

DOCUMENT RESUME

ED 368 805

UD 029 695

AUTHOR Lambert, Mary Jo  
 TITLE A Summary of Research Findings on Efficacy Programs for Middle and Elementary School Students.  
 INSTITUTION Efficacy Inst., Lexington, MA.  
 PUB DATE [92]  
 NOTE 32p.  
 PUB TYPE Information Analyses (070)

EDRS PRICE MF01/PC02 Plus Postage.  
 DESCRIPTORS \*Academic Achievement; Comparative Analysis; \*Elementary Schools; Elementary School Students; Longitudinal Studies; Mathematics Achievement; \*Middle Schools; Outcomes of Education; Program Evaluation; Public Schools; Reading Improvement; Research; \*Student Improvement; \*Teacher Response  
 IDENTIFIERS \*Efficacy; Middle School Students

ABSTRACT

This report examines the findings from a series of evaluations of efficacy programs in selected elementary and middle schools in Peoria (Illinois), Detroit (Michigan), Los Angeles (California), and the Ravenswood School District in East Palo Alto (California). An efficacy program initiated in Sacramento is targeted as a research site, but no data are presently available. The research conducted in Peoria, Detroit, and Los Angeles investigates the effects of these programs on various outcome measures, both qualitative and quantitative, including improvement in students' grades, decreases in absenteeism, attitude changes toward school work, and performance on standardized achievement tests. Findings indicate that elementary and middle school students who participated in the efficacy programs made significant gains in their achievement. In addition, teachers report positive perceptions of the program and cited the need to expand and continue the program for all grade levels. Thirteen tables provide program data. (Contains 11 references.) (GLR)

\*\*\*\*\*  
 \* Reproductions supplied by EDRS are the best that can be made \*  
 \* from the original document. \*  
 \*\*\*\*\*

ED 368 805

U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement  
EDUCATIONAL RESOURCES INFORMATION  
CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it
- Minor changes have been made to improve reproduction quality
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

PERMISSION TO REPRODUCE THIS  
MATERIAL HAS BEEN GRANTED BY

Mary Jo Lamberti  
Efficacy Inst.

TO THE EDUCATIONAL RESOURCES  
INFORMATION CENTER (ERIC)

## A SUMMARY OF RESEARCH FINDINGS ON EFFICACY PROGRAMS FOR MIDDLE AND ELEMENTARY SCHOOL STUDENTS

Mary Jo Lamberti, Ph.D.  
The Efficacy Institute

10029685

## TABLE OF CONTENTS

	Page
List of Tables	i
Summary	iii
The Efficacy Program in the Los Angeles Unified School District Ten Schools Program	1
Peoria Public Schools Efficacy Program: A Longitudinal Study	3
The Middle School Program in Detroit Public Schools	4
Follow-up Study of Middle School Efficacy in Detroit: 1988-1989	5
The Detroit Middle School Program Evaluation Report: 1989-1990	7
The Detroit Middle School Evaluation of Efficacy: 1990-1991	10
The Detroit Elementary Schools Evaluation of Efficacy: 1989-1990	12
Evaluation of 1989-1990 Data from the Detroit Elementary Schools	12
The 1991-1992 Evaluation of Efficacy on the Detroit Elementary School Curriculum	14
Staff Perceptions of the Evaluations of Efficacy in the Detroit Elementary Schools: 1989-1990 and 1991-1992	16
Evaluations of Efficacy in the Marquette Elementary and Middle Schools: 1991-1992	17
Marquette Elementary School	18
Marquette Middle School	18

	Page
Staff Perceptions of the Efficacy Program at Marquette	18
Efficacy Institute Project in the Ravenswood School District	19
Qualitative Data Obtained from Students' Essays	21
References	24

## LIST OF TABLES

	Page
Table 1 The Difference in Growth Scale Values for Peoria Students in Three Years of the Efficacy Program	4
Table 2 CAT (Reading): Experimental and Control Groups Middle School Follow-up of Efficacy	6
Table 3 CAT (Math): Experimental and Control Groups Middle School Follow-up of Efficacy	6
Table 4 CAT (Reading): Experimental and Control Groups in Detroit Middle Schools, 1989-1990	8
Table 5 CAT (Math): Experimental and Control Groups in Detroit Middle Schools, 1989-1990	9
Table 6 Experimental and Control Groups in the Detroit Middle Schools, 1990-1991: Outcome Measures	11
Table 7 Days Absent for Experimental and Control Groups for Detroit Elementary Schools, 1989-1990	13
Table 8 CAT: Reading Scores for Experimental and Control Groups in the Detroit Elementary Schools, 1989-1990	13
Table 9 CAT: Math Scores for Experimental and Control Groups in the Detroit Elementary Schools, 1989-1990	14

