Research Report

October 2001

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

Executive Summary

Academic achievement in schools is currently one of Florida's most important social policy issues. Education is seen as the one of the most important factors that will enable Floridians to thrive in an information age and is considered vital for both the economic and democratic future of our state and nation. However, parents, community leaders and policymakers remain concerned that many of Florida's children are not receiving the type of classroom instruction that will enable them to thrive in the information society of today and prepare them for the future.

One of the most commonly held solutions is to decrease class size. However, this is a very costly and debatable solution in light of reviews of the current research. It may also be difficult to reduce class sizes in the short run due to chronic teacher shortages and growing student enrollments.

In an effort to get to the bottom of the issue, Florida TaxWatch undertook a controlled, comparative evaluation of Project CHILD (Computers Helping Instruction and Learning Development), an innovative computer-integrated instructional system designed to increase academic achievement. This is the second phase of a three-phase study.

Overall, the evaluation suggests that Project CHILD has made a positive difference according to many of its teachers, students, parents, and administrators, and has the potential to generate substantial cost savings if expanded. The positive impact of Project CHILD is also apparent in the test results as indicated by statistically significant and higher test scores of most Project CHILD classes as compared to their counterparts at traditional schools. This is especially true in schools such as John D. Floyd Elementary where the student scores in grades 1-5 on ten of eleven comparative measures were higher than was the case for their Comparison School with considerably smaller average class size enrollment.

Project CHILD was initially developed in 1988 at Florida State University by Dr. Sarah (Sally) Butzin and is currently under her executive directorship of the Institute for School Innovation. The Project CHILD program is comprised of fully developed instructional materials that are correlated with state standards and is implemented in concert with intensive training provided by Institute for School Innovation staff and certified consultants. Project CHILD is designed to enable teachers to transform their text-dominated traditional classrooms into multi-dimensional learning stations and thereby heighten student achievement.

The evaluation of Project CHILD by Florida TaxWatch was both "process" and "outcome" oriented and was composed of five components. The results of each essential component of the evaluation are outlined below:

The first component was a review of previous research conducted on Project CHILD. The eight years of research

reviewed by TaxWatch suggests that Project CHILD students attain higher achievement levels as measured by report card grades and standardized tests. For example, a 1995 longitudinal study by FSU's College of Education indicates that Project CHILD students earned better grade point averages on mid-semester report cards and had higher test scores on year-end Comprehensive Test of Basic Skills than did their peers.

The second component of the evaluation was undertaken by the Institute for School Innovation staff and focused on the actual implementation processes of Project CHILD. It suggests that all five research schools (Tedder Elementary in Broward County, Windy Hill Elementary in Duval County, John D Floyd Elementary in Hernando County, Mascotte in Lake County, and Wilkinson in Sarasota County) have, to varying degrees, implemented the Twenty Essential Components of the Project CHILD program. John D. Floyd and Windy Hill Elementary Schools fully implemented the program, with the others making a strong effort at implementation. Notably, there was a strong correlation found between the degree to which Project CHILD was implemented and test score results.

The third component of the evaluation focused on a qualitative assessment of the academic achievements of students in Project CHILD classes. It included anecdotal evidence from Project CHILD principals, teachers, students and parents regarding the way in which Project CHILD has enhanced the educational experiences of students. The anecdotal data included testimony from a range of perspectives as follows. Ms. Lynne Ragatz, a mathematics teacher at Tedder Elementary School, remarked about positive improvement by stating, "I very definitely believe that Project CHILD is responsible for Tedder becoming a "C" school after being a "D" school for two years!" Mr. Dennis, the Principal of Mascotte Elementary School commented about increased attendance by noting that, "Children in Project CHILD enjoy the classes and want to stay in the classes." Even students wrote in praise of Project CHILD such as the following fifth grader from John D. Floyd Elementary School, "In conclusion, I really like Project CHILD. It is very educational. Everyone that I know likes it."

The fourth component of the evaluation focused on a cost-effectiveness analysis of the implementation of Project CHILD. It suggests that, if fully implemented statewide, the Project CHILD model with a class size of 30 students would accrue an annual cost saving of more than $4 billion over the traditional model of class size with 20 students.

The fifth and final component of the evaluation was the class size comparative statistical evaluation. The five Project CHILD research schools were compared to five demographically similar schools with smaller class size enrollments1. Comparisons were based on Florida Comprehensive Achievement Test (FCAT), the Standford Achievement Test, Ninth Edition (SAT 9), the Norm Reference Test (NRT), and the Florida Writes test. Independent t-Test and the Mann Whitney non-parametric statistical tests were used to analyze whether there was a statistically significant difference between the test scores from the Project CHILD schools and the Comparison Schools. Preliminary results indicate that, even with considerably larger class size enrollments, Project CHILD classes do score statistically significantly higher than do their counterparts at traditional schools. These results will be bolstered as more data are gathered during the third phase; however, they are a testament to Project CHILD taking into consideration that this was only the first or second year of its implementation at the schools.

Introduction

Academic achievement in schools remains one of Florida's most important social and fiscal policy issues. Education is seen as the most important factor that will enable Floridians to thrive in an information age and is considered vital for the economic and democratic future of both the state and nation. However, parents, community leaders, and policymakers remain concerned that many children in Florida are not receiving the type of classroom instruction that

will enable them to succeed in today's society.

One of the most commonly held solutions to raising student achievement is to decrease class size. Many see it as a means of sending dollars directly into the classroom rather than to the bureaucracy. However, the Florida Department of Education and studies such as Project STAR have pointed out that reducing class size is a very expensive exercise which works only if class sizes are reduced to 15 or fewer for children 9 years of age or younger, and less so for older children.2 This simply may not be possible, especially as with booming populations such as South Florida. Is there a more cost-effective and realistic means of realizing higher student achievement without a concomitant reduction in class size? To get to the bottom of the issue, Florida TaxWatch is undertaking Phase II of a three-year controlled evaluation of Project CHILD, an innovative computer-integrated instructional delivery system that purports to provide for student achievement success even with class sizes larger than state average.

Developed in 1988 at Florida State University by Dr. Sally Butzin, and currently under her executive directorship at the Institute for School Innovation, Project CHILD has received numerous awards and has been recognized as an effective instructional management program by such groups as the National Diffusion Network and the Georgia Innovation Program. The Project CHILD model is designed to enable elementary schools (principally Kindergarten to Grade Five) to integrate technology into their reading, language arts, and mathematics curricula. It incorporates a variety of innovative instructional management and delivery strategies to actively engage students, improve student behavior, and heighten student learning. The model is centered on cognitive-based research, cooperative learning, continuous progress instruction, authentic assessment, and hands-on active learning. In addition, fully developed Project CHILD instructional materials are aligned with state standards and intensive training of local staff is provided by the Institute for School Innovation. Further, certified consultants assist teachers in transforming their text-dominated traditional classrooms into multi-dimensional learning stations.

Project CHILD is an instructional system with twenty essential components (See Appendix A). The extent to which these components are implemented has been determined to impact student academic achievement. The more completely the components are implemented as designed, the stronger is the academic achievement of students.

The Project CHILD system has redesigned and optimized the traditional instructional delivery system. The teachers work in teams of three with each teacher becoming a specialist in one of three core academic subjects, i.e., reading, writing, or mathematics. Three classrooms form an instructional cluster. A cluster consists either of early-elementary grades K-2 or later-elementary grades 3-5. Each teacher is responsible for one grade level as his/her home-room. This group of students receive instruction in additional areas such as science and social studies following their three one-hour rotations through their reading, writing, and mathematics subject area classrooms. The students stay with this team of teachers for three years. This allows teachers to become very familiar with each student's individual strengths, learning styles, and needs, so they are able to capitalize on the student's individual capacities and enable the student to work to their highest academic potential.

The evaluation Florida TaxWatch is using includes both expert views and statistical analyzes to assess the efficiency and effectiveness of the Project CHILD program. The study is designed to determine the effects of class size on academic achievement in reading, writing, and mathematics. It also assesses the cost-effectiveness of the implementation of Project CHILD in elementary schools of Florida. Phase I of the Evaluation included three diverse and geographically dispersed Project CHILD elementary schools and three comparison schools throughout the state. The current phase of the Evaluation, Phase II, has been expanded to include two additional Project CHILD schools for a total of five Project CHILD schools.

Review of Previous Research on Project CHILD

The preliminary review by Florida TaxWatch of previous research on Project CHILD suggests that the Program can make an important positive difference in improving student performance. The evaluation of previous studies by TaxWatch of student performance in larger classrooms using the Project CHILD model, as compared to smaller classrooms not incorporating the model, will be an important preliminary test of the impact of the program on student achievement and program cost effectiveness.

The eight years of research reviewed by Florida TaxWatch indicates that Project CHILD students attain higher achievement levels as measured by both student report card grades and standardized tests. For example, a 1995 longitudinal study by Florida State University's College of Education indicates that Project CHILD students measure above their peers. The study included 360 sixth grade students at two middle schools in Okaloosa County, Florida. The two schools are feeder schools for nine elementary schools that had been implementing the Project CHILD program for several years. The study matched 180 students who had been in the Project CHILD program with 180 students who had been in traditional classrooms. The students were matched by socioeconomic status (SES), ethnicity, sex, and at-risk factors. The results attained were both positive and impressive.

