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ABSTRACT

This paper evaluates the effectiveness of the Beating the Odds (BTO) program of the Houston (Texas) schools in the 1990-91 school year, the third and final year of Phase I of the program. The BTO program provided training workshops for teachers of at-risk students and direct counseling and social service support for at-risk students in a selected number of schools. Overall goals were to address the academic, affective, and family-related needs of students; facilitate development of determination to stay in school; and improve academic performance. Sixty teachers received training and follow-up, while over 2,000 students received instructional counseling, guidance, and family case-management support services. Evaluation measures include student self-esteem scores, standardized test scores, attendance rates, and retention rates. Findings indicate that the 2,353 secondary school students in the BTO program achieved significantly higher academic performance scores in mathematics, a lower failure rate, and a lower withdrawal rate than 1,721 comparison group secondary school students, even though BTO students had lower self-esteem scores. The 219 elementary school students with BTO trained teachers had higher mathematics test scores than 191 comparison group elementary school students whose teachers received no BTO training. Recommendations are presented for enhancing BTO program effectiveness. Two figures and seven tables present findings. There is a six-item list of references, and one appendix presents the BTO Teacher Survey. (Author/SLD)

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Beating the Odds (BTO) Program: A comprehensive support system for teachers and families of at-risk students

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The Beating The Odds (BTO) Program: A comprehensive support system for teachers and families of at-risk students

Abstract

The 1990-91 school year was the third annual year of the BTO (Phase I) program. As a multi-pronged instructional support system, the BTO program provided training workshops for teachers of at-risk students and direct counseling and social service support for at-risk students in a selected number of schools. The program staff included six half-time educational diagnosticians and six social workers. The overall goal of the program was to address the academic, affective, and family-related needs of the at-risk students, to facilitate the development of their determination to stay in school and improve their academic performance. Sixty teachers received training and follow-up support, while over 2,000 students received instructional, counseling, guidance, and family case-management support services during the 1990-91 school year. This report evaluates the effectiveness of the program during the 1990-91 school year. Measures used in this evaluation include student self esteem scores, standardized test scores, attendance rates, and retention rates. The findings indicate that the secondary BTO students achieved significantly higher academic performance scores in math, a lower failure rate, and a lower withdrawal rate than the comparison group of non-BTO students, in spite of the fact that the BTO students had significantly lower self-esteem scores than the comparison group. Additionally, the elementary students with BTO trained teachers achieved a significantly higher MAT-6 Total Complete Battery scores and MAT-6 Total Math scores than the corresponding scores of a comparison group of students whose teachers had received no BTO training. Many recommendations were proposed by the BTO staff for enhancing the effectiveness of the program.

Introduction

In view of the tremendous costs to society that result from illiteracy, many educational and business leaders have increasingly expressed much concern about finding effective strategies for curbing the high failure and drop-out rates in the nation's inner-city school systems. This national preoccupation has led to the implementation of many exploratory programs by several urban school districts to ensure that potential dropouts stay in school. Prominent examples of such efforts include Boston's Compact (Hargroves, 1987), Buffalo's Project AIM and Project SMART, Hartford's Project Bridge, New York City's Project SOAR, and Cleveland's "Scholarships in Escrow" (OERI, Department of Education, 1987). In staying abreast of such pioneering leadership efforts, the Houston Independent School District (HISD) initiated the Beating the Odds (BTO) Program in 1988-89 school year under the provisions of the federal government's Dropout Demonstration Assistance program.

Even though the research literature acknowledges poor academic performance as the single best predictor of students who drop out of school, it also points out that it is the feeling of helplessness and lack of confidence in one's ability to achieve good grades in

school that often trigger the decision to drop out (Burchard and Berlung, 1988; Wehlage, Rutter, and Turnbaugh, 1987). Indeed, many believe that at the time when the feeling of helplessness sets in, certain symptomatic psychological states or attitudes become apparent, such as feelings of boredom, lack of interest in school, and low self-esteem (Wehlage, Rutter, and Turnbaugh, 1987; Opuni, Sanchez, and Tullis, 1990).

Accordingly, the BTO program took a multi-pronged strategy, by simultaneously pursuing activities that provide supportive and nurturing school and home environments in which the academic deficiencies of program students could be addressed, thereby giving them the competence and attitudinal resilience to stay in school and graduate. The 1990-91 school year represented the third and final year (1990-91) of the BTO (Phase I) program. Specifically, the 1990-91 BTO program provided the following services: (a) counseling and guidance services; (b) community outreach and family case management services; and (c) a specialized training of 60 secondary teachers who taught classes that were predominantly at-risk students.

The 1990-91 BTO program staff included six half time educational diagnosticians and six full-time social workers. One educational diagnostician and one social worker were assigned to each BTO school. The social workers provided family case-management and community outreach support services for program students and their families to help resolve any pertinent home dysfunctionalities. The educational diagnosticians provided follow-up instructional support services for the BTO teachers in the six program schools. These teachers participated in five Saturday training sessions during the school year. They also provided support for the social workers and teachers by helping to organize parenting classes, tutorials for program students, and counseling support groups. The 1990-91 BTO program served at-risk students at Austin High, Worthing High, Jackson Middle, Woodson Middle, Edison Middle, and Attucks Middle. However, program support services were concentrated on the 541 at-risk students who had been served during the 1989-90 school year or the 1990-summer program.