	Page
Table 10 CAT: Reading Scores for Experimental and Control Groups in the Detroit Elementary Schools, 1991-1992	15
Table 11 CAT: Math Scores for Experimental and Control Groups in the Detroit Elementary Schools, 1991-1992	15
Table 12 GPA's for Experimental and Control Groups in the Detroit Elementary Schools, 1991-1992	16
Table 13 GPA's for Experimental and Control Groups in the Marquette Evaluation, 1991-1992	17

## SUMMARY OF FINDINGS

This report examines the findings of a series of evaluations of the Efficacy programs in selected elementary and middle schools in Peoria, Detroit, Los Angeles, and the Ravenswood School District in East Palo Alto. Sacramento has also implemented Efficacy and is targeted as a research site, although there is no data presently available. The research conducted in Peoria, Detroit, and Los Angeles investigates the effects of the program on various outcome measures, both qualitative and quantitative, including improvement in students' grades, decreases in absenteeism, attitude changes toward school work, and performance on standardized achievement tests. The findings of this research indicate that elementary and middle school students who participated in the Efficacy programs made significant gains in their achievement. In addition, teachers reported positive perceptions of the program and cited the need to expand and continue the program for all grade levels. The research in East Palo Alto differs from the research conducted in the other sites as this evaluation is based on teachers' and principals' perceptions and judgments about the implementation of the Efficacy program. The Ravenswood research is not a quantitative analysis of students' achievement, but is instead concerned with administrators' perceptions of the program. The results of the five studies reported here are summarized below:

### **The Efficacy Program in the Los Angeles Unified School District Ten Schools Program, 1990-1991**

The researcher examined students' and teachers' self-reports as outcome measures of the effectiveness of the Efficacy program. Students were asked about improvement in their grades, attitudes towards school work, and feelings of

academic self-efficacy. Teachers reported that students appeared to be taking more risks, indicated greater academic self-efficacy, and showed improved attitudes toward their academic work. Black students showed greater positive changes in comparison to Hispanic students.

### **Peoria Public Schools Efficacy Program**

The research conducted in Peoria was longitudinal, examining achievement in reading and math test scores over a three year period. Researchers calculated a Growth Scale Value (GSV), an expected score of achievement, based upon a student's actual test scores during the school year. Statistically significant gains were found for all three years in first through fourth grades. First grade students benefitted most. They attained achievement gains which exceeded all other grade levels and showed the greatest increases in reading achievement.

### **The Detroit Middle and Elementary Schools**

The results of the Efficacy Program in the Detroit Middle Schools were evaluated for three school years: 1988-1989; 1989-1990; and 1990-1991. The results of the elementary school program were evaluated for two school years: 1989-90 and 1991-1992. The researcher examined a variety of outcome measures in all evaluations including improvement in students' grade point averages (GPA), absentee rates, citizenship ratings, scores on the Michigan Educational Assessment Program (MEAP), and scores on the California Achievement Tests (CAT). The results of the evaluations varied, although almost every evaluation reflected statistically significant increases in reading and math achievement scores for students who participated in the Efficacy programs when compared with scores of students who did not participate in the programs.

## **Evaluations of Efficacy in the Marquette Elementary and Middle Schools: 1991-1992**

In a separate Detroit study, evaluations were completed for one middle school and one elementary school. These studies reflect a considerably smaller sample than the other studies. Students who participated in Efficacy at the third grade level showed increased GPA's compared to third grade students who did not participate in the program. At the middle school, the researcher reported decreases in absentee rates for the experimental group when compared to a control group. The sixth graders who experienced Efficacy had higher GPA's than the control group (although the way in which the statistical results were interpreted is subject to debate).

### **Efficacy Institute Project in the Ravenswood School District**

An evaluation of the effectiveness of Efficacy training was conducted in the Ravenswood School District in California. Seven middle and elementary schools participated in the Efficacy program from the East Palo Alto and East Menlo Park areas. This evaluation differs from the others reported here as it is based on individual perceptions and judgments of teachers and principals. The research does not examine changes in children's achievement levels. The evaluator found that teachers' evaluations at the conclusion of the program were overwhelmingly positive. Based on the findings of the evaluation, Hill (1992) concluded that the principles established by the Efficacy Institute are sound; that the training program is well conceived; and that trainers are dedicated to Efficacy concepts. The evaluator also indicated a need for teachers who are committed to Efficacy and for district-wide coaches to work with teachers to accelerate implementation of the Efficacy principles.

## **Staff and Students' Perceptions of Efficacy**

Teachers at all research sites responded favorably to the program and to the in-service training. Students also provided their perceptions of Efficacy through school essays written about the program's significance. Students reported that Efficacy had impacted not only their academic life, but their personal lives as well. Many of the essays reflect the modules students had learned in the programs and how the application of these modules led to greater achievement.