Project CHILD students had higher grade point averages on mid-semester report cards in language arts and mathematics (the curricular focus of Project CHILD), and higher test scores on the Comprehensive Test of Basic Skills (CTBS), administered in reading, math, as well as overall scores across the total test battery. In addition, 41.6% of the Project CHILD students were enrolled in advanced mathematics courses as compared to only 25.5% of the traditional students (See Appendix B for a listing of other earlier studies which point to increasing academic achievement by Project CHILD students.)

Review of Findings From Phase I

In Phase I of the Evaluation, the three Project CHILD research schools were compared to three demographically similar schools that had a smaller average class sizes. Comparisons were based on Florida Comprehensive Achievement Test (FCAT) and the Stanford Achievement Test Series, Ninth Edition (SAT 9) tests. Independent t-Tests and the Mann Whitney non-parametric statistical tests were used to analyze whether there were statistically significant differences between the test scores from the Project CHILD schools and the comparison schools with smaller average class sizes. The results were statistically significant and indicated that classes at two of the three Project CHILD schools scored substantially better than their counterparts at traditional schools with smaller class sizes.

These initial results may be further validated as more data are gathered over subsequent years; however, they are a positive testament to Project CHILD's effectiveness, especially when considering that this was the first year of its implementation at the schools.

Overall, Phase I of the Evaluation indicated that Project CHILD made a positive difference according to many of its teachers, students, parents and administrators, and it has the potential to generate considerable taxpayer cost savings if expanded. Project CHILD also appears to positively impact the improvement of academic results as was indicated by statistically significant higher test scores in two of the three Project CHILD schools when compared to their counterpart traditional schools with smaller average class sizes. This was especially true in schools such as John D. Floyd Elementary where the technology and the Project CHILD coordinators fully complemented the Project CHILD teachers.

Purpose of Phase II

The purpose of Phase II of this evaluation is to further validate the effect participation in the Project CHILD program has on student learning, even in classrooms that average 30 or more students and are notably larger than traditional elementary school classes which average 20 students. In addition, this evaluation also expands the results of Phase I by extending the research to five Project CHILD schools. Further, the study evaluates the potential cost-effectiveness of statewide implementation of Project CHILD. The Evaluation utilized quantitative data collection and analysis methods including parametric and cost-effectiveness methods, as well as qualitative and anecdotal data from parents, teachers, students, and administrators regarding their experiences with Project CHILD.

Research Design

The Florida Legislature provided funding in FY 2000-2001 to the Institute for School Innovation for designing and implementing Phase II of a research study utilizing the Project CHILD model to determine the effect that participation in Project CHILD classes has on student academic achievement, even in classrooms of 30 or more. It was conducted by Florida TaxWatch using students in five diverse and geographically dispersed elementary schools across the state of Florida.

The research design was comprised of five stages:

I. The first stage is a review of previous, similar, independent research conducted on Project CHILD.

II. The second stage is an analysis of the degree of implementation of CHILD components, using the checklist developed by Institute for School Innovation, to determine the extent to which the Project CHILD Essential Components were implemented in each of the research schools.

III. The third stage focuses on a qualitative assessment of the achievements of students in Project CHILD classes. It includes anecdotal evidence from Project CHILD school principals, teachers, students, and parents regarding how Project CHILD has enhanced the educational experiences of students.

IV. The fourth stage is an examination of the cost-effectiveness of the enhanced Project Child model in increasing student academic achievement compared to traditional classroom teaching models with fewer students.

V. The fifth stage includes a quantitative assessment of academic achievement (as measured by standardized test scores) of students in Project CHILD classes compared to the academic achievement of comparable students in traditional classes. It compares student scores on the Florida Comprehensive Achievement Test (FCAT) and the Stanford Achievement Test Version 9 (SAT 9) from Project CHILD classes of approximately 30 to student scores from demographically comparable, traditional non-Project CHILD schools, of approximately 20 students. The Independent Samples t-Tests were utilized in comparing the two populations in this analysis.

Methodology

Current research in the social sciences tend to agree on two points: (1) the best research design is one that uses several different research methods (a triangulation of methods); and (2) qualitative and quantitative methods are complimentary and both should be used when appropriate.3 Since each research method has its particular limitations and weaknesses, the use of multiple methods readily compensates for any potential blind spots that might occur if

only a single method were used. Moreover, if findings from different methods support one another, more comprehensive and dependable conclusions can be formulated. Notably, relying upon a single research method to find answers to a research question can be dangerous in that it is possible the findings might be a result of an artifact of the research method used and thereby generate spurious or inconclusive results. Accordingly, multiple methods (and multiple data sources) were used in Florida TaxWatch's investigation of the impact of Project CHILD on classroom achievement.

I. Previous Analysis

Previous evaluations of Project CHILD were analyzed to seek congruence with the current analysis of the implementation of Project CHILD in Florida Schools. A variety of sources were analyzed and are referenced in Appendix B. They include studies conducted both by Project CHILD and independent researchers.

II. Analysis of Current Implementation

This section of the report includes issues related to implementation of the program during the second year and was completed by Institute for School Innovation staff. Staff designated as Project CHILD site/school coordinators, assisted by the Institute for School Innovation Staff, completed the checklists and wrote the summary that is included in this report.

III. Qualitative Evidence

This section, contained in Appendix C, presents example letters received from a variety of principals, teachers, and students. These letters represent only a very small sample of like letters received from those associated with Project CHILD. When letters pertaining to Project CHILD were requested, there were no restrictions placed on either the content or focus. Notably, no negative letters associated with Project CHILD were received. Importantly, the qualitative evidence analyses in subsequent evaluations will be substantively expanded and quantified.

IV. Cost-Effectiveness Analysis

This section contains a summative spreadsheet analysis of potential statewide cost savings associated with the Project CHILD program based upon data provided by the Florida Department of Education. The first spreadsheet analysis compares all K-5 students in a classroom size of 20 to the Enhanced Project CHILD model of 30 students per classroom. The enhanced application of the Project Child Program included one classroom para-educator and one FTE teacher with 30 students per class. The second spreadsheet analysis focuses on the potential cost savings for the Project CHILD Model of 22 students per classroom (excludes enhancements) as compared to the classroom of 20 students.

V. Quantitative Analysis

1) School Selection/Student Population Selection - The five schools selected for participation in Phase II of the research project by the Institute for School Innovation were:

a) Exemplary Schools (schools with school-wide implementation of the Project CHILD model):

- Tedder Elementary School, Pompano Beach (Broward County) - urban, school wide Title I, 87% free/reduced

lunch, 37% mobility, 90% minority4.

- John D. Floyd Elementary School, Spring Hill (Hernando County) - suburban, 34% free/reduced lunch, 23.5 % mobility, 16% minority.

b) Evolving School (implements one-two full "strands," K-5 classes):

- Windy Hill Elementary, Jacksonville (Duval County) - urban, Title I inclusion, 62% free/reduced lunch, 46.2% mobility, 43% minority.

c) Emerging Schools (beginning implementation in one strand):

- Mascotte Elementary (Lake County) - rural, school wide Title I, 69% free/reduced lunch, 42.7% mobility, 46% minority.

- Wilkinson Elementary School (Sarasota County) - urban, 41% free/reduced lunch; 23.5% mobility, 20% minority.

2) Selection of Comparison Schools - Researchers from Florida TaxWatch, with the assistance of officials of each of the school districts, Project CHILD school principals and on-site coaches, and staff in the Department of Education, selected comparison schools with similar characteristics and demographics for the evaluation. Indicators such as urban/rural location, inclusion of Title I Program, percent of free and reduced lunch, and mobility rates were used as the basis for the selection of the comparison schools. Availability of traditional classrooms with appropriate class size ranges was also factored into the selection of the non-Project CHILD schools.5

3) Data Selection/Collection/Analysis - Standardized test scores were used to compare academic achievement in reading, writing, and math in those grades where such test scores were available. No test scores were available for kindergarten, so it was not used as a school evaluation category. SAT 9 standardized test scores were used as the basis for comparison in Grades 1 and 2, and FCAT Norm Referenced Test scores for reading and mathematics were used as the basis for comparison for Grades 3-5. Comparisons of the FCAT Writing tests, even though only administered in Grade 4 of elementary schools, are also included.

Project CHILD classrooms were initially selected based on teachers having volunteered to implement the Project CHILD instructional system. Students initially included among the Project CHILD classrooms were not specially selected based on any attributes but were included because they were students in the classroom of a volunteering teacher. These students were kept together as much as possible in their initial cohorts through their participation in Project CHILD. Nevertheless, mobility among Project CHILD schools is in excess of 35%, on average, and numbers of students have since moved. Importantly, however, incoming replacement students, as was true of the initial students, were not specially selected for placement in Project CHILD classrooms. All Project CHILD schools randomly assigned replacement students to classrooms on the basis of their individual grade levels and classroom enrollment or openings at the time. Thus, the students of Project CHILD classrooms genuinely constitute a representative random sample of students of each of the participant schools. Moreover, it is notable that while the overall numbers of initial, long term students of Project CHILD have been reduced over time, the scores of the Project CHILD classrooms have been maintained or increased even with substantially larger average class

enrollments than the Comparison Schools.

The Data Analysis component of this study used the Independent Samples T-Test, a parametric test used for the comparison of means, to compare two populations of students (the Project CHILD classes and the classes from the comparison schools).6 Ideally, for this test, the subjects should be randomly assigned to two groups so that any difference would be due to the treatment (in this case, the exposure to Project CHILD) and not to other factors. As this was not feasible, all more care was taken to select comparison schools that were demographically similar to the Project CHILD schools to avoid bias as much as possible. However, no claims are made that the study has been able to totally eliminate such bias.

