	293	38	300
		Writing Exp. Score	21	32	23	32
		Writing Narr. Score	21	33	15	36
	Hispanic	Reading SS	26	318	4	322
		Math SS	26	315	4	320
		Writing Exp. Score	14	35	2	38
		Writing Narr. Score	11	36	2	33
	American Indian	Reading SS		.	1	343
		Math SS		.	1	380
		Writing Exp. Score		.	0	.
		Writing Narr. Score		.	1	20
	Multiracial	Reading SS	10	334	9	330
		Math SS	10	312	9	323
		Writing Exp. Score	4	28	7	34
		Writing Narr. Score	6	36	2	40
	White	Reading SS	298	323	170	333
		Math SS	298	322	170	326
		Writing Exp. Score	146	33	74	34
		Writing Narr. Score	145	35	93	36
5th Grade	Asian	Reading SS	2	378	4	290
		Math SS	2	410	4	311
	African American	Reading SS	42	268	33	287
		Math SS	42	299	33	316
	Hispanic	Reading SS	17	291	9	305
		Math SS	17	315	9	331
	American Indian	Reading SS	1	256	1	251
		Math SS	1	336	1	313
	Multiracial	Reading SS	9	307	3	270
		Math SS	9	336	3	297
	White	Reading SS	308	302	184	308
		Math SS	307	326	184	332

Table 14. Mean Scale Scores for the Six Marion County Schools (2002-2003)

			Students			
			Non-CHILD Student		CHILD Student	
			Valid N	Mean	Valid N	Mean
1st Grade	Asian	Reading SS	5	598		.
		Math SS	5	551		.
	African American	Reading SS	78	537	10	551
		Math SS	79	528	10	519
	Hispanic	Reading SS	22	545	1	533
		Math SS	23	531	1	584
	American	Reading SS	2	530	1	550

	Indian	Math SS	1	505	1	559
	Multiracial	Reading SS	12	527	1	535
		Math SS	12	536	1	535
	White	Reading SS	428	551	73	551
		Math SS	431	543	73	540
2nd Grade	Asian	Reading SS	6	611	2	619
		Math SS	6	618	2	600
	African American	Reading SS	72	582	9	602
		Math SS	74	584	9	567
	Hispanic	Reading SS	15	578	7	620
		Math SS	15	575	7	588
	Multiracial	Reading SS	20	602		.
		Math SS	20	615		.
	White	Reading SS	348	597	85	605
		Math SS	360	596	89	592
3rd Grade	Asian	Reading SS	7	326		.
		Math SS	7	359		.
	African American	Reading SS	80	282	10	290
		Math SS	80	277	10	298
	Hispanic	Reading SS	26	303		.
		Math SS	26	306		.
	American Indian	Reading SS	1	356		.
		Math SS	1	404		.
	Multiracial	Reading SS	12	326	3	300
		Math SS	12	318	3	306
	White	Reading SS	465	307	29	321
		Math SS	465	321	29	327
4th Grade	Asian	Reading SS	4	354		.
		Math SS	4	332		.
		Writing Exp. Score	1	40		.
		Writing Narr. Score	3	50		.
	African American	Reading SS	74	277	10	286
		Math SS	74	274	10	297
		Writing Exp. Score	37	32	3	33
		Writing Narr. Score	37	35	7	39
	Hispanic	Reading SS	22	288		.
		Math SS	22	291		.
		Writing Exp. Score	10	31		.
		Writing Narr. Score	12	34		.
	American Indian	Reading SS	3	285		.
		Math SS	2	289		.
		Writing Exp. Score	2	30		.
		Writing Narr. Score	0	.		.
	Multiracial	Reading SS	8	322		.
		Math SS	8	314		.
		Writing Exp. Score	5	37		.
		Writing Narr. Score	3	33		.

	White	Reading SS	452	310	31	318
		Math SS	451	304	31	318
		Writing Exp. Score	222	33	17	38
		Writing Narr. Score	229	38	14	39
5th Grade	Asian	Reading SS	2	350	1	278
		Math SS	2	388	1	363
	African American	Reading SS	62	277	12	283
		Math SS	62	302	12	316
	Hispanic	Reading SS	20	276	3	302
		Math SS	20	332	3	327
	American Indian	Reading SS	2	289		.
		Math SS	2	369		.
	Multiracial	Reading SS	14	310	1	314
		Math SS	14	341	1	363
	White	Reading SS	487	302	30	301
		Math SS	486	325	30	338