## Introduction

This report examines the findings of a series of evaluations of the Efficacy program in selected elementary and middle schools in Peoria, Illinois, Los Angeles, and the Ravenswood School District in East Palo Alto. Sacramento has also implemented Efficacy and is targeted as a research site, although there is no data presently available. The research conducted in Peoria, Detroit, and Los Angeles investigates the effects of the program on various outcome measures, both qualitative and quantitative, including improvement in students' grades, decreases in absenteeism, attitude changes toward school work, and performance on standardized achievement tests. The findings of the research in the three cities indicate that elementary and middle school students who participated in the Efficacy programs made significant gains in their achievement. In addition, teachers reported positive perceptions of the program and cited the need to expand and continue the program for all grade levels. The research in East Palo Alto differs from the other evaluations as it is an examination of teachers' and principals' perceptions and judgments concerning the implementation of the Efficacy program and is not a quantitative analysis of students' achievement.

### The Efficacy Program in the Los Angeles Unified School District Ten Schools Program, 1990-1991

In an examination of the Efficacy program in the Los Angeles school districts, Isonio (1992) selected 1210 third grade students in Los Angeles from ten different elementary schools. The sample included students who completed either the pretest only; the posttest only, or completed both the pretest and the posttest. With some of the same students completing both the pretest and posttest, and some students only having been administered the one measure, there is inconsistency in the methodology of the design. In addition, no control groups were used in the design. Another inconsistency exists in the examination of

race. Only 82% of the sample was coded for race (44% Hispanic and 53% Black students), yet the remaining 18% was not coded for this variable. Therefore all analyses in the Los Angeles evaluation examine only Hispanic and Black participants.

Isonio (1992) examined students' and teachers' self-reports as outcome measures of the effectiveness of the Efficacy program. Students were asked about improvement in their grades, attitudes towards school work, and feelings of academic self-efficacy. Measures of teachers' perceptions included their experiences with Efficacy training, and their opinions about the implementation of the program and its effectiveness.

The findings indicate that Black students showed the greatest positive changes in items such as "My parents feel I can do well if I work hard in math and reading" and "I do a great job in everything I try." In a more in-depth analysis of the item, "I do a great job in everything I try," by race and gender, the researcher found that Black males and Hispanic females showed trends in a positive direction (increased ratings at the posttest), but that black females and Hispanic males showed changes in a negative direction (decreased ratings). The researcher speculates that this finding may result from students' agreement with this item as being less honest. Since Efficacy promotes a positive self-concept as measured by reasonable challenges, "doing a great job in everything" the student tries may not in fact be realistic.

Black male and female students reported significant improvement in their ratings of self-pride when compared to Hispanic students. There was evidence for improvement, however, in both groups for "parents' feelings of students' ability to do well in speaking," and that students can "do anything if they think they can and work hard." Isonio (1992) indicates that this last item on thinking one can and working hard is the clearest indicator of the effectiveness of the program. The result is based on the differences in this item at the pretest and

posttest measures. The pretest mean was 4.25 and the posttest mean was 4.46, significant at  $p < .01$  ( $F = 9.96$ ). These statistically significant findings indicate a potentially important change in attitudes and behaviors in a positive direction, and represent a substantial change quantitatively.

Teachers in Los Angeles reported that students appeared to be taking more risks (70%); indicated greater academic self-efficacy (94%); and improved their attitudes toward their academic work (94%). Teachers did, however, report that the inconsistency of visits from Pacific Bell volunteers, who had been trained in Efficacy concepts and then volunteered to support the classroom teacher, was a disadvantage. Only about half reported that the volunteers helped some or very much. Another disadvantage was that teachers perceived that Hispanic students may have had trouble identifying with some of the Efficacy materials (i.e., the role models), as they may have had more relevance to Black students. In addition, teachers perceived that there were differences between the English and Spanish versions, particularly in the coordination of materials.

#### **Peoria Public Schools Efficacy Program: A Longitudinal Study**

The Peoria Public Schools evaluation (1992) was similar in design to the research conducted in Los Angeles as no control groups were used. The Peoria study (1992) differs from the Los Angeles study, as researchers examined achievement levels in reading and math based on test scores and did not examine students' self-reports. The research conducted in Peoria was also longitudinal and examines achievement over a three year period in the first through fourth grades. Each yearly sample, however, does not include all four grade levels.

