DOCUMENT RESUME

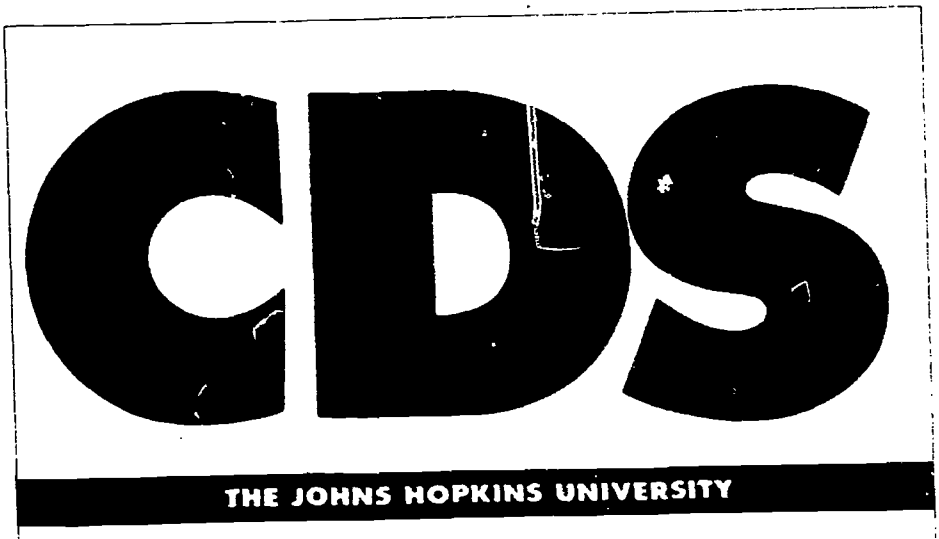
ED 351 418 UD 028 928

AUTHOR	Slavin, Robert E.; And Others
TITLE	Success for All. Policy Implications. Report No. 35.
INSTITUTION	Center for Research on Effective Schooling for Disadvantaged Students, Baltimore, MD.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE	Jul 92
CONTRACT	R117-R90002
NOTE	30p.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Academic Achievement; *Black Students; Cost Effectiveness; Economically Disadvantaged; *Educational Change; Educational Policy; *Elementary School Curriculum; Parent Participation; Policy Formation; Primary Education; Program Effectiveness; Public Schools; *Reading Instruction; *Remedial Reading; School Policy; Special Education; Tutoring; *Urban Schools
IDENTIFIERS	African Americans; *Baltimore City Public Schools MD; *Success for All Program

ABSTRACT

This publication describes the Success for All elementary school reading program and its outcomes as well as the policy implications of this program's demonstration that reading failure can be prevented. An opening section describes the program itself, which involves a combination of high quality teaching, engaging parents in supporting students' school success, and promptly intervening at signs of learning problems in a intensive and minimally disruptive fashion. Reading tutors, assessments, and academic plans all play a part in the program. The results are reported of individually administered tests on reading indicating that after 3 to 4 years of Success for All at schools with a nearly 100 percent African American population and 90 percent on free lunches, the program dramatically increased achievement, decreased special education assignments, and reduced retention in grade to near 0. These results can be replicated as the program is currently in place in 31 schools in 12 states. A second section describes the policy implications of the program based on costs, comparisons with other programs, and implications for compensatory and special education and school reform. Included are 47 references, 1 table, and 1 bar graph. (JB)

UD



THE JOHNS HOPKINS UNIVERSITY

SUCCESS FOR ALL

Policy Implications

Robert E. Slavin
Lawrence Dolan
Nancy A. Madden
Nancy A. Karweit
Barbara A. Wasik