Average standardized test scores for enhanced Project CHILD classes were compared to average scores from traditional classes at grade levels 1-5 in the areas of reading, writing, and mathematics.7 The objective of comparing mean scores was to determine whether or not there were statistically significant differences between the mean test scores of the enhanced Project CHILD classes and those of the Comparison Schools.

The null-hypothesis being tested in this study is: There is no difference between the average scores for grade levels 1-5 at the Project Child schools and the comparison schools despite differences in class size. The research hypothesis being tested is that the results generated by the Independent Samples T-test will indicate a statistically significant difference between the two groups of scores. Specifically, it is hypothesized that the Project CHILD schools will score higher as a group than the comparison schools and that those scores will be statistically significant.

V. Dissemination of Findings

Florida TaxWatch will assist the Institute for School Innovation in disseminating information about the project to the news media and expert panels. An executive summary and the full report will be posted on the Website of Florida TaxWatch and will be published in print form for use by the Florida Legislature, Florida TaxWatch membership, Superintendents of participating districts, and other interested parties.

VI. Time-lines

1. A written evaluation plan which outlines the framework and procedures for accomplishing the tasks described above no later than September 15, 2000.

2. A draft of the final report which states the findings and conclusions of the first year of the project. Such draft shall be delivered to the Institute for review and sign-off no later than September 26, 2001.

3. A final report and executive summary suitable for release to the Florida Department of Education, news media, and other interested parties shall be delivered to the Institute no later than September 28, 2001.

4. Periodic and ongoing status reports will be provided to the Institute for School Innovation for input and information as the research project develops.

Implementation Issues8

The academic year 2000-2001 was the second year of the study for Tedder Elementary in Broward County, Floyd Elementary in Hernando County, and Windy Hill Elementary in Duval County. The two new emerging schools,

Mascotte Elementary in Lake County and Wilkinson Elementary in Sarasota County began full implementation the first semester of the 2000 - 2001 academic year.

The numbers of participating classroom clusters differed from school to school ranging from including one primary research cluster (Kindergarten - Grade 2) and one intermediate research cluster (Grade 3 - Grade 5), to three primary and three intermediate clusters. The clusters operated by each of the five Project CHILD schools of this research are as follows:

Tedder Elementary School (Broward County) operated 3 primary research clusters and 3 intermediate research clusters which included a total of 18 teachers and 538 students. Excluding kindergarten, the average class enrollment size was 30.8 students.

Windy Hill Elementary School (Duval County) operated 2 primary research clusters and 2 intermediate research clusters which included a total of 12 teachers and 350 students. Excluding kindergarten, the average class enrollment size was 29.8 students.

Floyd Elementary School (Hernando County) operated 2 primary research clusters and 3 intermediate research clusters which included a total of 15 teachers and 462 students. Excluding kindergarten, the average class enrollment size was 31.7 students.

Mascotte Elementary School (Lake County) operated 1 primary research clusters and 1 intermediate research clusters which included a total of 6 teachers and 174 students. Excluding kindergarten, the average class enrollment size was 30.2 students.

Wilkinson Elementary School (Sarasota County) operated 1 primary research clusters and 1 intermediate research clusters which included a total of 6 teachers and 171 students. Excluding kindergarten, the average class enrollment size was 29.4 students.

Each of the Project CHILD research classrooms was enhanced with a full-time para-educator and discretionary funds to purchase hands-on activities for students to use at learning stations. The Institute for School Innovation provided funding for a full-time, on-site coach, and training for the para-educators at Floyd, Tedder, and Windy Hill. Mascotte and Wilkinson were funded for half-time coaches. Monies also were provided for teachers to travel to other research sites to share information on instructional and implementation strategies and successes as well as to gather new techniques for classroom management and new learning station activities.

The coaches at each site were required by their administrators to perform duties beyond the job description as outlined by the Institute. While these duties typically impacted the entire school positively, at one site, the practice detracted from the coach fully supporting the research classrooms. At Floyd and Windy Hill, the coaches completed 100% of all required reports and received high evaluations from their peers on their job performance end-of-year survey. At Tedder, the coach provided 67% of the necessary reports, with the teachers indicating they could have used more assistance in their classrooms. The half-time coach at Mascotte, along with the principal, who relieved the coach of his duties at mid-semester, provided 63% of the required monitoring reports. Wilkinson's half-time coach turned in 86% of the reports.

To fully assess the degree of implementation it would have been necessary to receive 100% of required reports from each research site. The on-site coaches at all of the research sites found it difficult to visit the classrooms. This

resulted in a reduced number of reports, which made it impossible to determine the actual degree of implementation.

Table 1
Broward County
Tedder: Teacher Collaboration Components Implemented

Teacher Activities	Cluster Meetings	Peer Observations
1st Quarter	92%	84%
2nd Quarter	100%	77%
3rd Quarter	87%	100%
4th Quarter	74%	73%

Table 2
Duval County
Windy Hill: Teacher Collaboration Components Implemented

Teacher Activities	Cluster Meetings	Peer Observations
1st Quarter	100%	100%
2nd Quarter	100%	100%
3rd Quarter	100%	100%
4th Quarter	100%	100%

Table 3
Hernando County
Floyd: Teacher Collaboration Components Implemented

Teacher Activities	Cluster Meetings	Peer Observations
1st Quarter	100%	100%
2nd Quarter	100%	87%
3rd Quarter	100%	100%
4th Quarter	100%	100%

Table 4
Lake County
Mascotte: Teacher Collaboration Components Implemented

Teacher Activities	Cluster Meetings	Peer Observations
1st Quarter	56%	0%
2nd Quarter	89%	100%
3rd Quarter	100%	34%
4th Quarter	73%	100%

Table 5
Sarasota County
Wilkinson: Teacher Collaboration Components Implemented

Teacher Activities	Cluster Meetings	Peer Observations
1st Quarter	56%	100%
2nd Quarter	50%	100%
3rd Quarter	88%	0%
4th Quarter	72%	33%

A strong correlation was found between schools whose coach provided 100% of all required monitoring reports and the degree to which two important essential components were adhered to; i.e., weekly cluster meetings and peer observations. At Floyd and Windy Hill, the coaches provided the teachers all the necessary monitoring and support; at Windy Hill, 100% of all cluster meetings and peer observations were conducted and all reports received from the teachers; at Floyd, the teachers conducted 100% their cluster meetings and completed 97% their year-end peer observations.

The instructional design components in Project CHILD require teachers to create a multi-modality classroom. This is accomplished by each classroom providing six learning stations that include a variety of hands-on, paper/pencil and computer based activities.

The following tables reflect the data reported by the coaches. Data were collected using monitoring instruments (see Appendix for samples). It should be noted that data from Tedder, Wilkinson, and Mascotte have been determined based on less than 100% of the required reports. If 25% or less of the monitoring reports were not completed or provided, the data were not analyzed because they would not accurately indicate the degree of implementation.

Table 6
Broward County
Tedder Elementary: Instructional Design Components Implemented

Station Activities	Hands-on	Paper / pencil	Technology
1st Quarter	60%	127%	77%
2nd Quarter	Minimal Data	Minimal Data	Minimal Data
3rd Quarter	33%	38%	34%
4th Quarter	70%	130%	94%

Table 7
Duval County
Windy Hill: Instructional Design Components Implemented

Station Activities	Hands-on	Paper / pencil	Technology
1st Quarter	65%	64%	69%
2nd Quarter	102%	88%	100%
3rd Quarter	123%	55%	100%
4th Quarter	100%	100%	100%

Table 8
Hernando County
Floyd Elementary: Instructional Design Components Implemented

Station Activities	Hands-on	Paper / pencil	Technology
1st Quarter	90%	115%	85%
2nd Quarter	98%	103%	100%
3rd Quarter	87%	120%	100%
4th Quarter	80%	130%	100%

Table 9
Lake County
Mascotte: Instructional Design Components Implemented

Station Activities	Hands-on	Paper / pencil	Technology
1st Quarter	Minimal Data	Minimal Data	Minimal Data
2nd Quarter	79%	46%	96%
3rd Quarter	Minimal Data	Minimal Data	Minimal Data
4th Quarter	75%	108%	100%

Table 10
Sarasota County
Wilkinson: Instructional Design Components Implemented

Station Activities	Hands-on	Paper / pencil	Technology
1st Quarter	78%	125%	100%
2nd Quarter	99%	100%	100%
3rd Quarter	89%	116%	100%
4th Quarter	92%	113%	100%

The second year ended with fairly consistent implementation overall. Looking ahead to the third year of the project the following changes will occur:

- Only teachers who fully implemented the Project CHILD essential components during Phase I and II will participate in Phase III.

- Teachers of quality clusters will be offered the opportunity to forgo their para-educator for an advanced technology package and cash stipend. The technology package will enable the teacher to provide their students the latest multi-media presentation tools. Training on this new technology will be ongoing throughout the year for both teachers and students.

- The teachers will continue to develop higher-order station activities. Floyd teachers will work through the curriculum map they created this summer to pilot new station activities into the mapping.

- Ongoing technology training will be provided for para-educators.

- Teachers will preview software on a regular basis and learn to incorporate it into lesson objectives.

- Traditional teachers at each site will be asked to visit Project CHILD classrooms to focus on components they could begin incorporating into their classroom settings.

- Key school district personal will be invited to each Project CHILD site to visit classrooms and to become more knowledgeable about the methodologies.