The federal government's Dropout Demonstration Assistance Program funded the BTO program at a cost of \$355,492 for the 1990-91 project year. The following was the breakdown of the amount: staff salaries, including \$27,000 for training 60 secondary teachers), \$338,924; contracted services, \$5,000; other costs, \$11,568.

The goal of this final evaluation was to determine the: (a) the effectiveness of the staff training and follow-up support services, and (b) the impact the counseling, guidance, and family case management support services on the program students. Specifically, this program evaluation answers the following research questions:

1. What are the perceptions of the teachers of at-risk students about the effectiveness of the staff training activities?
2. What were the perceptions of the principals of the BTO schools about the support services provided by the BTO staff?
3. What were the perceived strengths and weaknesses of the BTO program?
4. What was the impact of the 1990-91 BTO program on student performance, attendance rates, and self esteem?

5. What was the impact of the BTO teacher training activities on the academic performance of students who received instruction from the BTO trained teachers?
6. What was the impact of the BTO program on the dropout rates, promotion rates and failure rates of BTO students?
7. What were the recommendations of the BTO staff for resolving the identified weaknesses of the program?

Methodology

Sample

Six groups of students were identified for this study. The following are brief descriptions of the respective groups. The demographic, academic, and attendance characteristics of these cohort groups are shown on Table A.

- Group 1:** 302 at-risk students in the six BTO schools who had been exposed to BTO program support services during the 1989-90 regular school year.
- Group 2:** 197 at-risk students in the six BTO schools who had participated in the 1990 Summer school program.
- Group 3:** 499 1989-90 regular school year and 1990 summer BTO students in non-program schools during the 1990-91 school year. The students were former BTO students.
- Group 4:** 200 at-risk students who had demographic and other relevant characteristics similar to those of the BTO students. This group served as a comparison group for students in groups 1, 2, and 3.
- Group 5:** 2,572 (Elementary, 219; Secondary, 2,353) students taught by the 88 teachers who had received BTO training during the 1989-90 and the 1990-91 school years.
- Group 6:** A comparison group of 1,912 (Elementary, 191; Secondary, 1,721) students who shared similar demographic and achievement characteristics with students in Group 5 but had received instruction from teachers with no BTO training.

Table A
Demographic and other characteristics of Groups
(Cohort Selection Year: 1988-89)

Characteristics	Group 1	Group 2	Group 3	Group 4	Group 5**	Group 6**
Free & Reduced Lunch	93%	95%	94%	84%	43%	42%
Two or more years overage	29%	48%	32%	45%	—	—
Failed two or more courses	33%	21%	44%	29%	22%	23%
Academic Performance (two or more years below grade level)	45%	28%	51%	71%	—	—
MAT-6 (NCEs) Total Reading Mean*	35.1	39.9	37.4	34.0	40%	39%
MAT-6 (NCEs) Total Math Mean*	39.6	45.4	41.0	39.7	46%	45%
MAT-6 (NCEs) Total Complete Battery Mean*	36.6	42.5	38.9	36.2	43%	42%
Attendance Rate	93.4%	95.1%	94.2%	94.0%	94%	94%

* the attainment of an NCE score of 50.0 generally indicates that the student is performing on grade level .

** only data for secondary students are reported in these columns.

Data Analysis

The Student "t" test statistic was used to analyze the self-esteem scores of students in Groups 1, 2, and 4. The instrument used for the assessment of students' self-esteem was the *Piers-Harris Children's Self Concept Scale*. An analysis of covariance (ANCOVA) was used to analyze the attendance rates, and standardized test scores of students in Groups 1, 2, 3, 5, and 6. An analysis of covariance is a form of analysis of variance that assesses the significance of the differences between means of final experimental data by taking into account the correlation between the dependent and independent variable and one or more covariates or variables. All other analyses followed a descriptive format. The determination of attendance rates was based on the number of days a student attended classes as a percentage of the number of days the student was enrolled during the school year.

Results

QUESTION 1. What were the perceptions of the teachers of at-risk students about the effectiveness of the staff training activities?

METHOD

The *BTO Teacher Perception Survey* (see Appendix A) was used to assess (a) the relevance and effectiveness of the BTO training workshops; and (b) the extent to which skills and insights acquired by the teachers were effectively transferred to the classroom for the benefit of at-risk students. The return rate of the survey was 65%.

FINDINGS

Content of Training

Approximately eighty-eight teachers of at-risk students were given staff training support services during the 1989-90 and 1990-91 school years. During each of the two years, the selected teachers participated in five days of "Hand in Hand" inservices conducted by a group of staff training specialists. The goals of the Hand in Hand program were (a) to aid in the identification of high risk failure students, (b) to aid in the determination of learning patterns of high failure students, and (c) to aid in the instruction of high risk failure students. The following topical areas were addressed during the inservices to facilitate the achievement of the preceding goals:

Learning Styles:

- characteristics of the tactile or kinesthetic learner
- characteristics of the auditory learner
- characteristics of the visual learner
- instructing tactile or kinesthetic learners
- instructing auditory and visual learners
- characteristics of right or left brain dominant learners
- instructing right or left brain dominant learners

Identifying high risk failure students:

- slow learning students
- learning disabled students
- dyslexic students
- emotionally disturbed students

