Interim Research Report

March 2000

Florida TaxWatch's
Comparative Evaluation of Project CHILD

Academic achievement in schools is currently one of Florida's most important social and policy issues. Education is seen as the most important factor in enabling Floridians to thrive in an information age and is considered vital for 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 today's society. To get to the bottom of the issue, Florida TaxWatch is presently undertaking a controlled, comparative evaluation of Project CHILD, an innovative computer-integrated instructional program.

Florida TaxWatch Evaluation of Project Child:

Developed in 1988 at Florida State University by Dr. Sally Butzin and currently under her executive directorship of the Institute for School Innovation, Project CHILD has received numerous awards and has been recognized as an effective program by the National Diffusion Network. The Project CHILD model is designed to enable elementary schools integrate technology into their reading, language arts, and mathematics curriculum. It incorporates a variety of school improvement strategies to improve student instruction and student learning: brain-based research, cooperative learning, continuous progress instruction, students with special needs, authentic assessment, and hands-on active learning. Fully developed instructional materials, correlated with state standards and intensive training provided by Institute for School Innovation staff (which manage the program) and certified consultants enable teachers to transform the text-dominated traditional classroom into multi-dimensional learning stations.

The TaxWatch evaluation is using both expert opinion and statistical analysis to evaluate the efficiency and effectiveness of the Project CHILD program. Utilizing a cost effectiveness framework, the study is designed specifically to determine the effects of class size on academic achievement in reading, writing and mathematics. The evaluation will be applied to at least four diverse and geographically dispersed elementary schools throughout the state. The final draft of the evaluation results will be submitted August 31, 2000.

Preliminary Review By TaxWatch of Previous Research on Project CHILD

TaxWatch's preliminary review of previous research on Project CHILD and anecdotal evidence supplied by elementary school teachers and principals suggest that the Program can make an important difference in improving student performance. The evaluation 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 acid test of the programs impact on student achievement and

program cost effectiveness.

Eight years of independent research 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 Department of Education, indicates that Project CHILD students measure above their peers. The study involved 360 sixth grade students at 2 middle schools in Okaloosa County, Florida. The two schools are feeder schools for nine elementary schools which have 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 were impressive.

Project CHILD students had better grade point averages on mid-semester report cards in language arts and mathematics (the curriculum focus of Project CHILD) and higher test scores on the Comprehensive Test of Basic Skills (CTBS) administered in the Spring in reading, math, and the total 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 A for a list of other past studies which point to increasing academic achievement by Project CHILD students).

Anecdotal Evidence of Project CHILD's Effectiveness: One Principal's Story

The following is a verbatim, e-mail letter received by Florida TaxWatch from Principal Tom Wallon of Windy Hill Elementary School in Jacksonville, Florida. Mr. Wallon describes in vivid terms the differences that the Project CHILD program already is making at his school. The program has been implemented at Windy Hill since 1992. The letter is presented here with Principal Wallon's permission and is characteristic of the kinds of testimonials being made by other Florida elementary school principals and teachers who have actively been engaged with the Project CHILD program:

> Our 5th grades were preparing for the FCAT exams in a variety of ways. The 5th grade teachers came up with the idea that if they had a competition among the four classes, it would be a "fun" way to practice and learn as much math as they could before the test. The Project CHILD teachers took the lead and devised several stations with a game format that allowed 4 teams to compete at once. The final station was one where they pushed the off/on switch on a "strip plug" which was attached to a light bulb. The first to be able to press the switch was chosen to answer first. The "BRAIN BRAWL" was very interesting and fun for the children. We had several TV stations show up and put it on the News that evening.
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> The outcome of the Brain Brawl was particularly interesting. First of all, the Project CHILD classes had 30 children each, the non-child classes were about 28 each. The Project CHILD classes had ALL of the ESE (special education) students in the 5th grade. The non-Project classes had none. The non-CHILD classes used typical drill techniques; the CHILD classes utilized their stations, game formats and some traditional drill.