- Travel funds will be available for teachers to visit other research sites and to attend the Project CHILD conference in conjunction with Florida Education Technology Conference.

- Enrollment in each classroom will be closely monitored.

- School principals will take an active roll in monitoring degree of implementation in each classroom and determining the efficacy of activities at Project CHILD classroom learning stations.

Potential Cost-Related Impacts of Project CHILD

The following spreadsheet data represent a brief analysis of potential statewide cost savings associated with the Project CHILD program based upon data provided by the Florida Department of Education. The first spreadsheet analysis compares all K-5 students in a traditional classroom size of 20 to the Enhanced Project CHILD model of 30 students per classroom. The enhanced application includes one para-educator and one FTE teacher involved with 30 students per class. The second spreadsheet analysis is of anticipated cost savings for the Project CHILD Model of 22 students per classroom (excluding enhancements) as compared to the traditional classroom of 20 students. It should be noted that, in this spreadsheet analysis, student enrollment, average teacher salary, and average student workstation cost were obtained from the latest available Florida Department of Education data. Also, potential cost savings would accrue over time through attrition and cost avoidance.

Table 11
Project CHILD Research Model Impact
Potential Cost and Savings Calculations are For Illustrative Purposes Only
and Represent an Estimate of the Maximum Potential
Actual Results May Vary

Example 1	CHILD / 30 36,728 Classrooms	Traditional / 20 55,093 Classrooms	Potential Savings
Initial Cost Savings:			
Teachers (@ $38,230 + 28% Benefits)	$1,797,262,643	$2,695,942,899	$898,680,256
CHILD Materials/Software/Training (@ $3,500)	$128,548,000	$0	($128,548,000)
Classroom Assistant (@ $15,000 + 28% Benefits)	$705,177,600	$0	($705,177,600)
Subtotal Basic Costs	$2,630,988,243	$2,695,942,899	$64,954,656
Computers (@ $1,200 * 4 per classroom)	$176,294,400	$0	($176,294,400)
Additional classrooms (18,365 Classrooms @20 student	$0	$4,676,830,900	$4,676,830,900
Student workstations/classroom (@ $12,733 per ws)			
TOTAL Cost/Savings	$2,807,282,643	$7,372,773,799	$4,565,491,156
Ongoing (after first year) Cost/Savings:			
Teachers (@ $38,230 + 28% Benefits)	$1,797,262,643	$2,695,942,899	$898,680,256
Renewal materials (@$12*30 students per classroom)	$13,222,080	$0	($13,222,080)
Classroom Assistant (@ $15,000 + 28% Benefits)	$705,177,600	$0	($705,177,600)
Total Recurring Cost/Savings	$2,515,662,323	$2,695,942,899	$180,280,576

Example 2	CHILD / 22 50,084 Classrooms	Traditional / 20 55,093 Classrooms	Potential Savings
Initial Cost/Savings:			
Teachers (@ $38,230 + 28% Benefits)	$2,450,830,490	$2,695,942,899	$245,112,410
CHILD Materials/Software/Training (@ $3,500)	$175,294,000		($175,294,000)
Subtotal Basic Costs	$2,626,124,490	$2,695,942,899	$69,818,410
Computers (@ $1,200 * 4 per classroom)	$240,403,200	$0	($240,403,200)
Additional Classrooms (5,009 classrooms @20 students	$0	$1,275,591,940	$1,275,591,940
Student workstations/classroom (@ $12,733 per ws)			
Total Cost/Savings	$2,866,527,690	$3,971,534,839	$1,105,007,150
Ongoing (after first year) Cost Savings:			
Teachers (@ $38,230 + 28% Benefits)	$2,450,830,490	$2,695,942,899	$245,112,410
Renewal materials (@$12*30 students per classroom)	$1,803,240	$0	($1,803,240)
Total Recurring Cost/Savings	$2,452,633,730	$2,695,942,899	$243,309,170

Test Score Comparisons

The following is a brief analysis of Project CHILD Schools and their comparison school in five Florida counties,

i.e., Broward, Duval, Hernando, Sarasota, and Lake Counties. The essential difference among the Project CHILD and comparison schools is that they vary considerably in average class sizes. The individual traditional schools hereon will be referred to as a "Comparison School."

Broward County School Analysis

The first Project CHILD school used in this analysis was Tedder Elementary. The demographics for this school and the Comparison School chosen are presented in Table 12.

Table 12
Demographics for Tedder Elementary and Comparison School

School	School Grade	Average Class Size	Mobility	Limited English	Free / Reduced Lunch	Absent 21+ Days
Tedder Elementary	C	30.8	37.0%	26.1%	87%	8.5%
Comparison School	D	23.2	19.9%	19.2%	89%	3.2%

The two schools were compared by grade levels for grades 1 to 5. The basis for the comparisons were SAT 9 scores for Grades 1 and 2 and FCAT Norm Referenced Test Scores for grades 3, 4, and 5. The results are presented in Table 13.

Table 13
Independent t-Test Analysis for
Tedder Elementary and Comparison School

SAT 9 Scores - Reading Grade 1	**Tedder**	**Comparison School**
Mean	523	532 ✓
SAT 9 Scores - Math Grade 1	**Tedder**	**Comparison School**
Mean*	528 ✓	513
SAT 9 Scores - Reading Grade 2	**Tedder**	**Comparison School**
Mean	573 ✓	567
SAT 9 Scores - Math Grade 2	**Tedder**	**Comparison School**
Mean	579 ✓	573
FCAT Scores - Reading Grade 3	**Tedder**	**Comparison School**
Mean	600 ✓	597
FCAT Scores - Math Grade 3	**Tedder**	**Comparison School**
Mean	591 ✓	585
FCAT Scores - Reading Grade 4	**Tedder**	**Comparison School**
Mean	625	630 ✓
FCAT Scores - Math Grade 4	**Tedder**	**Comparison School**
Mean	614	615 ✓
NRT Scores - Reading Grade 5	**Tedder**	**Comparison School**
Mean	632 ✓	631
FCAT Scores - Math Grade 5	**Tedder**	**Comparison School**
Mean*	628	640 ✓

** Denotes those differences in means that were found to be statistically significant at the .01 (90% degree of confidence) level. All analyzes were performed using Statistical Program For the Social Sciences (SPSS).*

The type of statistical analysis used in comparing the mean scores by grade level for the two schools was the independent t-Test. First, the mean test scores for reading and math for Project CHILD classes and for classes at the Comparison School at the same grade levels were generated. Then the t-Test was applied to determine if it was possible to be at least 90% confident that the differences in the mean scores from the two schools were statistically significant rather than coincidental or due to chance.

As Table 13 indicates, the difference in scores between Tedder Elementary and the Comparison School were found to be statistically significant in only one portion of the analyses, *i.e.*, Mathematics Grade 1. In other words, this was the area of the particular analysis in which we can be at least 90% confident that the difference in scores between Tedder and the Comparison School did not occur by chance. In this case, the Project CHILD students at Tedder scored higher on the SAT 9 Mathematics scores than did their counterparts at the Comparison School with smaller class sizes.

Overall, the results of the statistical analysis performed by Florida TaxWatch at the two schools in Broward County did not indicate substantial statistically significant differences in reading scores. In only one case, in which Tedder scored higher than the Comparison School, was there a statistically significant difference in the scores. However,

two caveats must be presented in interpreting these results. The first is that the FCAT scores for this year do not reflect the applications portion of the test. This part of the test was deliberately not graded by the Florida Department of Education so that other test scores could be released on schedule. Importantly, Project CHILD students, especially at Tedder, are taught in a much more applied manner than traditional students; therefore, they may have been more negatively affected by this decision than their peers at the Comparison schools.

Secondly, as was stated in the Implementation section of this report, Tedder experienced problems in the implementation of Project CHILD this year. It had become necessary, for the good of the program, to "encourage" several Project CHILD teachers to leave the program. Notably, a new component of the research this year indicated that there exists a strong correlation between good Project CHILD implementation and good test results. Importantly the implementation problems found at Tedder may well have translated into poorer test results than may have been possible had there been a more complete compliance with the Project CHILD protocol.

The FCAT Writing scores of Tedder Elementary and its Comparison School also were comparatively analyzed (See Table 14). The FCAT Writing test scores included in this analysis are the combined scores of both the expository (writing to explain) and narrative (writing to tell a story) tests. Although each student only receives either an expository or narrative test, these tests are graded in the same fashion, randomly and evenly distributed among students, and considered equivalent. It also is important to note that in the FCAT Writing tests, students are graded on their ability to focus, organize, support, and appropriately punctuate their responses. In other words, the FCAT Writing test scores are centered on the student conceptualizing and expressing themselves in an applied manner. Given the Project CHILD emphasis on the application and utilization of knowledge and skills rather than memorization or rote techniques, it is not surprising that the Tedder Elementary School students earned comparatively higher scores than did students of the Comparison School. Moreover, it is notable that the Project CHILD students at Tedder were grouped in classrooms with an average of almost 31 students while the Comparison School classrooms averaged 23 students.

Table 14
FCAT Writing Scores9
Tedder Elementary and Comparison School

School	Mean Score
Tedder Elementary	3.2
Comparison School	3.1

Duval County School Analysis

The second Project CHILD research school used in this analysis was Windy Hill Elementary. The demographics for this school and the Comparison School chosen are presented in Table 15 below.