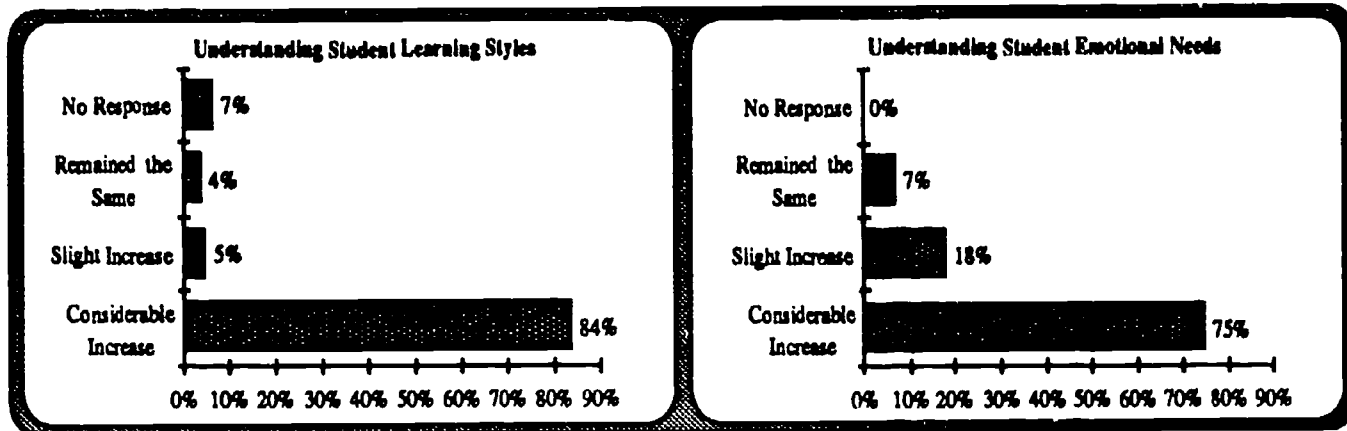
The six half-time BTO Educational Diagnosticians participated in the inservices and later provided follow-up support services for the teachers.

Teacher Perceptions of Training Effectiveness

As is shown in figures 1.1. and 1.2, the assessments of the inservices by the teachers indicated that the inservices were generally effective in enhancing their confidence in their ability to motivate and effectively teach at-risk students. The BTO training workshops also

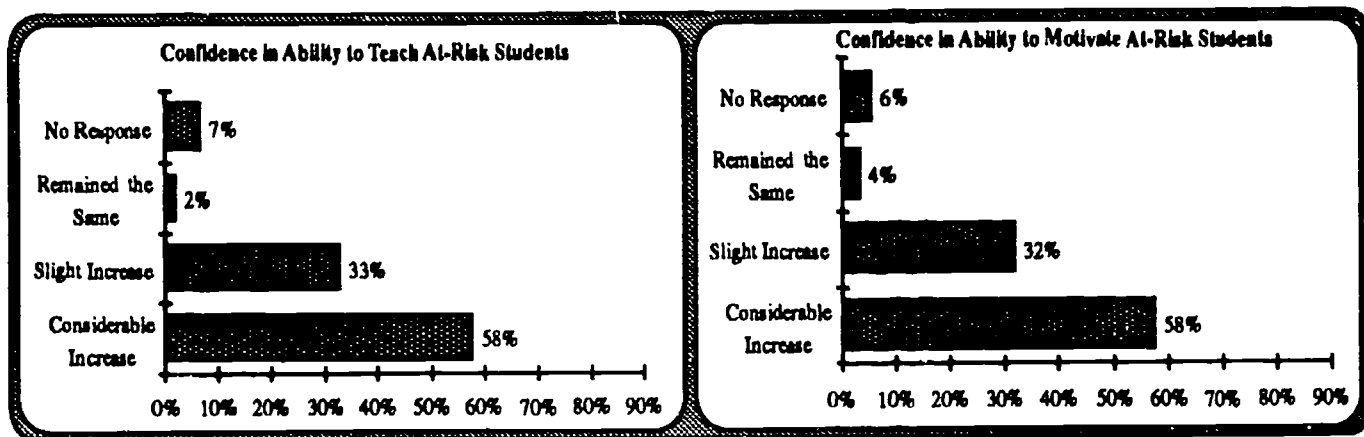
improved their understanding of the learning styles and emotional needs of at-risk students. Overall, 75%-84% of the teachers experienced a considerable increase in their understanding of the learning styles and emotional needs of at-risk students.

Figure 1.1
Teacher Evaluation of Training Effectiveness



As Figure 1.2 portrays, the inservices provided the teachers with instructional and other insights that helped to enhance their confidence in their ability to motivate at-risk students to improve their academic performance. Additionally, 58% of the teachers experienced a considerable increase in their confidence in their ability to effectively teach at-risk students.

Figure 1.2
Teacher Evaluation of Training Effectiveness



The mean score of the teacher ratings of the relevance of the inservices to the problems they have been facing in their classrooms was 86%. Additionally, the teachers indicated that they were 80% successful in using the skills and insights acquired through the inservices in their classrooms for the benefit of at-risk students. An unsolicited letter of appreciation received by the BTO program director from one of the teachers who had participated in the inservices expressed some of the merits of the inservices as follows:

Hand in Hand was timely, to the point, series of presentations that gave me a needed update on learning disabilities and on the methods and approaches available to the classroom teacher in dealing with them. You are to be commended on your excellent choice of presenters.

QUESTION 2. What were the perceptions of the principals of the BTO schools about the efficacy of the support services provided by the BTO staff?

METHOD

Monthly records of social services rendered to students and their families were submitted throughout the year to the BTO research staff. These monthly reports were later used to complete an annual report of social worker services for comparison with the 1989-90 report. Comments of the principals of BTO program schools were used to determine the importance of the program to the respective building-level curricula.