The researcher calculated an expected score of achievement beyond a child's fall and spring scores as it was noted that often an increase in scores can result from a child's maturation during the school year. The expected score was a

projection based upon the Growth Scale Value (GSV) that the student achieved in the previous test. The difference between actual scores and expected scores was used as a measure of attainment. Since the researcher fails to indicate the type of statistical test used in the analyses, we may infer that a t-test was used to examine the difference between the pretest and posttest. The following table represents the improvement in scores over a three year period:

**Table 1**  
**The Difference in Growth Scale Values for Peoria Students in Three Years of the Efficacy Program**

<u>Year of Efficacy Program</u>	<u>Number of Students</u>	<u>Actual Mean GSV</u>	<u>Expected Mean GSV</u>	<u>Difference</u>
1989-90	102	234	219	.01*
1990-91	383	236	214	.01*
1991-92	612	234	211	.01*

\* denotes statistical significance,  $p < .01$ .

The Peoria researchers indicated that gains were found for all three years at all grade levels and concluded that Efficacy had a positive effect on reading and math achievement levels. Another finding was that first grade students attained gains which exceeded all other grade levels. First graders also showed the greatest increases in reading achievement.

### **The Middle School Program in Detroit Public Schools**

Syropoulos completed evaluations of the Efficacy program in the Detroit Middle Schools for three school years: 1988-1989, 1989-1990, and 1990-1991. Each evaluation will be examined individually as the researcher investigates different outcome measures in each.

### **Follow-up Study of Middle School Efficacy in Detroit: 1988-1989**

The 1988-1989 study is an examination of the impact of the 1988-1989 Efficacy program in students one year after the implementation of the Efficacy program. Syropoulos (1990) investigated a variety of outcome measures in the follow-up, including improvement in students' grade point averages, attendance, citizenship ratings, scores on the Michigan Educational Assessment Program (MEAP), and on the California Achievement Tests (CAT). The researcher selected a control group of 97 seventh graders from five non-participating middle schools and 120 seventh graders from six middle schools in the Efficacy program as the experimental group.

The findings indicate that the experimental students scored significantly better than the control students on the California Achievement Tests (CAT) and on the Michigan Educational Assessment Program. The experimental students also had higher citizenship ratings. There were, however, no significant differences for GPA or for attendance between the two groups. The tables below indicate improvement on the post reading and math scores of the California Achievement Tests.

**Table 2<sup>1</sup>****CAT (Reading): Experimental and Control Groups**

<u>Month/Year</u>	<u>Experimental Group</u>		<u>Control Group</u>		<u>Sig. Level</u>	<u>d.f.</u>	<u>Std. Dev.</u>
	<u>N=120</u>	<u>GEU*</u>	<u>N=97</u>	<u>GEU *</u>			
April '89	723.9	(6.0)	724.4	(6.1)	.0094	215	52.4
June '90	738.6	(6.9)**	725.8	(6.2)	.0025**	215	33.4

\*Grade Equivalent Units

\*\*p<.01, for analysis of posttest scores only.

**Table 3<sup>2</sup>****CAT (Math): Experimental and Control Groups**

<u>Month/Year</u>	<u>Experimental Group</u>		<u>Control Group</u>		<u>Sig. Level</u>	<u>d.f.</u>	<u>Std. Dev.</u>
	<u>N=120</u>	<u>GEU*</u>	<u>N=97</u>	<u>GEU*</u>			
April '89	742.7	(6.5)**	727.0	(5.5)	.0004	215	32.4
June '90	762.6	(7.8)**	745.5	(6.7)	.00007	215	31.1

\*Grade Equivalent Units

\*\*p<.001.

<sup>1</sup> The numbers in this table differ from those in the actual evaluation as the latter were incorrectly reported. The error was confirmed by Dr. Mike Syropoulos on July 26, 1993 in a personal communication.

<sup>2</sup> Same as footnote 1.

Based upon the results of the research, the evaluator recommends the following: train more teachers so that the program can be extended to all grade levels; emphasize parental training so as to understand the effects that parents have on their child's learning; and provide follow-up for at least one more year using the same sample of students.

### **The Detroit Middle School Program Evaluation Report: 1989-1990**

Syropoulos (1990) examined sixth grade students during the 1989-1990 school year. The sample included 164 sixth grade students from six middle schools participating in the Efficacy program and 124 sixth grade students from five schools not participating in Efficacy. The outcome measures of this study include academic achievement and staff perceptions regarding the program. The academic data consisted of students' GPA's in reading, language arts, science, and math for November 1989 and June 1990; number of days absent; citizenship ratings; results of the California Achievement Tests (April 1989 and April 1990); and scores from the School Attitude Measure (SAM) in October 1989 and May 1990. The SAM is a self-report of students' motivation for school; their academic self-concept (both performance based and reference based); student's sense of control over performance; and student's instructional mastery. The findings of the 1989-1990 evaluation for the Detroit Middle Schools indicated that the experimental group showed improvement in absenteeism rates, citizenship ratings, and for reading and math achievement levels. The experimental group did not, however, show gains in GPA from pre to posttests. The results of the SAM indicate that the experimental students scored higher on all five scales at the posttest and these differences were significant. The tables below indicate the results of the California Achievement Tests for both the experimental and the control groups:

Table 4<sup>3</sup>

CAT (Reading): Experimental and Control Groups in Detroit Middle Schools, 1989-1990

---

<u>Month/Year</u>	<u>Experimental Group</u>		<u>Control Group</u>		<u>Sig. Level</u>	<u>d.f.</u>	<u>Std. Dev.</u>
	<u>N=134</u>	<u>GEU*</u>	<u>N=99</u>	<u>GEU*</u>			
April '89	697.9	(4.7)	697.0	(4.7)	.85	231	35.1
April '90	714.8	(5.6)**	702.2	(4.9)	.02**	231	39.9

---

\*Grade Equivalent Units

\*\*p<.05, posttest reading scores only.

---

<sup>3</sup> The numbers in this table differ from those in the actual evaluation as the latter were incorrectly reported. The error was confirmed by Dr. Mike Syropoulos on July 26, 1993 in a personal communication.

**Table 5<sup>4</sup>****CAT (Math): Experimental and Control Groups in Detroit Middle Schools, 1989-1990**


---

<u>Month/Year</u>	<u>Experimental Group</u>		<u>Control Group</u>		<u>Sig. Level</u>	<u>d.f.</u>	<u>Std. Dev.</u>
	<u>N=120</u>	<u>GEU*</u>	<u>N=97</u>	<u>GEU*</u>			
April '89	717.5	(5.7)	718.1	(5.7)	.89	231	32.7
April '90	734.0	(6.6)**	720.7	(5.8)	.026	231	32.8

---

\*Grade Equivalent Units

\*\*p<.05, posttest reading scores only.

---

The qualitative section of the 1989-1990 evaluation includes staff perceptions of the Efficacy program. These process objectives were determined by the evaluator and were reported to have been achieved. An overwhelming majority (86%) responded positively to seven categories of items including: teacher behavior change attributed to Efficacy; Efficacy instructional activities; help provided to students in instructional and attitude change; availability of materials; teacher preparation and implementation of the program; the concern and support of the project coordinator.

Based on the evaluation, Syropoulos (1990) developed a list of recommendations including heightening the awareness of the staff regarding improving students' self-concept and the significance of high expectations for student performance. In addition, the researcher recommends in-service training for staff and training more teachers to extend the program to 7th and 8th graders. Syropoulos (1990) also notes the importance of having a one day

---

<sup>4</sup> The numbers in this table differ from those in the actual evaluation as the latter were incorrectly reported. The error was confirmed by Dr. Mike Syropoulos on July 26, 1993 in a personal communication.

workshop for school administrators to explain the Efficacy principles.

### **The Detroit Middle School Evaluation of Efficacy: 1990-1991**

In the most recent evaluation of the Efficacy program in the Detroit Middle Schools, Syropoulos (1991) selected 129 sixth grade students from three participating and three non-participating schools as the control group, and 140 sixth graders from six middle schools in the Efficacy program as the experimental group. This evaluation was less comprehensive and the researcher provided a summary of results. Syropoulos (1991) found that experimental students showed significant gains in their GPA's, in citizenship ratings, and in reading and math achievement levels as measured by the California Achievement Tests (CAT). The following table shows the results of students' GPA gains, improvement in citizenship ratings and in the CAT:

**Table 6****Experimental and Control Groups in the Detroit Middle Schools, 1990-1991:  
Outcome Measures**

<u>Outcome Measure</u>	<u>Test</u>	<u>Experimental Group N=140</u>	<u>Control Group N=129</u>
GPA	Pre	2.1	1.9
	Post	2.2**	1.9
Citizenship (1=Excellent, 2=Good, 3=Poor)	Pre	1.8	1.8
	Post	1.6*	1.9
CAT: Reading (GME Equivalent)	Pre	5.5	5.2
	Post	6.4**	5.5
CAT: Mat (GME Equivalent)	Pre	5.5	5.3
	Post	6.6**	5.5

\*p<.05  
\*\*p<.05, post differences significant only.  
(GME is Grade Mean Equivalent).

In an examination of other findings of the 1990-1991 evaluation, Syropoulos (1991) noted that the experimental group scored higher than the control group on the School Attitude Measure (SAM). The researcher indicated that this difference was significant, although no data was presented to support the findings. There were no significant differences, however, for days absent. In addition, staff gave positive responses regarding the in-service training and the program content of the program.