Report No. 35

July 1992

CENTER FOR RESEARCH ON EFFECTIVE SCHOOLING FOR DISADVANTAGED STUDENTS

National Advisory Panel

Beatriz Arias, College of Education, Arizona State University

Mary Frances Berry, Department of History, University of Pennsylvania

Anthony S. Bryk, Department of Education, University of Chicago

Michael Charleston, Department of Education,
University of Colorado at Denver

Constance E. Clayton, Superintendent, Philadelphia Public Schools

Edmund Gordon (Chair), Department of Psychology, Yale University

Ronald D. Henderson, National Education Association

Vinetta Jones, Executive Director, EQUITY 2000, College Board

Hernan LaFontaine, Superintendent (retired), Hartford Public Schools

Arturo Madrid, Director, Tomas Rivera Center

William Julius Wilson, Department of Sociology, University of Chicago

Center Liaison

Harold Himmelfarb, Office of Educational Research and Improvement

SUCCESS FOR ALL

Policy Implications

Robert E. Slavin, Lawrence Dolan, Nancy A. Madden,

Nancy L. Karweit and Barbara A. Wasik

Grant No. R117 R90002

Report No. 35

July 1992

Published by the Center for Research on Effective Schooling for Disadvantaged Students, supported as a national research and development center by funds from the Office of Educational Research and Improvement, U.S. Department of Education. The opinions expressed in this publication do not necessarily reflect the position or policy of the OERI, and no official endorsement should be inferred.

Center for Research on Effective Schooling for Disadvantaged Students
The Johns Hopkins University
3505 North Charles Street
Baltimore, Maryland 21218

The Center

The mission of the Center for Research on Effective Schooling for Disadvantaged Students (CDS) is to significantly improve the education of disadvantaged students at each level of schooling through new knowledge and practices produced by thorough scientific study and evaluation. The Center conducts its research in four program areas: The Early and Elementary Education Program, The Middle Grades and High Schools Program, the Language Minority Program, and the School, Family, and Community Connections Program.

The Early and Elementary Education Program

This program is working to develop, evaluate, and disseminate instructional programs capable of bringing disadvantaged students to high levels of achievement, particularly in the fundamental areas of reading, writing, and mathematics. The goal is to expand the range of effective alternatives which schools may use under Chapter 1 and other compensatory education funding and to study issues of direct relevance to federal, state, and local policy on education of disadvantaged students.

The Middle Grades and High Schools Program

This program is conducting research syntheses, survey analyses, and field studies in m dle and high schools. The three types of projects move from basic research to useful practice. Syntheses compile and analyze existing knowledge about effective education of disadvantaged students. Survey analyses identify and describe current programs, practices, and trends in middle and high schools, and allow studies of their effects. Field studies are conducted in collaboration with school staffs to develop and evaluate effective programs and practices.

The Language Minority Program

This program represents a collaborative effort. The University of California at Santa Barbara is focusing on the education of Mexican-American students in California and Texas; studies of dropout among children of recent immigrants are being conducted in San Diego and Miami by Johns Hopkins, and evaluations of learning strategies in schools serving Navajo Indians are being conducted by the University of Northern Arizona. The goal of the program is to identify, develop, and evaluate effective programs for disadvantaged Hispanic, American Indian, Southeast Asian, and other language minority children.

The School, Family, and Community Connections Program

This program is focusing on the key connections between schools and families and between schools and communities to build better educational programs for disadvantaged children and youth. Initial work is seeking to provide a research base concerning the most effective ways for schools to interact with and assist parents of disadvantaged students and interact with the community to produce effective community involvement.

Abstract

What would happen if we decided to provide children with the programs and resources necessary to ensure that *every* child in *every* school would reach the third grade on time with adequate reading skills, no matter what? If we decided that no child would need to be assigned to special education for a learning problem unless they were seriously handicapped? If we decided that no child would need to be retained in grade or relegated to long-term remedial services? How could we design an urban elementary school that simply refuses to accept the idea that even a single child will fail to learn to read?

These questions led to the development of Success for All, a comprehensive reorganization of the urban elementary school designed to use existing and additional resources in a coherent way to ensure the success of every child. This paper describes the Success for All program and its outcomes, and discusses the policy implications of a demonstration that reading failure can be prevented. Specifically, it addresses the policy implications of Success for All on questions of cost-effectiveness, compensatory education, special education, and the general school reform movement.

Success for All Description and Results

Basic Principles

Our basic approach to designing a program to ensure success for all children begins with two essential principles: *Prevention* and *immediate, intensive intervention.*

Learning problems must first be prevented by providing children with the best available classroom programs and by engaging their parents in support of their school success. When learning problems do appear, corrective interventions must be immediate, intensive, and minimally disruptive to students' progress in the regular program. Thus students receive help early on, when their problems are small. This help is intensive and effective enough to catch students up with their classmates so that they can profit from their regular classroom instruction. Instead of letting students fall further and further behind until they need special or remedial education or are retained in grade, students in Success for All are given whatever help they need to keep up in the basic skills.