FINDINGS

Social Services

The kind and extent of activities provided by the six social workers during the 1990-91 school year are shown on Table 2.1. With an unduplicated count of 2,237 students as beneficiaries of the counseling and case-management support services in 1990-91, it is apparent that the students received multiple services in the areas of individual counseling, group counseling, crisis intervention, community referrals and group presentations. Family support services included training workshops, home visits, referrals to community resources, and presentations to PTO groups. A comparison of the 1989-90 school year figures with the 1990-91 figures indicates a considerable degree of increases in several social service areas, except parental training workshops which suffered a decline.

Table 2.1
Social Worker Services Provided
For Parents & Students (1989-91)

<u>Social Service Category</u>	<u>1989-90</u>	<u>1990-91</u>
Student Services:		
Field Trips/Extracurricular activities	2	82
Personal or Family Counseling	374	2,120
Community Referrals	*	591
Crisis Intervention	*	436
School or Classroom Activities (e.g. guest speakers)	28	473
Presentations	*	2,237
Total (Unduplicated) # of students served	1,283	2,237
Family Services		
Training Workshops (e.g. on parenting skills)	257	196
Family Outreach (phone contacts, home visits & referrals to community agencies)	568	2,058
School or Classroom Activities (e.g. guest speakers)	28	473
Other Social Services (e.g. community meetings)	150	564

* data were not collected during the 1989-90 school year.

Instructional Support Services

The educational diagnosticians provided follow-up support services for teachers in the BTO schools who had participated in the BTO inservices. Eighty seven percent of the BTO trained teachers were in the six BTO schools. Other support services that were provided by the educational diagnosticians included small group tutorials for at-risk students, orientation for new at-risk students, special education testing, parental tutoring, and evaluation of students with special needs. Teachers who had participated in the staff training activities during the last two project years indicated through a survey in April 1991 that the overall effectiveness of the follow-up support was 61%. However, it should be mentioned that 13% of the teachers surveyed did not receive any follow-up support services since they taught in non-BTO schools.

BTO School Principal Perceptions of Program Efficacy

The overall consensus was that the program had provided such a vital role in their respective schools that all necessary resources should be harnessed to ensure its continuity. The following are pertinent extracts from letters written by the principals of BTO Schools to the program director, when the principals realized that the BTO (Phase 1) program's final year was the 1990-91 school year¹:

Principal of School A

Our social worker has filled the missing link in our pupil assistance program. Many of our students have the need for someone to go the extra mile in helping them to adjust to school, find external agencies for services and a person they can trust to help with problems...our social worker has been that person. Students will get in line just to talk with her. Our diagnostician has been a valuable asset to us by identifying the kind of educational needs our students have. Without the services provided by our social worker and diagnostician, many of the acute needs of our students would not be addressed. Please do whatever you can to get the Beating the Odds Program continued...It would be a tragedy to stop our services to them [i.e. the students] at this point.

Principal of School B

During our many conversations, I have told you of how valuable the services Mrs. Lambda [social worker] and Mrs. Griffin [diagnostician] provide to our children. I can not imagine being without their assistance.

Principal of School C

I was very disappointed to learn that the Beating the Odds program was in its last year of funding. This program has been instrumental in helping at-risk sixth graders make the transition from elementary school to the middle school.

Principal of School D

Students who were potential drop-outs have remained in school due to the services of this program. The Beating the Odds program has been an asset to the Westminster Middle School and has facilitated the learning process and fostered the potential growth of many at-risk students.

¹ Names of schools and BTO staff have been changed to facilitate anonymity.

QUESTION 3. What were the perceived strengths and weaknesses of the BTO program?

METHOD

The six BTO social workers were individually interviewed during the month of June 1991 to determine their perceptions about the effectiveness of their counseling guidance, and family case-management efforts. The entire program staff, including the district's Assistant Superintendent for Student Services, the Director of Psychological Services, and BTO social workers participated in a one-day workshop during the month of May 1991 with several other district administrators to discuss the strengths and weaknesses of the BTO (Phase 1) program. Summaries of the group discussions were collected.

FINDINGS

BTO Staff Perceptions of Program Strengths

Overall, the following were recognized as the major strengths of the BTO program by the BTO staff.

Service Delivery Flexibility

The inherent flexibility of the program provided the social workers and educational diagnosticians with the opportunity for creativity and adjustment of program services to meet the unique needs of program students, parents, BTO teachers, and BTO schools.

Training for Teachers of At-risk Students

The staff training component provided the teachers of at-risk students instructionally productive insights that enhanced teacher confidence and competence in the classroom to the ultimate benefit of the students.

BTO Summer Program

The BTO Summer Program was identified to be one of the major strengths of the overall program. The merits of the summer program included: (a) the intensity and effectiveness of the instructional, counseling and case-management support, (b) the emotional bonding that occurred between students and staff, and among the students, which provided the students friendships, a sense of belonging and re-assurance during the 1990-91 school year, (c) the significant improvements in student self-esteem, students' confidence in their ability to improve their grades, appreciation of their teachers, and determination to succeed in school (Opuni, Sanchez, and Tullis, 1990).

Peer Tutoring

The peer tutor component proved effective in helping the program students and the tutors themselves to be more committed to their studies.

Nurturing Support

The nurturing support that remained at the core of the program was deemed vital since it was what most at-risk students seemingly needed.