### **The Detroit Elementary Schools Evaluation of Efficacy: 1989-1990**

Syropoulos (1990) also examined the effects of the Efficacy Program on the Detroit Elementary School curriculum during the 1989-90 and 1991-92 school years. The researcher used measures similar to those examined in the Middle School evaluations and included the School Attitude Measure (SAM). This measure was also used in the Detroit Middle School report (1989-1990).

Syropoulos (1990) selected a sample of 137 third graders from five elementary schools participating in the Efficacy program as the experimental group. The control group included 123 third graders from five participating and non-participating elementary schools. Two schools, Owen and Richard, were selected twice for both experimental and control group samples. The researcher does not indicate whether different students were selected for the experimental and control groups, and we can only assume that the same students were not selected to participate as both experimentals and controls.

### **Evaluation of 1989-1990 Data from the Detroit Elementary Schools**

In an analysis of the 1989-1990 data, Syropoulos (1990) did not find significant differences between the experimental and control groups for GPA or for citizenship ratings. He did find, however, that the experimental students had decreased absenteeism rates and had higher levels of achievement on the CAT for reading and math. In both cases the differences were statistically significant. The following tables show the significant results:

**Table 7<sup>5</sup>**  
**Days Absent for Experimental and Control Groups for Detroit Elementary Schools, 1989-1990**

---

<u>Month/Year</u>	<u>Experimental Group</u> <u>N=137</u>	<u>Control Group</u> <u>N=97</u>	<u>Sig. Level</u>	<u>d.f.</u>	<u>Std. Dev.</u>
November '89	2.5	2.0	.19	258	3.1
June '90	3.4*	5.4	.013*	258	3.3

---

\*p<.05

---

**Table 8<sup>6</sup>**  
**CAT: Reading Scores for Experimental and Control Groups in the Detroit Elementary Schools, 1989-1990**

---

<u>Month/Year</u>	<u>Experimental Group</u> <u>N=120</u>		<u>Control Group</u> <u>N=97</u>		<u>Sig. Level</u>	<u>d.f.</u>	<u>Std. Dev.</u>
	<u>GEU</u>		<u>GEU</u>				
April '89	635.4	2.8	624.2	2.6	.16	215	57.9
April '90	707.8	5.2*	648.7	3.0	.029*	215	54.8

---

\*p<.05

---



---

<sup>5</sup> The numbers in this table differ from those in the actual evaluation as the latter were incorrectly reported. The error was confirmed by Dr. Mike Syropoulos on July 26, 1993 in a personal communication.

<sup>6</sup> Same as footnote 5.

**Table 9<sup>7</sup>****CAT: Math Scores for Experimental and Control Groups in the Detroit Elementary Schools, 1989-1990**

<u>Month/Year</u>	<u>Experimental Group</u>		<u>Control Group</u>		<u>Sig. Level</u>	<u>d.f.</u>	<u>Std. Dev.</u>
	<u>N=120</u>	<u>GEU</u>	<u>N=97</u>	<u>GEU</u>			
April '89	654.5	3.0*	634.7	2.7	.011*	215	56.7
April '90	712	4.8*	672.7	3.4	.011*	215	45.9

-----  
 \*p<.05  
 -----

**The 1991-1992 Evaluation of Efficacy on the Detroit Elementary School Curriculum**

In the 1991-1992 evaluation of elementary schools, Syropoulos (1990) selected 252 third graders from 10 schools participating in Efficacy as the experimental group, and 213 third graders from 10 schools not participating in the program as the control group. The results of this evaluation were similar to the previous one (1989-1990) on achievement scores, but there were differences on the other outcome measures. The tables below show the CAT scores for the experimental and control groups.

---

<sup>7</sup> The numbers in this table differ from those in the actual evaluation as the latter were incorrectly reported. The error was confirmed by Dr. Mike Syropoulos on July 26, 1993 in a personal communication.

**Table 10****CAT: Reading Scores for Experimental and Control Groups in the Detroit Elementary Schools, 1991-1992**

<u>Month/Year</u>	<u>Experimental Group</u>		<u>Control Group</u>		<u>Std. Dev.</u>	<u>t Value</u>	<u>Sig. Level</u>
	<u>N=219</u>	<u>GME*</u>	<u>N=195</u>	<u>GME*</u>			
April '91	644.4	3.1	616.9	2.7	66.1	4.21	.01**
April '92	694.7	4.8	670.2	3.6	57.5	4.34	.01**

\*Grade Mean Equivalent

\*\*statistically significant,  $p < .01$ .**Table 11****CAT: Math Scores for Experimental and Control Groups in the Detroit Elementary Schools, 1991-1992**

<u>Month/Year</u>	<u>Experimental Group</u>		<u>Control Group</u>		<u>Std. Dev.</u>	<u>t Value</u>	<u>Sig. Level</u>
	<u>N=219</u>	<u>GME*</u>	<u>N=195</u>	<u>GME*</u>			
April '91	662.6	3.3	634.1	2.7	66.4	4.35	.01**
April '92	709.8	4.9	683.4	3.7	53.9	4.98	.01**

\*Grade Mean Equivalent

\*\*statistically significant,  $p < .01$ .