Reading Tutors

One of the most important elements of the Success for All model is the use of tutors to support students' success in reading. One-to-one tutoring is the most effective form of instruction known (see Slavin, Karweit, & Madden, 1989; Wasik & Slavin, 1990). The tutors are certified teachers with experience teaching Chapter 1, special education, and/or primary reading.

Tutors work one-on-one with students who are having difficulties keeping up with their reading groups. Students are taken from their homeroom classes by the tutors for 20-minute sessions during times other than reading or math periods. In general, tutors support students' success in the regular reading curriculum, rather than teaching different objectives. For example, if the regular reading teacher is working on long vowels, so does the tutor. However, tutors seek to identify learning deficits and use different strategies to teach the same skills.

During daily 90-minute reading periods, tutors serve as additional reading teachers to reduce class size for reading. Information on students' specific deficits and needs passes between reading teachers and tutors on brief forms, and reading teachers and tutors are given regular times to meet to coordinate their approaches with individual children.

Initial decisions about reading group placement and need for tutoring are made based on informal reading inventories given to each child by the tutors. After this, reading group placements and tutoring assignments are made based on eight-week assessments, which include teacher judgments as well as more formal assessments. First graders receive first priority for tutoring, on the assumption that the primary function of the tutors is to help all students be successful in reading the first time, before they become remedial readers.

Reading Program

Students in grades 1-3 are regrouped for reading. Students are assigned to heterogeneous, age-grouped classes with class sizes of about 25 most of the day, but during a regular 90-minute reading period they are regrouped according to reading performance levels into reading classes of 15 students all at the same level. For example, a 2-1 reading class might contain first, second, and third grade students all reading at the same level.

The idea behind regrouping is to allow teachers to teach the whole reading class without having to break the class into reading groups. This greatly reduces the time needed for seatwork and increases direct instruction time. We do not expect reduction in class

size to increase reading achievement by itself (see Slavin, in press), but it does ensure that every reading class will be at only one reading level, eliminating workbooks, dittos, or other follow-up activities which are needed in classes with multiple reading groups. The regrouping is a form of the Joplin Plan, which has been found to increase reading achievement in the elementary grades (Slavin, 1987).

The reading program itself (Madden, & Livermon, 1990) has been designed to take full advantage of having 90 minutes of direct instruction. The reading program emphasizes development of basic language skills and sound and letter recognition skills in kindergarten, and uses an approach based on sound blending and phonics starting in first grade (although kindergarten students who show readiness are accelerated into the first grade program).

Students in pre-K, kindergarten, and first grade experience the Peabody Language Development kits to help them build language concepts essential to later reading success. The K-1 reading program uses a series of phonetically regular minibooks and emphasizes oral reading to partners as well as to the teacher, instruction in story structure and specific comprehension skills, and integration of reading and writing.

When they reach the 2-1 reading level, students use a form of Cooperative Integrated Reading and Composition (CIRC) with the district's Macmillan basal series. CIRC uses cooperative learning activities built around story structure, prediction, summarization, vocabulary building, decoding practice, writing, and direct instruction in reading comprehension skills. Research on CIRC has found it to significantly increase students' reading comprehension and language skills (Stevens, Madden, Slavin, & Farnish, 1987).

Eight-Week Reading Assessments and Individual Academic Plans

Every eight weeks, reading teachers assess student progress through the reading program. The results of the assessments are used to determine who is to receive tutoring, to suggest other adaptations in students' programs, and to identify students who need other types of assistance, such as family interventions or vision/hearing screening. On the basis of the eight-week assessments, Individual Academic Plan (IAP's) are developed for each student indicating areas of weakness to be addressed by classroom teachers and/or tutors.