Table 15. Marion County SS by Ethnicity 2002-03 (Grade 1 & 2)

			Non-CHILD Student		CHILD Student	
			Valid N	Mean	Valid N	Mean
1st Grade	African American	Reading SS	5	530	5	574
		Math SS	5	522	5	529
	Hispanic	Reading SS	1	503		.
		Math SS	1	527		.
	Multiracial	Reading SS	1	546		.
		Math SS	1	552		.
	White	Reading SS	19	535	10	549
		Math SS	19	543	10	543
2nd Grade	Asian	Reading SS	2	630		.
		Math SS	2	624		.
	African American	Reading SS	31	588	21	598
		Math SS	31	580	21	576
	Hispanic	Reading SS	16	583	3	596
		Math SS	16	579	3	595
	American Indian	Reading SS	2	567		.
		Math SS	2	573		.
	Multiracial	Reading SS	6	571	4	611
		Math SS	6	593	4	583
	White	Reading SS	197	594	122	612
		Math SS	203	589	122	597

Table 16. Marion County SS by Ethnicity 2003-04 (Grade 1 & 2)

			Non-CHILD Student		CHILD Student	
			Valid N	Mean	Valid N	Mean
1st Grade	Asian	Reading SS	2	612		.
		Math SS	2	567		.
	African American	Reading SS	55	541	5	540
		Math SS	55	531	5	513
	Hispanic	Reading SS	15	540		.
		Math SS	16	527		.
	American Indian	Reading SS	2	530		.
		Math SS	1	505		.
	Multiracial	Reading SS	9	527	1	535
		Math SS	9	542	1	535
	White	Reading SS	297	552	43	557
		Math SS	300	543	43	543
2nd Grade	Asian	Reading SS	6	611	1	630
		Math SS	6	618	1	609
	African American	Reading SS	50	585	6	597
		Math SS	52	592	6	563
	Hispanic	Reading SS	15	578	5	629
		Math SS	15	575	5	597
	Multiracial	Reading SS	12	601		.
		Math SS	12	616		.
	White	Reading SS	271	597	65	609
		Math SS	281	597	66	593

Table 17. Mean SS Learning Gains for CHILD and Non-CHILD Students (Grade 2)

			Non-CHILD Student		CHILD Student	
			Valid N	Mean	Valid N	Mean
2nd Grade	African American	Reading SS	50	55	6	22
		Math SS	52	70	6	34
	Hispanic	Reading SS	15	75	5	-
		Math SS	15	48	5	-
	Multiracial	Reading SS	12	55		-
		Math SS	12	64		-
	White	Reading SS	271	61	65	60
		Math SS	281	54	66	50

Source: Learning gains were computed based on the information in Table 15 and 16.

Table 18. Mean SS Learning Gains for CHILD and Non-CHILD Students (Grade 4 & 5)

				Non-CHILD Student		CHILD Student	
				Valid N	Mean	Valid N	Mean
Grade	4th Grade	Asian	Reading Gains	5	391	1	249
			Math Gains	5	285	1	-81
		African American	Reading Gains	31	240	25	238
			Math Gains	31	137	25	195
		Hispanic	Reading Gains	20	257	2	73
			Math Gains	20	233	2	66
		American Indian	Reading Gains		.	1	78
			Math Gains		.	1	25
		Multiracial	Reading Gains	7	213	5	149
			Math Gains	7	181	5	146
		White	Reading Gains	237	208	110	203
			Math Gains	237	126	110	134
	5th Grade	Asian	Reading Gains	2	359	1	312
			Math Gains	2	450	1	185
		African American	Reading Gains	31	164	20	92
			Math Gains	31	250	20	156
		Hispanic	Reading Gains	11	276	6	142
			Math Gains	11	221	6	285
		American Indian	Reading Gains	1	179	1	-177
			Math Gains	1	337	1	105
		Multiracial	Reading Gains	6	28		.
			Math Gains	6	164		.
		White	Reading Gains	255	83	126	123
			Math Gains	255	171	124	168

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This *Research Report* was written by Necati Aydin, Ph.D., Senior Research Analyst, with the assistance of Dave Davis, Senior Research Analyst, Rosia Zhang and Gregory Pershin, Research Assistants, with and under the direction of Steve Evans, Chief Operating Officer.

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Florida TaxWatch Research Institute, Inc.

The work of the Florida TaxWatch Center for Educational Performance and Accountability has been made possible, in part, through the generous contributions of Publix Super Markets Charities, Inc. and the Washington Mutual Foundation.

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