Syropoulos (1992) found that the experimental group in the 1991-1992 study had increased their GPA in a statistically significant finding unlike the earlier evaluation. Both the experimental group and the control group showed decreases in the rates of absence from school, yet more complex analyses revealed that these differences were not significant. The table below shows the results of students' GPA's from 1991-1992.

**Table 12**  
**GPA's for Experimental and Control Groups in the Detroit Elementary Schools, 1991-1992**

---

<u>Month/Year</u>	<u>Experimental Group</u> N=252	<u>Control Group</u> N=213	<u>Std. Dev.</u>	<u>t Value</u>	<u>Sig. Level</u>
June '91	2.83	2.73	.72	1.46	.14
June '92	2.72	2.51	.75	2.96	.01*

---

\*statistically significant,  $p < .01$ .

---

The students in the experimental group only received the School Attitude Measure (SAM). There were no significant differences, however, from pre to post tests.

**Staff Perceptions of the Evaluations of Efficacy in the Detroit Elementary Schools, 1989-1990 and 1991-1992**

Teachers responded positively to items concerning the in-service portion of Efficacy. These items included teachers' opinions about workshop design, workshop procedures, consultant services, and workshop outcomes. Staff also responded favorably to other aspects of the Efficacy program which consisted of teacher behavior change attributed to Efficacy; appropriate Efficacy instructional activities; help provided to students in different areas of instructional and attitude change; availability of materials; and teacher preparation and implementation of the program. The qualitative information, also known as process objectives (Syropoulos, 1992), is identical to the data gathered in the Middle Schools evaluations.

### Evaluations of Efficacy in the Marquette Elementary and Middle Schools; 1991-1992

Efficacy has also been implemented in the Marquette Elementary and Middle Schools, located in Detroit. These evaluations investigate the effects of Efficacy upon sixth graders from the Marquette Middle School and third graders from the Marquette Elementary School. The Marquette evaluations differ from previous evaluations as this sample of students is considerably smaller.

#### Marquette Elementary School

Syropoulos (1992) selected 51 third grade students from Marquette as the experimental group and 50 third grade students from a non-participating elementary school as the controls. The researcher did not find significant differences on achievement tests or for attendance between the two groups. The researcher did report differences on students GPA's and the results are shown in the table below:

**Table 13**  
**GPA's for Experimental and Control Groups in the Marquette Evaluation,**  
**1991-1992**

<u>Month/Yr.</u>	<u>Experimental Group Mean N=51</u>	<u>Control Group Mean N=50</u>	<u>Std. Dev.</u>	<u>t Value</u>	<u>Sig. Level</u>
June '91	2.57	2.40	.78	1.10	.27
June '92	2.58	2.13	.81	2.77	.01*

\*statistically significant,  $p < .01$ .

Syropoulos (1992) reported that the experimental group showed significant increases on the posttest of the School Attitude Measure (SAM). This measure was, however, only administered to the experimental group, so there is no comparison group to determine if the gains resulted from Efficacy. Also, it is significant that the SAM is a self-report measure and relies upon students' self-reports of attitude change.

### **Marquette Middle School**

This evaluation included 57 sixth grade students from a non-participating middle school as the control group and 56 sixth grade students from Marquette. The results of the data obtained from the middle school students differed from the elementary school findings. One difference is that there were significant differences in attendance rates, in favor of the experimental group. Although the researcher notes that there were significant differences in sixth grade students' GPA's, the means of both groups at the pretests and posttests were, in fact, identical. The researcher argues, however, that the variances differed at the posttest, and therefore, an analysis of posttest grades revealed significant differences. Certainly, whether these statistical results are meaningful is an arguable issue.

Syropoulos (1992) also noted that there were no significant differences between groups on the achievement tests or between pretests and posttest measures of the SAM for the experimental students.

### **Staff Perceptions of the Efficacy Program at Marquette**

The researcher reported similarities in staff perceptions between both schools. Staff from both the elementary and middle schools rated the program and the in-service training very favorably. All items were identical to those used in the

Detroit evaluations.