Preschool and Kindergarten

The Success for All school provides a half-day preschool and a full-day kindergarten for all eligible students. The focus of the preschool and kindergarten is on providing a balanced and developmentally appropriate learning experience for young children. The curriculum emphasizes the development and use of language. It provides a balance of academic readiness and non-academic music, art, and movement activities. Readiness activities include use of the Peabody Language Development Kits and a program called Story Telling and Retelling (STaR) in which students retell stories read by the teachers (Karweit, Coleman, Waclawiw, & Petza, 1990). Pre-reading activities begin the second semester of kindergarten.

Family Support Team

A Family Support Team consisting of any social workers, parent liaisons, counselors, and others who work in the school provides parenting education and works to involve parents in support of their children's success in school. Also, family support staff are called on to provide assistance when there are indications that students are not working up to their full potential because of problems at home. For example, families of students who are not receiving adequate sleep or nutrition, need glasses, are not attending school regularly, or are exhibiting serious behavior problems, receive family support assistance.

Program Facilitator

A Program Facilitator works at the school full time to oversee (with the principal) the operation of the Success for All model. The

Facilitator helps plan the Success for All program, helps the principal with scheduling, and visits classes and tutoring sessions frequently to help teachers and tutors with individual problems. The Program Facilitator may work with individual children having particular difficulties to find successful strategies for teaching them, and then return the children to the tutors or teachers. She helps teachers and tutors deal with any behavior problems or other special problems, and coordinates the activities of the Family Support Team with those of the instructional staff.

Teachers and Teacher Training

The teachers and tutors are regular teachers. They received detailed teacher's manuals supplemented by two days of inservice at the beginning of the school year and several inservice sessions throughout the year on such topics as classroom management, instructional pace, and implementation of the curriculum.

Special Education

Every effort is being made to deal with students' learning problems within the context of the regular classroom, as supplemented by tutors. Special education resource services are still provided for students assigned to special education in previous years, but no new assignments to resource services are being made for reading problems, on the assumption that tutoring services available to all students will be more appropriate. Self-contained services for seriously handicapped students are being maintained for students whose needs cannot be met in the regular class.

Advisory Committee

An advisory committee composed of the building principal, Program Facilitator, teacher, and parent representatives, meets regularly to review the progress of the program and to identify and solve any problems that arise.

Results of Success for All

The effects of Success for All on students who begin the program in preschool, kindergarten, or first grade are extremely positive on individually administered tests of reading. Figure 1 shows the results (in average grade equivalents) after four years of Success for All one Baltimore elementary school and three years in four other schools. Nearly all students are African American and approximately 90% quality for free lunches. Effect sizes (the proportion of a standard deviation separating experimental and control groups) are also presented. Note that while Success for All students in general are far outperforming their counterparts in the control group, the effects are particularly dramatic for the students who started out in the lowest quarter of the sample in pretest scores. Significantly, only 3.9% of Success for All third graders who were in the program since first grade are currently performing two years below grade level, one traditional indication of learning disabilities in reading. In contrast, 11.7% of matched control students were two years or more below grade level (see Slavin et al., 1992, for more on the research design and findings).

==========
Figure 1 Here
==========

Similar findings have been obtained for schools in Philadelphia, Memphis, and rural Maryland (Slavin et al., 1992). Special education referrals and assignments for learning disabilities have been reduced by about half in the five Baltimore schools. At a rural Maryland school where the main focus on the program is on providing alternatives to special education, referrals to special education have fallen from 22 to 6, and assignments have fallen from 12 to 3 in the first two years of Success for All (see Slavin & Madden, 1991).

In addition to increasing achievement and decreasing special education assignments, retentions in grade were reduced to near zero in all schools. In the Baltimore City schools, this reduction was from a pre-program mean

of about 11% per year in Kindergarten through grade three.

The findings to date of the Success for All evaluations illustrate the potential of prevention and early intervention to keep students from falling far behind their agemates, to keep them from failing, and to keep them from being assigned to special education for learning disabilities. All of the Success for All schools serve very disadvantaged student populations; in particular, the Baltimore City schools experience major problems with truancy, inadequate health care, parental poverty, and drug involvement. Yet in these schools, students are performing at or near national norms, and even the lowest achievers are well on their way to reading, are being promoted, and are staying out of special education.

Can Success for All be Replicated?