The Brain Brawl was a two Friday event. At the end of the first Friday, the Project Classes were close in total points, (to each other), and the non-CHILD classes were far behind (over 100 points). We made a big deal that anything could happen next week, and that everyone should practice and study hard. The following Friday, the gap between the two classes widened dramatically. It was almost embarrassing. We really played down the final score in points and reported back the place everyone came in during the competition. The Project CHILD classes literally "blew away" their counterparts. It was also clearly not a matter of two superior teachers and their classes against two inferior teachers and their classes, as all our 5thgrade teachers were very capable and experienced ones.

I simply believe the manner in which the Project CHILD students practiced was much more effective, and that the information stayed with the children better with the Project CHILD methodology.

Sincerely,

Tom Wallon
Principal

Preliminary Spreadsheet Analysis of Potential Cost-Related Impacts of Project CHILD:

The following data represent a brief, preliminary spreadsheet analysis of anticipated 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 classroom assistant 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 (excludes enhancements) as compared to the traditional classroom of 20 students:

Project CHILD Research Model Impact

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**	**Savings**
Initial Cost/Savings:			
Teachers @ $35,916	$1,319,122,848	$1,978,720,188	$659,597,340
Benefits @ 28%	$369,354,397	$554,041,653	$184,687,255
CHILD Materials/Software/Training	$102,841,500	$0	($102,841,500)
Classroom Assistant ($10/hr @ 3 hrs; 180 days)	$198,331,200	$0	($198,331,200)

Subtotal Basic Costs	$1,989,649,945	$2,532,761,841	**$543,111,895**
Computers @ $1,200 (4 per classroom)	$176,294,400	$0	($176,294,400)
Additional Classrooms - 18,365 classrooms @ 20 student workstations/classroom @$11,157 per ws	$0	$4,097,966,100	$4,097,966,100
TOTAL Cost/Savings	$2,165,944,345	$6,630,727,941	**$4,464,783,595**
Ongoing (after first year) Cost/Savings:			
Teachers	$1,319,122,848	$1,978,720,188	$659,597,340
Benefits	$369,354,397	$554,041,653	$184,687,255
Renewal materials	$11,191,575	$0	($11,191,575)
Classroom Assistant	$196,003,800	$0	($196,003,800)
Total Recurring Cost/Savings	$1,895,672,620	$2,532,761,841	**$637,089,220**

Example 2	**CHILD/22 50,084 Classrooms**	**Traditional/20 55,093 Classrooms**	**Savings**
Initial Cost/Savings:			
Teachers @ $35,916	$1,798,816,944	$1,978,720,188	$179,903,244
Benefits @ 28%	$503,668,744	$554,041,653	$50,372,908
CHILD Materials/Software/Training	$139,893,540	$0	($139,893,540)

Subtotal Basic Costs	$2,442,379,228	$2,532,761,841	$90,382,612
Computers @ $1,200 (4 per classroom)	$240,403,200	$0	($240,403,200)
Additional Classrooms - 5,009 classrooms @ 20 student workstations/classroom @$11,157 per ws	$0	$1,117,708,260	$1,117,708,260
TOTAL Cost/Savings	$2,682,782,428	$3,650,470,101	**$967,687,672**

Ongoing (after first year) Cost/Savings:			
Teachers	$1,798,816,944	$1,978,720,188	$179,903,244
Benefits	$503,668,744	$554,041,653	$50,372,908
Renewal materials	$15,225,500	$0	($15,225,500)
Total Recurring Cost/Savings	$2,317,711,188	$2,532,761,841	**$215,050,652**

Note: *Student enrollment, average teacher salary and average student workstation cost obtained from latest available FDOE data. Also, savings would accrue over time through attrition and cost avoidance.*

Appendix A

Preliminary Inventory of Previous Research Findings on Project CHILD

1. 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. 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-CHILD students at each school and found 11 positive effects, 2 negative effects and large positive effects for long-term students.

3. 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 CHILD Students compared to non-CHILD students at each school and found 12 positive effects, 2 negative effects, and that large positive effects continue for long term students.

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

5. 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 7 CHILD schools. Descriptive statistics (means and standard deviations) were calculated for percentile scores, then independent t-tests were conducted to determine differences between 180 former CHILD and non-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.

6. 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 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 CHILD and non-CHILD students. The results indicate that 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.

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