### **Efficacy Institute Project in the Ravenswood School District**

Hill (1992) conducted an evaluation of the effectiveness of Efficacy training within the Ravenswood School District in California. Seven schools (four elementary schools and three middle schools) participated in the Efficacy program from the East Palo Alto and East Menlo Park areas. One of the schools differed from the sample as it was a magnet for high achieving students. This evaluation differs from the others in this report as it was based on individual perceptions and judgments of teachers and principals. The findings do not examine the results of children's achievement levels. The researcher does indicate, however, that a more quantitative analysis will be conducted at a later time involving pre and posttest comparisons of students' test scores. This evaluation consists of observations of training sessions; focus group sessions with school leaders; teachers' exit evaluations; questionnaires completed by workshop participants; and personal interviews with participants.

Hill (1992) found that the exit evaluations of teachers were overwhelmingly positive. All respondents ranked the quality and utilitarianism of the Institute's training as well as the quality and professionalism of the Efficacy trainers in the outstanding range (8-10). The findings of the evaluation also revealed that the process of development was a key concept and that teachers were committed to its implementation in their classrooms.

The results of the teacher questionnaire indicated that 85% of respondents used the zoning model in their classrooms. In addition, 73% of respondents stated that the Institute encouraged them to assess their efforts in promoting high standards, intensive effort and effective collaboration, and risk taking. Teachers (70%) also indicated that Efficacy training validated previously held beliefs regarding "the suspension of disbelief in the intelligence of children."

This concept signifies the importance of treating children with respect, tolerance and care, based on the belief that they are highly intelligent.

The results of the focus groups indicated that school principals felt that participating in the Efficacy training was effective and increased collegiality among teachers. The principals also felt that teachers gained either new perspectives or validated beliefs that were previously held. Another finding was that the learning goal model is being used by the classrooms in the program. Last, there was a consensus among principals of the need for follow-up activities and for coaching teachers on implementation of the Efficacy principles. Another part of the research involved the observation of training sessions. The observations revealed that there was a misunderstanding among teachers about the amount of time involved in the workshops. This misunderstanding resulted in a lack of consistency among teacher attendance at the Institute sessions.

Based on the findings of this evaluation, the researcher summarizes that the principles established by the Efficacy Institute are sound, that the training program is well conceived; and that trainers are dedicated to Efficacy concepts. Also, Hill (1992) indicates the need for teachers who are committed to Efficacy and suggests that there be district-wide coaches to work with teachers to accelerate implementation of the Efficacy principles. There was also a perception that group support activities twice a year would reinforce teacher collegiality among teachers and Efficacy trainers. Last, the evaluator recommends that the District join with the Efficacy Institute to increase the transfer of learning in the workshops to classroom practice within the school district.

### Qualitative Data Obtained from Students' Essays

Many of the evaluations reviewed in this report also include a considerable amount of qualitative information. Most of this qualitative data is in the form of essays written by students describing the impact of the Efficacy program on their own attitudes and behaviors. These attitudes and behaviors are not restricted to those displayed at school, but encompass all aspects of their lives. Thus, the application of the Efficacy principles appear to impact all aspects of the students' lives.

The essays often include the modules the students have learned (i.e., Strong Side, Weak Side) and how the application of these modules have led to greater achievement. The students' own awareness and internalization of the Efficacy principles may also be viewed as outcomes of the program, although these outcomes are more difficult to measure quantitatively.

## References

- Isonio, S. (1992, January). The Efficacy Curriculum in the Los Angeles Unified School District Ten Schools Program, 1990-1991.
- Hill, K. (1992). Efficacy Institute Project in the Ravenswood School District.
- Law, N. (1991). Efficacy: A Research/Evaluation Design for Elementary, Middle and High School Efficacy Programs in Sacramento City Unified School District.
- Peoria Public Schools Efficacy Program: A Longitudinal Study (1992). Department of Research, Evaluation, and Testing.
- Syropoulos, M. (1990, August). Efficacy: The Middle School Program. Follow-up study 1989-1990. Detroit Public Schools.
- Syropoulos, M. (1990, August). Efficacy: The Elementary School Curriculum. Evaluation Report 1989-1990. Detroit Public Schools.
- Syropoulos, M. (1990, August). Efficacy: The Middle School Program. Evaluation Report 1989-1990. Detroit Public Schools.
- Syropoulos, M. (1990, August). Efficacy: The Middle School Program. Evaluation Report 1990-1991. Detroit Public Schools.
- Syropoulos, M. (1992, August). Efficacy: The Elementary School Curriculum. Evaluation Report 1991-1992. Detroit Public Schools.
- Syropoulos, M. (1992, August). The Marquette Elementary School Efficacy Program. Evaluation Report 1991-1992. Detroit Public Schools.
- Syropoulos, M. (1992, August). The Marquette Middle School Efficacy Program. Evaluation Report 1991-1992. Detroit Public Schools.