The practical or policy consequences of research on Success for All would be minimal if the program depended on conditions unlikely to be replicated in schools beyond our pilot sites. Yet this is certainly not true; the program currently exists in 31 schools in 12 states and is continuing to expand. Clearly, successful implementation of the program does not depend on the existence of hand-picked staff, charismatic principals, or proximity to Johns Hopkins. The 31 schools are highly diverse and are located in all parts of the country, from California to Idaho to Texas to Alabama to Indiana. This is not to say that every school serving disadvantaged students can successfully implement the program. It does require a clear commitment from the district, principal and staff to a very different way of organizing their schools. However, it is our belief and experience that with adequate support from their central administrations, the majority of elementary schools serving disadvantaged students want to implement a program like Success for All and are capable of doing so.

Policy Implications of Success for All
I. Program Costs

The most important impediments to the widespread use of Success for All are not any lack of willingness or skill on the part of school staffs but rather revolve around the cost of the program. Success for All is an expensive program. School districts which concentrate their Chapter 1 funds in their poorest schools can afford the program in such schools without additional expenditures; this is the case in Baltimore and Philadelphia, for example. Bringing in special education, state compensatory education, funding from settlements in desegregation or school finance suits, or bilingual education or ESL funding can also help support the program, and these funding sources are in fact supporting Success for All in many of its sites around the country.

The following sections examine several questions relating to the cost of Success for All. First is a discussion of what the costs are. This is followed by discussion of mid- to long-term savings brought about by the program, and a discussion of the effectiveness of Success for All in comparison to equally expensive alternatives.

Costs

Success for All is an expensive program. When it began at Abbottston Elementary School, it cost $400,000 in addition to the funds the school would have otherwise received, or $800 per student. It is important to note that this is less than the difference in per-pupil cost between Baltimore City and the rest of Maryland, so rectifying this funding imbalance would make it possible for every school in the city to implement Success for All. However, this is unlikely to occur any time soon. Given the realities of school

funding, how can the program be funded? Are all of the elements (and therefore costs) equally essential? Are there savings brought about by Success for All that may offset the costs? Is the program cost-effective in comparison to practical alternatives? These are the questions now addressed.

Success for All has been implemented with widely varying constellations of resources. Most schools fund the program by reconfiguring existing Chapter 1 funds or by supplementing them with additional Chapter 1 or other resources.

==========
Table 1 Here
==========

Table 1 shows program costs for high-, moderate-, and low-need schools. "High need" refers to high-poverty schools in which approximately 75% of students qualify for Chapter 1 services, "moderate-need" refers to schools with 50% eligibility, and "low-need" refers to less impoverished schools in which only 25% of students qualify. The Table assumes a school of about 500 students, teacher costs (salaries plus benefits) of $47,000, and aide costs of $19,000. The cost of adding three sections of half-day preschool are estimated based on 1.5 teachers, 1.5 aides, and $3000 in materials; full-day kindergarten (extending four half-day classes to full-day) would require 2 teachers and 2 aides, plus $3000 in materials.

As is clear from Table 1, the total costs of Success for All can vary considerably, from as little as $182,000 in low-need schools without additional costs for preschool or full-day kindergarten to as much as $626,000 in high-need schools in which preschool and full-day kindergarten are charged to the program.

Even in its least expensive form, Success for All appears to be costly. Yet it can be implemented by reallocating Chapter 1 funds that schools are already receiving. At $1000 per eligible student, a high-need school would receive enough to afford the program without preschool or full-day kindergarten. Many large districts are concentrating their Chapter 1 funds in their poorest schools and are providing more than $1000 per eligible student. The recent dramatic increase in national Chapter 1 funding, more than a 60% increase since 1988-89, totally alters the question of the feasibility of Success for All. Despite cutbacks in state and local funding, the expansion of Chapter 1 enables most high-poverty schools to implement a credible form of the program, although additional funds are still usually needed if both preschool and full-day kindergarten are funded by Chapter 1.

Can the Costs of Success for All Be Reduced?

The variation in staff and other resources among the different Success for All schools has enabled us to examine the contribution made by many key program elements to program outcomes. Our conclusion at present is that inexpensive forms of the program can significantly increase the achievement of students in general, but to guarantee the success of *every* child requires greater funding.