Table 15
Demographics for Windy Hill Elementary and Comparison School

School	School Grade	Average Class Size	Mobility	Limited English	Free / Reduced Lunch	Absent 21+ Days
Windy Hill Elementary	C	29.8	46.2%	1.6%	62%	9.8%
Comparison School	C	20.7	24.3%	0.0%	72%	10.6%

Because no standardized test was given at Grades 1 and 2 at the Project CHILD school, there was no means for comparison at these grade levels. Therefore, the two schools were only compared by grade levels 3 to 5. The basis for the comparisons were FCAT Norm Referenced Test scores for grades 3, 4, and 5.

The type of comparative statistical analysis used in comparing the mean scores by grade level for two schools was the independent t-Test. First, the mean test scores for reading and mathematics for Project CHILD classes and for classes at the comparison school at the same grade levels were generated. Then the t-Test was applied to determine if it was possible to be at least 90% confident that the differences in the mean scores from the two schools were statistically significant rather than coincidental or due to chance.

The results of this analysis appear in Table 16 below.

Table 16
Independent t-Test Analysis for
Windy Hill Elementary and Comparison School

FCAT Scores - Reading Grade 3	Windy Hill	Comparison School
Mean*	613 ✓	603
FCAT Scores - Math Grade 3	**Windy Hill**	**Comparison School**
Mean*	605 ✓	595
FCAT Scores - Reading Grade 4	**Windy Hill**	**Comparison School**
Mean*	629 ✓	617
FCAT Scores - Math Grade 4	**Windy Hill**	**Comparison School**
Mean	617 ✓	600
FCAT Scores - Reading Grade 5	**Windy Hill**	**Comparison School**
Mean*	645 ✓	642
FCAT Scores - Math Grade 5	**Windy Hill**	**Comparison School**
Mean*	639 ✓	638

** Denotes those differences in means that were found to be statistically significant at the .01 (90% degree of confidence) level. All analyzes were performed using Statistical Program For the Social Sciences (SPSS).*

As Table 16 indicates, classes at Windy Hill Elementary, the Project CHILD school, scored higher in all categories in which the two schools were compared. Of these, four of six comparison categories, 67% of the scores, were found to be statistically significant at the .01 (90% degree of confidence). This is particularly important when it is taken into account that one is comparing the Project CHILD schools with an average class size of 30 with a Comparison

School with average class size of only 21. It also is meaningful that Windy Hill has made considerable improvement in its rating against the Comparison School this year relative to last year. It shows once again that good implementation of Project CHILD can lead to positive student achievement improvement.

The FCAT Writing scores of Windy Hill Elementary and its Comparison School also were comparatively analyzed (See Table 17). In this analysis, the scores of Project CHILD students were averaged and compared to those of the Comparison School. It is important to note that although the Project CHILD students of Windy Hill equaled rather than surpassed the Comparison School student scores, they were able to maintain equivalency with an average of almost 30 students per classroom while the Comparison School classrooms averaged only 21 students.

Table 17
FCAT Writing Scores10
Wiindy Hill Elementary and Comparison School

School	Mean Score
Windy Hill Elementary	2.8
Comparison School	2.8

Hernando County School Analysis

The third Project CHILD School analyzed was John D. Floyd Elementary. The demographic characteristics both for this school and for the Comparison School used in this analysis appear in Table 18 below.

Table 18
Demographics for Floyd Elementary and Comparison School

School	School Grade	Average Class Size	Mobility	Limited English	Free / Reduced Lunch	Absent 21+ Days
Floyd Elementary	C	31.7	23.5%	1.1%	34%	5.7%
Comparison School	C	23	33.4%	2.5%	47%	6.1%

The schools in Hernando County were compared by grade levels for grades 1 to 5. The type of comparative statistical analysis used in comparing the two schools at the grade level was the independent t-Test. First, the mean test scores for Reading and Mathematics for each school at each of the five grade levels were generated. Then the t-Test was utilized to determine if it were possible to be at least 90% confident that the differences in the mean scores of the two schools were statistically significant rather than coincidental or due to chance. The results of this analysis appears in Table 19.

Table 19 presents the average test scores for John D. Floyd, the Project CHILD School, and the Comparison School. In the first two grades the SAT 9 is administered; thus, the average scores were used for this analysis. In the other three grades, the FCAT was administered and those scores were used for this analysis. As Table 19 indicates, nearly 90% of the differences in mean test scores between John D. Floyd and the Comparison School were statistically significant at the .01 level. In other words, because these results are statistically significant, one can be assured that, in at least nine out of ten cases where the Project Child students scored higher than those of the Comparison School, it was not due to chance. Therefore, in the case of these two schools, there is a scientific indication that Project

CHILD does make a positive statistically significant difference.

Table 19
Independent T-Test Comparison
For John D. Floyd and Comparison School

SAT 9 Scores - Reading Grade 1	**John D Floyd**	**Comparison School**
Mean*	545 ✓	533
SAT 9 Scores - Math Grade 1	**John D Floyd**	**Comparison School**
Mean*	562 ✓	556
SAT 9 Scores - Reading Grade 2	**John D Floyd**	**Comparison School**
Mean*	610 ✓	591
SAT 9 Scores - Math Grade 2	**John D Floyd**	**Comparison School**
Mean*	601 ✓	579
FCAT Scores - Reading Grade 3	**John D Floyd**	**Comparison School**
Mean*	627 ✓	616
FCAT Scores - Math Grade 3	**John D Floyd**	**Comparison School**
Mean*	622 ✓	613
FCAT Scores - Reading Grade 4	**John D Floyd**	**Comparison School**
Mean	644	649 ✓
FCAT Scores - Math Grade 4	**John D Floyd**	**Comparison School**
Mean*	638 ✓	630
FCAT Scores - Reading Grade 5	**John D Floyd**	**Comparison School**
Mean*	664 ✓	656
FCAT Scores - Math Grade 5	**John D Floyd**	**Comparison School**
Mean*	654 ✓	647

** Denotes those differences in means that were found to be statistically significant at the .01 (90% confidence limit) level. All analyzes were performed using Statistical Program For the Social Sciences (SPSS).*

Overall, the results of the analysis at the two schools in Hernando County indicate that Project CHILD made a positive statistically significant difference in terms of higher FCAT and SAT 9 scores at the Project CHILD school. These results are especially noteworthy when one takes into account that the Project CHILD school is being compared to a school with substantially smaller class sizes. The result also considerably reinforces the results from last year, where analysis by Florida TaxWatch found that the Project CHILD school scored better than the same comparison school 80% of the time.

The FCAT Writing scores of John D. Floyd Elementary and its Comparison School also were comparatively analyzed (See Table 20). In this analysis, the scores of Project CHILD students were averaged and compared to those of the Comparison School. Notably, the Florida Writing scores of the John D. Floyd Project CHILD students surpassed the Comparison School scores, even though those classrooms averaged almost 32 students per classroom

while the Comparison School classrooms averaged only 23 students.

Table 20
FCAT Writing Scores
John D. Floyd Elementary and Comparison School

School	Mean Score
John D. Floyd Elementary	3.5
Comparison School	3.4

Lake County School Analysis

The fourth Project CHILD research school used in this analysis was Mascotte Elementary. The demographics for this school and the Comparison School are presented in Table 21 below.

Table 21
Demographics for Mascotte Elementary and Comparison School

School	School Grade	Average Class Size	Mobility	Limited English	Free / Reduced Lunch	Absent 21+ Days
Mascotte Elementary	C	30.2	42.7%	12.4%	69%	7.4%
Comparison School	C	22.1	35.2%	4.6%	59%	5.4%

Because no standardized test was given at Grades 1 and 2 at the Project CHILD school, there was no means for comparison at these grade levels. Therefore, the two schools were only compared by grade levels grades 3 to 5. The basis for the comparisons were FCAT Norm Referenced Test scores for grades 3, 4, and 5.

The type of comparative statistical analysis used in comparing the mean scores by grade level for two schools was the independent t-Test. First, the mean test scores for reading and mathematics for Project CHILD classes and for classes at the comparison school at the same grade levels were generated. Then the t-Test was applied to determine if it is possible to be at least 90% confident that the differences in the mean scores from the two schools are statistically significant rather than coincidental or due to chance. The results of this analysis appear in Table 22.

Table 22
Independent t-Test Analysis for
Mascotte Elementary and Comparison School

FCAT Scores - Reading Grade 3	Mascotte	Comparison School
Mean	615 ✓	613
FCAT Scores - Math Grade 3	**Mascotte**	**Comparison School**
Mean	606	607 ✓
FCAT Scores - Reading Grade 4	**Mascotte**	**Comparison School**
Mean*	635 ✓	634
FCAT Scores - Math Grade 4	**Mascotte**	**Comparison School**
Mean	622 ✓	621
FCAT Scores - Reading Grade 5	**Mascotte**	**Comparison School**
Mean	641	646 ✓
FCAT Scores - Math Grade 5	**Mascotte**	**Comparison School**
Mean	638	639 ✓

** Denotes those differences in means that were found to be statistically significant at the .01 (90% degree of confidence) level. All analyzes were performed using Statistical Program For the Social Sciences (SPSS).*

As Table 22 indicates, only one of the score comparisons, reading in Grade 4 between Mascotte Elementary and the Comparison School, were found to be statistically significant at the .01 (90% degree of confidence) level. Therefore, the results of the analysis in this instance does not disprove the null hypothesis; namely, that there are no statistically significant differences between the test scores at the Project CHILD school and at the Comparison School.