Educational Diagnosticians

The educational diagnosticians' thorough knowledge of the district, the instructional process, and the special education student evaluation guidelines, made their role productive.

Social Workers

The social workers' knowledge of community resources and dedication to helping the at-risk students were also recognized as major strengths of the program.

Leadership & Organization

Lastly, the leadership and organization of the program, which provided the opportunity for productive, caring, and sharing relationships to develop within the BTO staff, were recognized as the "glue" that held the program together and gave it both direction and momentum.

BTO Staff Perceptions of Program Weaknesses

The following were recognized as some of the major weaknesses of the BTO program by the BTO staff.

Too Large Student Group Sessions

As a result of scheduling constraints and the large number of at-risk students who needed social service support services, group sessions tended to be too large in some of the BTO schools.

Uncooperative Attitudes of Parents

The social workers indicated that it was difficult to involve some parents. They observed that some parents would talk on the phone with them but would not allow a home visit nor arrange personal visits with the social worker at school.

Teacher Pessimism

Some teachers seemed to have little confidence in the success of the social work effort. In the opinion of the social workers, some teachers seemed convinced that some at-risk students were so incorrigible or firmly set in their dysfunctional ways that there seemed to be very little chance for success. Teacher pessimism was therefore a problem in some instances.

Lack of Summer Follow-Through

A few of the staff mentioned that some of the summer program students were not given adequate support after they had been given much emotional and academic support during the summer program. This situation occurred because of the limited number of staff which necessitated that only students in six schools could receive continuing BTO support services.

Implementation Inconsistency

It was the observation of some of the BTO staff that the implementation of the program was not adequately structured to provide consistent implementation frameworks for all campuses. The integration of the program services into the various schools therefore had to evolve independently on each campus, to fit the local conditions. As a result, there were times when teachers did not know which of their at-risk students had to be referred to the school counselor, and which needed to be referred to the social worker. In effect, some teachers did not sometimes know how best to utilize the services of the social workers. This characteristic is, however, typical of many pioneering and exploratory programs.

Inadequate Communication at the Building Level

In the opinion of one social worker, the program was not publicized enough at the building level. Some of the BTO principals did not seem to know enough about the program to optimize the use of the social worker services. It was the observation of some of the staff that if the administrators had been thoroughly knowledgeable of the whole spectrum of BTO support services, certain student suspensions would not have occurred. It would also have made it easier for the role of the social workers to have been more easily understood by teachers, thereby resulting in enhanced appreciation of their services. Consequently, some teachers did not know what the program was about nor how to use the services available.

Lack of Space & Telephone Resources

Some of the social workers indicated that they did not have a permanent space or room, with adequate privacy for assuring the students of the permanency and confidentiality of their support services. Thus, students in some BTO schools did not have a place they could go to in times of need. Furthermore, some of the staff indicated that lack of telephones hampered their ability to provide timely support services to both parents and students.

QUESTION 4. What was the impact of the 1990-91 BTO program on student performance, attendance rates, and self esteem?

METHOD

An analysis of covariance (ANCOVA) model was used to assess the impact of the program on the academic performance, and attendance rates of the program students. The ANCOVA was used to control for initial differences between the BTO group(s) and the comparison group on the performance variables and attendance rates. The achievement scores used in the analysis were the Metropolitan Achievement Test-Sixth Edition (MAT-6) Total Math, Total Reading and Total Complete Battery (TCB) scores. The respective pre-test scores (i.e. covariates in the analysis) were the 1988-89 MAT-6 scores and attendance rates. The 1988-89 data were used as a pre-measure since 1988-89 was the year immediately preceding the implementation of the program. Thus, the use of these scores as a pre-measure in the analysis provides an estimate of program efficacy relative to changing student achievement and attendance. The Scheffe post hoc method of multiple comparisons, for identifying between group differences, was applied to the adjusted post-test scores if a significant F score was obtained from the analysis.

The *Piers-Harris Children's Self Concept Scale* was used to obtain the self-esteem measures of the students. The Student's "t" test was used to assess the significance of the differences in self-esteem scores between the identified groups.

FINDINGS

The statistical analysis summaries on Tables 4.1 and 4.2 pertain to three student groups, two of which are BTO groups. The BTO students who were served by the program during the 1989-90 school year are the Group 1 students, while the BTO students who participated in the summer 1990 BTO program are the Group 2 students. Group 4 students represent the comparison group for the analysis. Tables 4.1 and 4.2 indicate the following findings:

Self-Esteem:

- There were no statistically significant differences between the self-esteem scores of the 1989-90 regular school year students (Group 1) and the corresponding scores of the comparison group of students (Group 4).
- The self-esteem scores of the 1989-90 regular school year students (Group 1) and those of the the comparison group of students (Group 4) were significantly higher than those of the 1990 BTO summer students (Group 2).

Attendance Rate

There were no statistically significant differences in attendance rates among the three groups.

Performance in Reading

There were no statistically significant differences in MAT-6 Total Reading scores among the three groups.

Performance in Mathematics

The BTO Summer (Group 2) students significantly out-performed students in either the 1989-90 regular school year group (Group 1) or the comparison group (Group 4) in mathematics. In effect, the BTO summer students, in spite of their statistically significant lower self esteem scores, out-performed the comparison group (Group 4) in mathematics.