The fully-funded schools had overall achievement effects only slightly better than those obtained in less well-funded locations, but they had much more positive effects on the performance of the most at-risk students (those in the lowest 25% at pretest) and on such outcomes as retentions and special education placements (Slavin et al., 1992). For the students with the greatest difficulties, the provision of adequate tutoring and family support services was crucial for success, but a small number of such students in each school absorbed enormous person-hours.

Having adequate resources also enabled the schools to avoid the use of expensive alternative services, such as special education and retention. For example, a student who was struggling at the end of first grade might be promoted to second grade and given continued one-to-one tutoring and family support. In a school without adequate support services, the same child would likely be retained or referred to special education. Retention rates in the fully-funded Baltimore schools were reduced from approximately

11% to near zero, and special education placements for learning disabilities were substantially reduced. Retentions and special education placements were also reduced in low-funded schools, but not to the same extent (see Slavin et al., 1992).

Without question, the most important resources for at-risk students are the tutors. The effects of Success for All for the lowest 25% of students are closely associated with the number and quality of tutors. In most schools we have insisted on the use of certified teachers as tutors. In one school in Charleston, South Carolina, we have experimented with the use of paraprofessionals as tutors, and our preliminary assessment of this has been positive. However, in this case the paraprofessionals are very highly qualified; some are certified as teachers in other states. Reducing the costs of Success for All by cutting back on tutors would undermine the program's ability to achieve success for *all*, although it would still achieve success for *more*.

The impact of additional family support staff has been clearly seen on student attendance. Abbottston Elementary, which has the most additional family support staff, has substantially increased its average daily attendance (from 89% to 93%). Family support interventions have also been crucial for individual children who have had serious behavior problems, health problems, or other family-related problems, and family support plays an important role in finding alternatives to special education placements. The impact of family support on average reading scores is probably minimal, but if Success for All is to truly mean *all*, family support is a critical component. However, most schools now create family support teams within their existing staff rather than adding staff for this purpose, so family support may not be a major factor in program cost.

Because all Success for All schools have facilitators, we cannot assess the contribution they make to program outcomes. However, our experience tells us that they are essential. The changes in instruction, curriculum, support services, and other features of the elementary program are so extensive that there must be someone whose sole job is to ensure that all elements of the program are well implemented, well coordinated with each other, and focused on the success of every child. We have experimented with half-time facilitators (who tutor in the afternoon), but we recommend against this in the early stages of program implementation.

The impact of preschool and full-day kindergarten on students in Success for All has been hard to assess (see Slavin et al., 1992). Students who have received these services appear to perform somewhat better than those who have not, but it will take a few more years to fully assess this contribution. What is clear is that students who begin the program in first grade or earlier do far better than those beginning in second or third grades (see Madden et al., 1991). We recommend preschool and/or extended-day kindergarten primarily on the basis of others' research on these programs (see Karweit, 1989a, b), but we also know that regardless of early childhood programs, students entering Success for All in first grade or earlier will do very well. As a result, we recommend that school districts for whom the cost of Success for All is a major impediment seek other funding for preschool and/or full-day kindergarten or implement only one of these components.

To summarize, we believe based on our research to date that much of the overall impact of Success for All can be achieved through improvements in curriculum and instruction, with the provision of a full-time facilitator critical to success in implementation. For the lowest-achieving students, tutors are clearly essential, and family support is also important for many children. We are less certain about the need for preschool and extended-day kindergarten, but support them based on our experience and on evidence from other research. When hard choices have to be made, we emphasize the importance of tutors and the facilitator in addition to curriculum change as minimum requirements for an adequate implementation.

Savings Brought About by Success for All

While the costs of Success for All must be primarily justified as an investment in children, the program typically incurs many savings in overall school educational costs that should also be considered. These are discussed below.

Retentions. The fully funded Success for All schools have reduced their rate of retentions from 11% to near zero, and other schools have cut retentions by almost as much. Reducing retentions has an important effect on educational costs. A retained first grader is receiving a very expensive intervention; one more year of first grade. Total per-pupil costs in Baltimore are $4779 per year. Every time an elementary school retains 25-30 students it must eventually hire an additional teacher, supply an additional classroom, and so on. Reducing retentions from 11% to 0% in a school of 500 students saves approximately $263,000 per year.