It must be noted that Mascotte did have its problems with the implementation of Project CHILD this year. It lost its on-site coach during the middle of the semester, and the Principal had to take over and assume the duties of on-site coach. As was noted earlier, the new implementation component of the research this year points to the fact that there is a strong correlation between schools that had good Project CHILD implementation and those that had good test scores. Unfortunately, implementation troubles may well have negatively impacted the test results from Mascotte. Nonetheless, in an independent analysis conducted by the Principal, Project CHILD students were reported to have earned higher scores, better attendance, and fewer referrals than did the balance of Mascotte students.

The FCAT Writing scores of Mascotte Elementary are not available at this time and are not included in this report.

Sarasota County School Analysis

The fifth Project CHILD research school used in this analysis was Wilkinson Elementary. The demographics for this school and the Comparison School chosen are presented in Table 23 below.

Table 23
Demographics for Wilkinson Elementary and Comparison School

School	School Grade	Average Class Size	Mobility	Limited English	Free / Reduced Lunch	Absent 21+ Days
Wilkinson Elementary	A	29.4	23.5 %	2.8 %	41 %	5.4 %
Comparison School	B	20.6	23.9 %	3.8 %	31.3 %	5.4 %

Because no standardized test was given at Grades 1 and 2 at the Project CHILD school, there is no means for comparison at these grade levels. Therefore, the two schools were compared by only grade levels 3 to 5. The basis for the comparisons were FCAT Norm Referenced Test scores for grades 3, 4, and 5.

The type of comparative statistical analysis used in comparing the mean scores by grade level for two schools was the independent t-Test. First, the mean test scores for reading and mathematics for Project CHILD classes and for classes at the comparison school at the same grade levels were generated. Then the t-Test was applied to determine if it was possible to be at least 90% confident that the differences in the mean scores from the two schools were statistically significant rather than coincidental or due to chance. The results of this analysis appear in Table 24.

Table 24
Independent t-Test Analysis for
Wilkinson Elementary and Comparison School

FCAT Scores - Reading Grade 3	Wilkinson	Comparison School
Mean*	676 ✓	653
FCAT Scores - Math Grade 3	**Wilkinson**	**Comparison School**
Mean*	660 ✓	640
FCAT Scores - Reading Grade 4	**Wilkinson**	**Comparison School**
Mean	645	649 ✓
FCAT Scores - Math Grade 4	**Wilkinson**	**Comparison School**
Mean*	638 ✓	630
FCAT Scores - Reading Grade 5	**Wilkinson**	**Comparison School**
Mean*	675 ✓	660
FCAT Scores - Math Grade 5	**Wilkinson**	**Comparison School**
Mean	654	660 ✓

** Denotes those differences in means that were found to be statistically significant at the .01 (90% degree of confidence) level. All analyzes were performed using Statistical Program For the Social Sciences (SPSS).*

As Table 24 indicates, classes at Wilkinson Elementary, the Project CHILD school, scored higher in four of the six comparison categories in which the two schools were compared. Of these, all were found to be statistically significant at the .01 (90% degree of confidence) level. In addition, all the categories in which the Comparison School outscored Wilkinson were not found to be statistically significant. This means that we cannot say with at least a 90 % degree of confidence that those score differences did not occur by chance. This is particularly important when it is taken into account that one is comparing the Project CHILD schools with an average class size of 30 with a comparison school with average class size of only 21.

The FCAT Writing scores of Wilkinson Elementary and its Comparison School also were comparatively analyzed (See Table 25). In this analysis, the scores of Project CHILD students were averaged and compared to those of the Comparison School. The Florida Writing scores of the Wilkinson Elementary Project CHILD students surpassed by far the Comparison School scores, even though those classrooms averaged almost 30 students per classroom while the Comparison School classrooms averaged only 21 students.

Table 25
FCAT Writing Scores
Wilkinson Elementary and Comparison School

School	Mean Score
Wilkinson Elementary	3.7
Comparison School	2.9

Conclusion

The multi-component evaluation of Project CHILD by Florida TaxWatch was both "process" and "outcome" oriented. The results of each of the evaluation components are summarized below:

- The first component was a review of previous research conducted on Project CHILD. The eight years of research reviewed by TaxWatch suggests that Project CHILD students attain higher achievement levels as measured by report card grades and standardized tests. For example, a 1995 longitudinal study by Florida State University's College of Education indicates that Project CHILD students had better grade point averages on mid-semester report cards and higher test scores on the Comprehensive Test of Basic Skills than did their peers. Appendix B provides of a list of the studies reviewed.

- The second component of the evaluation was undertaken by the Institute for School Innovation staff focused on the implementation processes of Project CHILD. The results of this evaluation indicate that all five research schools (Tedder Elementary in Broward County, Windy Hill Elementary in Duval County, John D. Floyd Elementary in Hernando County, Mascotte Elementary in Lake County, and Wilkinson Elementary in Sarasota County) have, to varying degrees, implemented the Twenty Essential Components of the Project CHILD program. Among Project CHILD schools, John D. Floyd Elementary implemented the program most completely while Windy Hill Elementary made the greatest improvement in implementation over last year. It is interesting to note that Windy Hill also made the greatest improvement in test scores over last year.

- The third component of the evaluation focused on a cost-effectiveness analysis of the implementation of Project CHILD. It suggests that, if fully implemented statewide, the Project CHILD model with a class size 30 would accrue an annual cost saving of more than $4 billion over the traditional model of class size 20.

- The final component was the class size comparative statistical evaluation. The five Project CHILD research schools were compared to five demographically similar schools with smaller class sizes. Comparisons were based on the FCAT Norm Referenced Test and the SAT 9 test, and the means for both groups and Independent t-Tests were analyzed for statistical significance. The results indicate that of the classes at three of the five Project CHILD schools, those that most fully implemented Project CHILD, scored better than did their counterparts at traditional schools with smaller class sizes. The "most improved" school was Windy Hill, which did much better in terms of implementation and test score comparison than it did last year. In addition, FCAT Writing scores also were

compared. In all cases, Project CHILD classes surpassed or equaled the scores of their respective Comparison School, even though student enrollment in each of the Project CHILD classrooms was substantially higher than were those of the Comparison School

☛ The anecdotal evidence from a sampling of Project CHILD principals, teachers, students, and parents regarding the way in which Project CHILD has enhanced the educational experiences of students is found in Appendix C. The anecdotal data included testimony from parents, teachers, students, and principals from Tedder, Mascotte, and Wilkinson Elementary Schools, attesting to ways in which Project CHILD has improved both teaching and learning.

These results may be further validated as more data are gathered over the next year; however, even at this point, after only two consecutive years of empirical evaluation, they are a testament to the positive influence of Project CHILD. The results are especially noteworthy, taking into account that the Project CHILD schools are being compared with schools having classes of much smaller enrollments.

Overall, the evaluation suggests that Project CHILD has made a positive difference on student performance according to testimonials from many of the teachers, students, parents, and administrators involved with the Program, and it has the potential to generate substantial cost savings, if more widely implemented. It also appears to make a difference in student achievement results as indicated by statistically significant higher test scores in three of the five Project CHILD schools as compared to their counterparts at traditional schools with smaller class sizes. This is especially true in schools such as John D. Floyd Elementary and Windy Hill, the "most improved" school, where the technology and the Project CHILD coordinators fully complemented the Project CHILD teachers.

Recommendations

The research of this year points to the fact that there exists a strong correlation between schools that had good Project CHILD implementation and those that had good test scores. Therefore, every effort should be made to gather substantive input from the Project Child teachers on the implementation of Project CHILD and their recommendations for improvement. This could be done quantitatively (through the implementation of an annual survey) and quantitatively (by asking them to provide artifacts documenting innovative results that may have resulted as a consequence of Project CHILD through the course of the year). An effort should be made to institutionalize this process for continuous improvement through the use of a rudimentary management information system.

An effort should be made to gather longitudinal data as well as cross-sectional data over subsequent years. The results of this year should be built upon by comparing it to those of both last and next year and describing trends in student academic growth. Since high mobility rates are one of the biggest impediments to longitudinal research, it might be prudent to pilot-test the method at John D. Floyd which has the lowest mobility rate of the present research schools.

The process of institutionalizing the evaluation process at the Project CHILD schools should earnestly begin in the third year. An effort should be made to train the Project CHILD teachers and the on-site coaches in collecting, inputting an analyzing the data used in this research for their own schools. This will enable them to readily track the growth of their students and also provide them with tangible indicators of the results that they are achieving. A training schedule should be put in place and an SPSS statistical package purchased for the schools.

ENDNOTES

1. For reasons of anonymity, the comparison schools will not be named in this report.

2. Class size for the Project CHILD school represents the typical size of the Project CHILD classes at the schools.

3. It does reveal, however, statistical significance at the .1 level, which is an acceptable level of scientific observation in most cases. Additionally, when choosing between the acceptability of parametric (like the t-Test) and non-parametric (like the Mann Whitney Test) results, statisticians normally opt for the parametric test. However, with the small sample size, one needs to be additionally careful; hence the use of both in this study.

4. It should be noted that during the course of this study it was difficult for Florida TaxWatch to find elementary schools in Florida with average class sizes of 20 or fewer students. This seems to indicate that the substantial efforts and funds expended by the State of Florida to reduce class sizes have not been fully effective.

5. Florida Department of Education. (1999). Class Size for Grades K to 3 in Florida's Public Schools. Tallahassee: Florida Department of Education. McRobbie, Joan; Finn, Jeremy, D.; & Harman, Patrick. (1998). Class Size Reduction: Lessons Learned from Experience. San Francisco, CA: WestEd.