Table 4.1
Student's *t*-test Analysis of Self-Esteem Scores
Groups 1, 2 & 4

Group (Size)	1991 Observed Group Mean	Standard Deviation	"t" Value
Group 1 (n=194)	59.16	12.58	2.92*
Group 2 (n=154)	55.00	13.67	
Group 1 (n=193)	59.16	12.58	n.s.
Group 4 (n=132)	59.32	12.88	
Group 2 (n=154)	55.00	13.67	-2.75*
Group 4 (n=132)	59.32	12.88	

* $p \leq .05$

Table 4.2
Attendance Rates, & MAT-6 Scores of Groups**
ANCOVA of independent and Dependent Variables

Variable/ Domain	Group (Size)	1989 Group Mean	1991 Adjusted Group Mean	F
Attendance	Group 1 (n=187)	94.49	89.62	n.s.
	Group 2 (n=142)	95.57	92.14	
	Group 4 (n=126)	94.73	90.96	
Reading	Group 1 (n=127)	34.95	33.93	n.s.
	Group 2 (n=109)	39.27	37.12	
	Group 4 (n=71)	33.77	37.04	
Math	Group 1 (n=125)	39.48	36.62	10.078*
	Group 2 (n=110)	46.10	45.85	
	Group 4 (n=68)	39.98	38.60	

* $P \leq .05$.

** Groups: 1 (BTO students served during the 1989-90 Regular School year),
2 (BTO students served during the 1990 Summer program),
4 the comparison group of students.

QUESTION 5. What was the impact of the 1989-90 and 1990-91 teacher training activities on the academic performance of students who received instruction from the BTO trained teachers?

METHOD

All of the eighty-eight teachers who had participated in BTO staff training activities during the 1989-90 and 1990-91 school years were identified on the HISD personnel computer file. The list was then used to identify all the students they had taught during the 1990-91 school year (Group 4, see page 3). The 1990 and 1991 attendance rates and MAT-6 scores of the identified students were then compared with a comparison group of students (Group 5, see page 3). Each of the the two groups was sub-divided into elementary level (Group 4E & Group 5E) and secondary level (Group 4S & Group 5S). An analysis of covariance (ANCOVA) model was used to assess the impact of the program on the academic performance, and attendance rates of students in the four groups.

FINDINGS

Elementary Student Findings

The analysis of covariance summary on the performance and attendance rates of *elementary students* who received instruction from BTO trained teachers (Table 5.1) indicates the following findings:

Attendance Rate

There were no statistically significant differences between the attendance rates of the elementary school students who received instruction from BTO trained teachers and the corresponding rates of students who received instruction from non-BTO trained teachers.

Performance in Reading

There were no statistically significant differences between the MAT-6 total reading scores of the elementary school students who received instruction from BTO trained teachers and the corresponding scores of those who received instruction from non-BTO trained teachers.

Performance in Math

The 1991 MAT-6 total math scores of the elementary students who received instruction from BTO trained teachers were significantly higher than the corresponding scores of the students who received instruction from non-BTO trained teachers.

Total Complete Battery

There were statistically significant differences between the MAT-6 total complete battery scores of the elementary school students who received instruction from BTO trained teachers and the corresponding scores of those who received instruction from

non-BTO trained teachers. The students of the trained teachers therefore outperformed the students who received instruction from the non-BTO trained teachers.

Table 5.1
Attendance Rates & MAT-6 Scores (Elementary Groups 4 & 5)
ANCOVA of Independent and Dependent Variables

Variable/ Domain	Group (Size)	1989 Group Mean	1991 Adjusted Group Mean	F
Attendance	Group 4E (n=174)	96.64	95.79	n.s.
	Group 5E (n=158)	95.27	94.86	
Math	Group 4E (n=133)	58.60	60.93	17.00*
	Group 5E (n=116)	48.73	46.76	
Reading	Group 4E (n=135)	49.95	48.68	n.s.
	Group 5E (n=115)	40.73	42.86	
TCB	Group 4E (n=130)	55.53	55.03	7.51*
	Group 5E (n=115)	44.14	44.43	

* $P \leq .05$.

** Groups: 4E: elementary school students taught by teachers who had been trained by the program
5E a comparison group of students with demographic characteristics similar to students in group 4E.

Secondary Student Findings

The analysis of covariance summary on the performance and attendance rates of *secondary students* who received instruction from BTO trained teachers (Table 5.2) indicates the following findings:

Performance in Reading

There were no statistically significant differences between the MAT-6 total reading scores of the secondary school students who received instruction from BTO trained teachers and the corresponding scores of those who received instruction from non-BTO trained teachers.

Total Complete Battery

There were no statistically significant differences between the MAT-6 total complete battery scores of the secondary school students who received instruction from BTO trained teachers and the scores of those who received instruction from non-BTO trained teachers.

Attendance Rate

There were no statistically significant differences between the attendance rates of the secondary school students who received instruction from BTO trained teachers and the attendance rates of students who received instruction from non-BTO trained teachers.

Performance in Math

There were statistically significant differences between the MAT-6 total math scores of the secondary school students who received instruction from BTO trained teachers and the corresponding scores of those who received instruction from non-BTO trained teachers. In effect, students of the teachers who had been trained by the BTO program out-performed the comparison group of students whose teachers did not receive any BTO training.

Table 5.2
Attendance Rates & MAT-6 Scores (Secondary Groups 4 & 5)
ANCOVA of Independent and Dependent Variables

Variable/ Domain	Group (Size)	1989 Group Mean	1991 Adjusted Group Mean	F
Attendance	Group 4E (n=3,648)	94.70	88.77	n.s.
	Group 5E (n=3,502)	94.90	89.43	
Math	Group 4E (n=2,530)	47.03	44.01	3.893*
	Group 5E (n=2,284)	45.76	42.69	
Reading	Group 4F (n=2,512)	39.96	38.08	n.s.
	Group 5E (n=2,290)	39.18	37.95	
TCB	Group 4E (n=2,362)	43.19	39.94	n.s.
	Group 5E (n=2,118)	42.04	39.41	

* $P \leq .05$.

** Groups: 4S: secondary school students taught by teachers who had been trained by the program;
5S a comparison group of students with demographic characteristics similar to students in group 4S.

QUESTION 6. What was the impact of the BTO program on the dropout rates, promotion rates and failure rates of BTO students?

METHOD

Status data on all of the students in Groups: 1, 2, 3, and 4 were obtained from the HISD student masterfile at the end of the 1990-1 school year. The status data indicated the numbers of students who (a) had withdrawn from school, (b) had been placed (i.e., students who had failed but had been promoted because of two previous repeats at the same grades), (c) had failed courses required for promotion, or (d) had been promoted. Reasons for the withdrawals were also obtained from the student masterfile.

FINDINGS

Table 6.1 indicates the following findings:

- The former BTO students who were in non-BTO schools during the 1990-91 school year (i.e., Group 3) experienced the highest failure rate and the lowest promotion rate of students from all the groups.
- The students who were in the six 1990-91 BTO schools (Groups 1 & 2) experienced a higher promotion rate and a lower failure rate than those in the comparison group.
- The rate of withdrawals was 4% for three of the groups (i.e. Groups 1,3,& 4). The BTO Summer students experienced a lower withdrawal rate (2%) than that of the comparison group. The combined withdrawal rate of the BTO students who were in the six BTO schools (Groups 1 & 2) was 3%, as compared to the 4% withdrawal rate of the comparison group.

Table 6.1
Percent of Students in Each Status Category
in June 1991 (Groups 1, 2, 3, & 4)

Group (Size)	Withdrawals*	Promoted	Failed/Placed
BTO Regular /Group 1 (n=294)	4%	67%	29%
BTO Summer/Group 2 (n=194)	2%	76%	22%
BTO in Non-program Sch./Group 3 (n=443)	4%	54%	42%
BTO Comparison/ Group 4 (n=195)	4%	64%	34%

* reasons for withdrawals included: illness, dropouts, whereabouts unknown, disciplinary, and court jurisdiction.

The student masterfile identified a combined total of sixteen BTO students (from Groups 1 & 2) as having withdrawn from school for reasons such as: *illness, whereabouts unknown, disciplinary, and court jurisdiction*. However, it should be mentioned that the students who have been included in the withdrawal category are not classified as dropouts until the 1991-92 student masterfile up-date (to be completed by the middle of October 1991) indicates that the students have not re-enrolled.

QUESTION 7. What were the recommendations of the BTO staff for resolving the identified weaknesses of the program?

METHOD

The six BTO social workers were individually interviewed during the month of June 1991 to determine their recommendations for resolving the weaknesses of the program. Additionally, the entire BTO staff, including the district's Assistant Superintendent for Student Services, the Director of Psychological Services, and BTO social workers participated in a one-day workshop during the month of May 1991 with several other district administrators to discuss (a) the weaknesses of the BTO (Phase 1) program and (b) recommendations for program refinement. Summaries of the group discussions were accordingly collected.

FINDINGS

Several recommendations were proposed by the BTO staff for addressing the weaknesses of the program or for making the program more effective. The following is the summary of the recommendations.

Improve Teacher Attitudes & Knowledge About the Program

Teachers should be encouraged to be more optimistic about some of the at-risk students, since a continuing perception of student incorrigibility can undermine the efforts of the program. Building-level administrators should therefore assist in inculcating in the teachers a belief in the effectiveness of the BTO program. Some of the BTO staff suggested that the staff of each school should be given an inservice to enlighten the staff about the role of the social workers and the nature of the referral process. In the opinion of the social workers, they would be better accepted and supported if teacher attitudes and knowledge about the program could be improved.

Implement Summer Program

It was mentioned that because of the many merits of the summer program, the program sponsors or any school system that may want to replicate the program should explore the feasibility of implementing a summer program component, especially for students who are transitioning from elementary to middle schools, or from middle to high schools. Additionally, it was recommended that the summer BTO program staff should follow-up on the BTO students to ensure that they receive continuing reinforcements of support until they attain adequate and sustainable momentum and resilience to overcome the odds of failure.

Inservice for Teachers & Other School Staff

It was the observation of some of the social workers that the BTO program should sponsor inservices for teachers to enlighten them on topics such as: how to deal with conflict and anger and stay in control of one's emotions, how to identify symptoms of child abuse and dysfunctional home environments, and how to identify students with

acute personal problems. The building-level administrators should therefore encourage their teachers to attend such workshops. In the words of one social worker,

"students seem vulnerable, and sometimes indicate how much they want to be understood, to have teachers who would respect them, understand them, love them, and regard them as normal human beings with some of the same problems even the teachers have."

Inservices for Social Workers

The social workers suggested that an inservice should be conducted for them, for the purpose of enlightening them on the following: administrative framework in the schools, kinds of alternative schools available for at-risk students and how to access the programs, available community resources, guidance and counseling departmental resources for at-risk students and how to access them, and other opportunities for at-risk students in the school system.