6. Denzin, Norman K. (1989). The Research Act: A Theoretical Introduction to Sociological Methods. Englewood Cliffs, NJ: Prentice Hall.

7. In an effort to provide the most current data, school demographic data were drawn from both Project CHILD schools and the Florida Indicators Report (November 9, 2000). Tallahassee, FL: Florida Department of Education.

8. Comparison schools had average class sizes of 20 or less when selected.

9. Nachimas, David & Nachimas Chava, (1976). Research Methods in the Social Sciences. New York: St. Martin's Press

10. FCAT Writing tests are only administered in Grade 4 of elementary schools.

11. This section was written by Debbie Pepin of the Institute for School Innovation.

12. FCAT Writing scores of Project CHILD students were provided by each participating school. Comparison school FCAT Writing scores were drawn from: School FCAT Writing Results, 2001 Data, All Curriculum Groups - Grade 04 (May 2001). Tallahassee, FL: Florida Department of Education.

13. FCAT Writing scores of Project CHILD students were provided by each participating school. Comparison school FCAT Writing scores were drawn from: School FCAT Writing Results, 2001 Data, All Curriculum Groups - Grade 04 (May 2001). Tallahassee, FL: Florida Department of Education.

Appendix A

The CHILD Twenty Essential Components

1. Primary and intermediate grades form classroom clusters.

Three grade-levels form a cluster for instruction in reading, language arts (writing), and mathematics. Kindergarten, first and second grades form the primary cluster; while third, fourth, and fifth grades form the intermediate cluster. Each classroom in the cluster has learning stations equipped with computers, software, and other learning materials appropriate for either reading, language arts, or mathematics. Students spend one hour in each of the subject classrooms in their cluster every day.

2. Cluster teachers function as trained experts in a subject specialty.

Project CHILD teachers receive special year-long training in their content specialty (reading, language arts, or mathematics), in classroom-management techniques, and computer-integration skills. Project CHILD teachers continue their professional development through ongoing self-study, inservice, action-research, and by becoming mentor/trainers for new CHILD teachers.

3. Students work with the same teacher team for three years.

Project CHILD students work with the same reading teacher, language arts teacher, and math teacher for three years (kindergarten through second grade; third grade through fifth grade).

4. Teachers use the CHILD research-based materials to plan lessons and coordinate instruction.

While CHILD schools use their own curriculum, they follow the multi-grade unit organization in the *CHILD Planning Guides* to coordinate lessons and incorporate a variety of appropriate software and learning activities for their students. Teachers incorporate suggestions from the teaching tips into their instruction. Teachers also use the *CHILD Activities Guides* to develop hands-on station activities tied to lesson objectives.

5. Students work at a variety of learning stations on a daily basis.

Each CHILD classroom has a Computer Station for using instructional software and productivity tools, a Text Station for written work, an Exploration Station for hands-on activities, and a Teacher Station for small group work. Students work cooperatively at learning stations when they are not working with the teacher. The learning stations provide a variety of activities designed to accommodate all learning modalities.

6. Station activities are clearly defined, aligned with standards, and appropriate to students' abilities and needs.

Teachers clearly explain station activities and use *Task Cards* to specify assignment requirements at each station. The assignments are appropriate for the students' level of intellectual and social development.

7. Teachers designate where students begin working each day.

The teacher prepares a *Daily Station Assignment Board* so that students know where to begin working after whole group instruction. Teachers insure that students begin at different stations each day by using information provided on the Station Visitation Chart of the *CHILD Passport.*

8. The classroom ambiance is supportive, equitable, and risk-free.

CHILD teachers create a risk-free learning climate which enables students to learn from their mistakes. Teachers set high expectations and follow equitable practices. There is a positive tone where students are frequently praised and encouraged.

9. Cluster teachers meet weekly to plan and coordinate instruction.

Teachers within each cluster (primary and intermediate) work cooperatively. They participate in weekly structured cluster meetings, and complete the *CHILD Cluster Meeting Agenda* form.

10. Teachers observe students in the other cluster classrooms.

Once during each six-week unit, teachers spend thirty minutes observing the two other classrooms in their cluster. They complete the *CHILD Cluster Observation Form* and report to their colleagues at a team meeting.

11. Teachers conduct a ten-day orientation to train students in CHILD management techniques.

Teachers follow a structured ten-day orientation plan to train students to responsibly use and care for materials and equipment, to stay on-task while working independently, and to move efficiently to various learning stations. They learn the purpose and use of the *CHILD Passport.*

12. Students set and assess unit goals.

Students are guided by their teachers to set reasonable goals at the beginning of each six-week unit. At the end of each unit, students assess whether they achieved their goals. They record this information in the *CHILD Passports.*

13. Students use *CHILD Passports* each day to guide independent movement to stations.

Students use their *CHILD Passports* to set goals, record information about their station work, express their opinions, and evaluate goal accomplishments. Students refer to the Passport to guide their movement to the various learning stations in each classroom.

14. Students have frequent and equitable access to computers.

Each cluster is equipped with a minimum of twelve computers (3 for reading, 3 for mathematics, and 6 for language arts). All students work at the Computer Station in each of the subject-area classrooms at least three times per week.

15. Students exercise control over materials and equipment.

Students have access to and control over all materials and equipment at designated learning stations. They use equipment carefully and store materials properly.

16. Students work as partners and in cooperative teams.

Students work at stations in cooperative teams where they learn to help and support one another. At the Computer Station, student pairs follow specific strategies to work as cooperative teams (except when word processing). They receive recognition and rewards to foster cooperation.

17. The principal provides leadership and support.

The principal attends the CHILD training and visits the classrooms frequently to become thoroughly familiar with the CHILD methods and materials. The principal designates a CHILD coordinator, and provides the necessary resources to fully implement the CHILD program -- including hardware and software. The principal facilitates communication and teamwork by helping teachers find ways to conduct structured observations. The principal facilitates communication with parents, central office staff, and the community at large.

18. There is adequate time for collaborative planning.

Each CHILD cluster must have a common planning time. At least one meeting per week is essential and should not be superseded by unscheduled faculty meetings, departmental duties, parent conferences, etc.

19. Instructional time is free from interruptions.

Instructional time is not interrupted by pull-outs, unscheduled special events, and intercom announcements. Block scheduling or other innovative scheduling plans that accommodate longer class period are highly desirable to facilitate the station rotation process.

20. Parents use the CHILD Passports to stay informed and provide input.

Parents attend a CHILD orientation meeting at the beginning of the school year to become informed about the CHILD instructional model. Parents review their child's Passport, sign and make comments at the end of each unit.

Project CHILD On-Site Coach's Monthly Report
ESSENTIAL COMPONENTS IMPLEMENTATION

Completed by_____ Date Submitted_____
Class _____Teacher _____

Directions: Use this form as a quick check of the Project CHILD Essential Components during your bi-weekly visit to each CHILD classroom. Complete a separate form for each classroom. Stay at least 30 minutes. Spend the bulk of your time participating and working with students. Consult with the teacher after each visit to determine how you can help facilitate his/her learning stations. If the students are not engaged in station work during your visit, indicate what the activity entailed (for example, whole group lecture, small group work on the same activity, etc.)

First Visit: Date_____ Start Time_____ End Time_____
Skill / Concept being taught _____

(PP-Paper/Pencil, HO-Hands-on, TECH-Technology)

Station_____
PP____ HO____ TECH____

Station_____
PP____ HO____ TECH____

Station_____
PP____ HO____ TECH____

Station_____
PP____ HO____ TECH____

Station_____
PP____ HO____ TECH____

Station_____
PP____ HO____ TECH____

Students are using correctly:

YES NO Daily station assignment board
YES NO Passports
YES NO Task Cards
YES NO Weekly self-assessment

Teacher is:

YES NO Attending weekly cluster meetings.
YES NO Observing in other classrooms during each nine weeks.
YES NO Meeting with on-site coach once a month.

Assistant is:

YES NO Monitoring the Computer Station

Second Visit: Date_____ Start Time_____ End Time_____
Skill / Concept being taught. _____

Station_____ **Station**_____
PP____ **HO**____ **TECH**____ **PP**____ **HO**____ **TECH**____

Station_____ **Station**_____
PP____ **HO**____ **TECH**____ **PP**____ **HO**____ **TECH**____

Station_____ **Station**_____
PP____ **HO**____ **TECH**____ **PP**____ **HO**____ **TECH**____

Students are using correctly:
YES NO Daily station assignment board
YES NO Passports
YES NO Task Cards
YES NO Weekly self-assessment

Teacher is:
YES NO Attending weekly cluster meetings.
YES NO Observing in other classrooms during each nine weeks.
YES NO Meeting with on-site coach once a month.

Assistant is:
YES NO Monitoring the Computer Station

Other aspects of Project CHILD I observed in this classroom:

_____
_____

Project CHILD Effective Practices

NAME _____ **DATE** _____

SUBJECT _____ **LEVEL: Primary or Intermediate**

Passports:

Yes or **No** Goals are appropriate for Academic, Work Habits, and/or Behavior.
Yes or **No** Dates on back are complete and consecutive.
Yes or **No** Skills from Task Cards are recorded on inside pages.
Yes or **No** Self-Assessment is completed weekly.

Daily Station Assignment Board:

Yes or **No** Daily Station Assignment Board is current.
Yes or **No** Teacher monitors station visitation selection.
Yes or **No** Teacher uses board or other system to designate beginning station for each student.

Stations:

Yes or **No** Stations are clearly designated by station signs.
Yes or **No** Teacher Station is used as needed for instruction and remediation.
Yes or **No** Task Cards are complete at each station.
Yes or **No** Documentation in Passport shows daily station visitation.
Yes or **No** Station activities relate to standards (Levels I & II).
Yes or **No** Station activities are appropriate for students' academic level.
Yes or **No** Students rotate individually and at their own pace.
Yes or **No** A variety of stations are in use.

TOTAL # of Yes _____ **TOTAL # of No** _____

EXEMPLARY CRITERIA: (Yes answers should be equal to or greater than the number listed below)
First Semester CHILD Teacher = 10 Yes
Second Semester & Beyond CHILD Teacher = 13 Yes

_____ of Paper/Pencil Stations # _____ of Hands-on Stations
(Hands-on stations include games, puzzles, construction, creative, artistic, projects, etc.)

_____ of Computers in use # _____ of Computers available

Noteworthy Practices

_____
_____
_____

Areas of Concern

_____
_____
_____

Next Steps

_____
_____
_____

_____ _____ _____
Signature of Teacher ISI Staff Member or On-Site Coach Principal

_____

Appendix B

Inventory of Previous Research Findings on Project CHILD

1. A 1991 random sample study by Evaluation Systems Design, Inc. and presented at the Southeast Evaluation Association, January, 1991 indicates that Project CHILD students in Volusia County, Florida scored significantly higher than their counterparts in traditional classes.

2. A 1991 six county study published in Florida Technology in Education Quarterly, Vol. 4, No.4, Summer 1992 and conducted by the FSU Center for Instructional Development compared mean standardized test scores for Project CHILD students compared to non- Project CHILD students at each school and found 11 positive effects, 2 negative effects and large positive effects for long-term students.

3. A 1992 six county follow-up study published in the Journal of Research on Computing in Education, Vol. 26, No. 1, Fall 1993 by O. Kromhout compared mean standardized test scores for Project CHILD Students compared to non-Project CHILD students at each school and found 12 positive effects, 2 negative effects, and that large positive effects continue for long term students.

4. A 1993 six-county follow-up report to the Daniel Memorial Institute, Jacksonville, Florida by O. Kromhout compared mean standardized test scores for Project CHILD students compared to non-Project CHILD students at each school and found 15 positive effects, 0 negative effects, and that large positive effects continue for long term students.

5. A 1994 middle school follow-up report to the Daniel Memorial Institute, Jacksonville, Florida by B. Gill compared standardized 6th grade test scores at two middle schools which receive students from Project CHILD schools.

6. Descriptive statistics (means and standard deviations) were calculated for percentile scores, then independent t-tests were conducted to determine differences between 180 former Project CHILD and non-Project CHILD students. The results indicate that percentile scores for CHILD students were 5 and 10 percentiles higher than matched sample of non-CHILD for reading and math.

7. 1997 longitudinal effects study through fifth grade preliminary report to the Institute for School Innovation, Tallahassee, Florida compared standardized test scores for students who participated in Project CHILD (K-5) at 2 elementary schools to a matched sample of traditional students. Descriptive statistics (means and standard deviations) were calculated for percentile scores, then independent t-tests were conducted to determine differences between 25 former Project CHILD and non-Project CHILD students. The results indicate that Project CHILD students had higher NCE and percentile scores in all areas: reading math, language and total battery, with the largest differences in subtests of reading comprehension and math concepts.

8. A 2000 study of the implementation of Project CHILD in two schools (Crooked River Elementary School and Scott Elementary School) in Georgia provided a positive portrait of Project CHILD. In particular:

- Reading growth is generally facilitated by Project CHILD, especially in the lower grades.
- Math growth is generally facilitated by Project CHILD, especially in the upper grades.

Writing growth is accelerated by Project CHILD in both the upper and lower secondary schools grades.

Appendix C

Qualitative Anecdotal Evidence of Project CHILD Effectiveness

A Principal's Testimony
The following is a verbatim, e-mail letter received by Florida TaxWatch from Principal Dennis Dennis of One of the new emerging schools, Mascotte Elementary of Lake County.

> "From my stand point I can definitely say there is an improvement in attendance: CHILD students have better attendance than regular classroom students. Overall attendance at the school is about 1% higher than before Project CHILD ...Children in Project CHILD enjoy the classes and want to stay in the classes."
>
> Dennis Dennis, July 25, 2001

Students in Project CHILD classes have also had positive experiences with the classroom method, as evidenced by the account below from one student (Bethany) at John D. Floyd Elementary School (edited somewhat for grammar):

> I have been in Project CHILD for 3 years. I am now in fifth grade at John D. Floyd Elementary School in Hernando County. I have been in Project CHILD since third grade.
>
> There are many good things about Project CHILD. One good thing is the stations. I like stations because I learn more things. We get to research things. We can learn about different things. Another good thing is we get different teachers. Each teacher focuses on one subject. They can concentrate on one thing.
>
> The third thing is we can go in groups. We learn teamwork. We learn to cooperate with others.
>
> The last good thing is that we can work on computers. We learn to type. We learn to research on the Internet. We can do educational programs.
>
> In conclusion, I really like Project CHILD. It is very educational. Everyone that I know likes it.

Parents of Project CHILD students have also indicated that they are very satisfied with the quality of instruction that their children receive in Project CHILD classes. Judy Perkins of Tedder Elementary School had this to say:

May 21, 2001

Both of my children have experienced the Project CHILD program. Project CHILD prepared my older son for a magnet middle school program and made his transition from the elementary school to middle school a smooth one, without skipping a beat. He will be entering a magnet program high school for the school year 2001-2002. My younger son has been in the Project CHILD program since he started school. He is currently in his 4th year. The teachers work well together and know the strong and weak points of every student in their classes. Having the same teachers for three years enables the student to know exactly what is expected academically, and the teachers know the capabilities of all the students. The students learn to work independently by going to their stations and completing the assignment for their station. Changing classes for reading, math and language arts prepares them for their future years of school.

Project Child has played an important role in the education of my children. I only have positive things to say about it.

Sincerely

Judy Perkins

Project CHILD teachers also have lauded praises on the effects of the program on their students' learning and on themselves. The testimonial presented below is from two Project CHILD Tedder Elementary School teachers.

June, 2001

To Whom it May concern:

I have worked with Project Child classes for two years (Language Arts and Math), and have noticed how well the students are focused and how they stay on task. I also have noticed the growth they made throughout the year. My grandson is in another Project Child cluster and is functioning above grade level in all three subjects. He enjoys the station activities and the fact that he has three different teachers. I am able to view this program through eyes BOTH as a participant AND as a parent and I feel it is the best program that has come to Tedder Elementary in the fifteen years that I have been working here!

Rosie T. Wright

Letter Two:

June, 2001

To Whom It May Concern:

I have been a Project Child Primary Math teacher at Tedder Elementary for five years. I am totally committed to this program since I have witnessed the tremendous growth each student has made over the years. The students work in a risk-free environment and at their own pace. They work cooperatively, as well as one-on-one and receive small group instruction at the Teacher Station. Technology is heavily incorporated throughout the classroom, especially at the Computer Station! Students of ALL learning modalities benefit from this program (which is a delivery system) since the station activities are paper and pencil and hands-on using a variety of manipulatives. I feel I have become an "expert" in my field since I teach ONLY math for a full hour to three different grade levels throughout each day. The stations provide practice skills listed in the benchmarks' five different strands in the Florida State Sunshine Standards. I very definitely believe that Project Child is responsible for Tedder becoming a "C" school after being a "D" school for two years! Project Child continues to help keep my enthusiasm and zest for teaching at the same level as it was when I entered the teaching profession twenty-six years ago!

Respectively submitted,

Lynne Ragatz

Project CHILD praises, like those above from teachers, are widespread and also include laudable recognition from teacher/coordinators as well.

August, 2000

"I will never teach the same again!" Those were my words after teaching in Project CHILD for 3 years. That was eight years ago and I am still a strong proponent of the system.

As a teacher I was looking for something new and different 11 years ago. Someone asked me if I wanted to teach with a team of teachers and try a new delivery system in the classroom. I was skeptical but I decided to give it a try. The first year was very hard. We didn't know why we had said we would do this. It was like being a first year teacher all over again. The second year was a little smoother, plus we knew 50 of the children that we had had the year before. We only had to learn the 20 new kindergarten names. The third year was like a dream. We knew the parents, the children, and had a wonderful way to manage our classroom, "Project CHILD."

My daughter was a disorganized student. She entered Project CHILD in third grade. It was a struggle at first for her to keep up with all of the things going on in a Project CHILD classroom. I wouldn't let her give up and her three wonderful teachers wouldn't either. She completed the last three years of elementary school in a Project CHILD setting and she is a better student because of it. As a middle school student she was very organized and a leader when it came to group projects. She was always the one who gave direction to the group and kept them on track to get projects turned in on time. This has also carried over into her high school years. Now as a junior in high school she is taking dual enrollment classes that will give her college credit.

I have been the coach at my school for the last two years in the research project. I am in and out of classrooms all day. The things that I see going on are phenomenal, both with the students and with the teachers. Most teachers that I talk to will never teach the same again. The Project CHILD management system has changed their classroom and their vision.

I am also a trainer for Project CHILD. The last several years I have trained many teachers in Project CHILD. I hear from them occasionally and they are still excited about the "new" way they learned to teach and manage their classroom.

Sincerely,

Janet Oppedal

Teacher and Coach

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