Provide Adequate Space & Telephone Resources

The provision of adequate room or office space and telephone resources for those social workers who lack such resources was strongly recommended.

Provide Incentives for Parents

Many of the staff suggested that parents of at-risk students should be given incentives to help obtain their involvement and support. One staff member suggested that small incentives should be given to parents to get them to attend school workshops or meetings, or do volunteer work in the schools. Another recommended that parents should be given paid retreats. In her opinion such an opportunity would help provide a very strong relationship of understanding and collaboration between the parents and the BTO staff. The parents could also be taught parenting skills and how to support their children in school.

Principals Should Apply for Participation in Program

It was indicated that if the building-level administrators applied for participation in the program, it may generate more administrative commitment to the processes and goals of the program.

Provide Incentives & Enrichment Activities for Students

Many of the staff suggested that the program staff explore opportunities for obtaining incentives such as nutritious foods for BTO students. Several others also recommended that enrichment activities should be provided for the students such as ROPES training and field trips.

Provide Peer Tutoring

On the basis of the merits of the peer tutoring support that was implemented in the first two years of the BTO (Phase 1) program, several of the staff suggested that peer tutoring should be provided.

Conclusion

The final year of the BTO program produced many indications that support the fact that major strides have been made in the pioneering effort to curb the high dropout rates in the district. As many researchers have indicated, the affective needs of at-risk students, especially those students from dysfunctional homes, need to be addressed before there can be a renewed attitudinal improvement towards learning and staying in school. The strengths of the BTO program have further indicated that the multi-pronged nature of the BTO program provided an effective and comprehensive strategy for assisting the at-risk student. Overall, the results of this evaluation have revealed the following major findings:

- Staff training and the subsequent integration of instructionally pertinent insights and strategies into the classroom were assessed by the BTO teachers as effective.
- The elementary at-risk students who received instruction from the trained teachers outperformed a comparison group of students in overall academic performance (MAT-6 Total Complete Battery Scores), and mathematics.
- The secondary students whose teachers were trained by the BTO program, outperformed a comparison group of students in mathematics.
- The 1990-91 BTO students who had participated in the 1990 Summer program had significantly lower self esteem scores than the comparison group of students, but significantly outperformed the comparison group in mathematics.
- The BTO students achieved higher rates of promotion and lower withdrawal rates than the comparison group of students.

The successes of the BTO program appear to have been engendered by factors that have been identified as *program strengths*. They include factors such as the summer program, teacher training workshops, service delivery flexibility, nurturing support, social workers, diagnosticians, and most of all, the collaborative and supportive leadership of the program coordinators. However, it should be mentioned that the program had a few deficiency areas which limited the realization of its maximum effectiveness and potential. A review of the recommendations by the BTO staff will not only be appropriate for the effective continuation of the program in HISD, but will also benefit any school system which embarks on the replication of this program.

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BEATING THE ODDS TEACHER SURVEY 1989-91

INSTRUCTIONS : Please answer the following questions regarding the BTO Staff Training program you completed during the 1989-90 school year. Your views will provide useful information for assessing the effectiveness of various aspects of the training. It is not necessary to sign your name. Your cooperation is appreciated. If you have any questions about this survey call me at 892-6350 (Dr. K. Opuni, Research Dept., HISD) or Dr. Pauline Clansy at 861-1217.

1. Rate the overall relevance of the training sessions to the instructional problems you face in the classroom? *(Circle the appropriate answer)*

<i>Not Relevant</i>	<i>Slightly Relevant</i>	<i>Considerably Relevant</i>	<i>Absolutely Relevant</i>
0%.....	10%.....	20%.....	30%.....
40%.....	50%.....	60%.....	70%.....
80%.....	90%.....	100%	

2. Indicate how successful or effective you have been in using the skills and insights from the training sessions to improve the effectiveness of your instruction? *(Circle the appropriate answer)*

<i>Not Effective</i>	<i>Slightly Effective</i>	<i>Considerably Effective</i>	<i>Absolutely Effective</i>
0%.....	10%.....	20%.....	30%.....
40%.....	50%.....	60%.....	70%.....
80%.....	90%.....	100%	

If your assessment is less than 70%, please explain what problems, resources, or kinds of support have prevented you from transferring the benefits of the staff training to your students.

Please use items 3—7 to indicate how effectively the staff training activities have increased your

understanding and teaching effectiveness of At-Risk students. (Circle the appropriate answer)

	<i>Increased Considerably</i>	<i>Increased Slightly</i>	<i>Remained the Same</i>
3. Your students' instructional time-on-task	1	2	3
4. Your understanding of the learning styles of At-risk students	1	2	3
5. Your understanding of the emotional needs of At-risk students	1	2	3
6. Your confidence in your ability to effectively teach At-risk students	1	2	3
7. Your confidence in your ability to effectively motivate At-risk students to improve their academic performance	1	2	3

8. Indicate how effective the follow-up support services provided by the educational diagnosticians were in helping you to integrate the skills and insights from the training sessions into the classroom. *(Circle the appropriate answer)*

<i>Not Effective</i>	<i>Slightly Effective</i>	<i>Considerably Effective</i>	<i>Absolutely Effective</i>
0%.....10%.....20%.....30%.....40%.....50%.....60%.....70%.....80%.....90%.....100%			

If your assessment is less than 70%, please explain what problems, resources, or kinds of support have prevented you from transferring the benefits of the staff training to your students.

9. Indicate the level to which you are currently assigned: *(Check one)*

- Elementary School Middle School High School

Thank you for your help!