Special Education. The fully funded Success for All schools have been able to reduce special education placements for learning disabilities by about half. The additional cost of serving a level 3 or 4 student (the usual placements for learning disabilities) in Baltimore is approximately $3500 per year. If over a period of years the number of children in special education for learning disabilities could be cut from 8% to 4%, the annual savings in a school of 500 students would be $70,000. In addition, reducing the number of *assessments* for special education (at $500 per student) from 8% to 4% would add a savings of $10,000 per year.

Duplicate Services and Materials. The cost of Success for All includes expenses for staff development, an on-site facilitator, and materials and supplies over and above those ordinarily received by the school. These reduce the school's need for similar services and materials. For example, Baltimore schools have half-time master teachers whose functions can be subsumed by the facilitator. The Success for All materials replace usual books and consumable workbooks, and the training can replace district inservices. Savings for an individual school would depend on the resources already in the school. For Baltimore, savings would include approximately $23,500 for the master teacher, $8000 in materials and supplies, and $2000 in staff development.

Total estimated annual savings are as follows:

Retentions	$263,000
Special Education Placements	$ 70,000
Special Education Testing	$ 10,000
Master Teacher	$ 23,500
Duplicate Materials, Inservice	$ 10,000
Total Savings	$376,500

Some of the savings listed above (such as duplicate services, materials, and supplies and special education testing) are realized immediately, while others (retentions, special education placements) accumulate over time. If the school is allowed to recoup its savings instead of having them disappear into the district at large, the net costs of implementing Success for All would decline significantly over time.

Long-Term Savings

The preceding discussion only deals with short- to mid-term savings realized by the school or school system. To these savings must be added the likely savings to society over the long term in costs of welfare, police, prisons, and so on. The link between school success and life success, and between these and need for expensive social services, is well established. To the degree that Success for All ultimately reduces delinquency, dropout, teen pregnancy, or other problems strongly associated with school failure in low-income communities, its savings to society could far outweigh any costs of implementation (see Berrueta-Clement, Schweinhart, Barnett, Epstein, & Weikart, 1984).

Comparison With Alternative Interventions

Leaving aside the question of monetary savings, the cost-effectiveness of programs that are both more expensive and more

effective than existing programs is hard to assess. Clearly, the effectiveness of schools serving disadvantaged students is far below what we can accept in our society. What we should ask is: what means do we have to bring disadvantaged students to acceptable levels of achievement, and which are the least expensive of the effective alternatives.

There are several approaches to early intervention which have objectives and costs similar to those of Success for All. As a point of comparison, after three to four years in the program, Baltimore Success for All students exceeded matched control students in reading by an effect size of +.62 at the end of first grade and +.57 at the end of third (Madden et al., 1992). For the lowest achievers, the corresponding effects were +.81 in first grade and +.97 in third. Also recall that retentions were reduced from 11% to near zero, and special education referrals almost halved.

One popular alternative strategy is to reduce class size in the early grades to about 15. Studies of this usually find small positive effects. Among the largest effects ever found, in a Tennessee statewide study (Word et al., 1990), were effect sizes of +.33 at the end of first grade and +.24 at the end of third (after four years of small class sizes). A followup study of fourth graders found lasting effects to be even smaller, +.14, (Nye et al., 1991). A similar statewide study in Indiana found much smaller effects (Farr et al., 1987); by the end of third grade, students who had been in small classes exceeded controls in reading by an effect size of only +.06. Studies in South Carolina, Virginia Beach, New York City and Austin, Texas have found effects of reduced class size closer to the small Indiana effects than the larger Tennessee findings (see Slavin, in press). Clearly, Success for All is substantially more effective than simply reducing class size.

Another often-proposed solution to the problem of early reading delays is the use of transitional first grades, pre-firsts, and other means of adding a year between kindergarten entry and the end of first grade. Such programs produce a short-lived boost to students' scores in comparison to their new (younger) classmates, but this effect rapidly fades in later years (Karweit, in press).

Other expensive alternatives have few if any effects on early reading. Among these are provision of instructional aides and IBM's Writing to Read computer program (Slavin, 1991).

The most successful alternatives to Success for All are programs which have elements in common with it. In particular, other one-to-one tutoring programs, such as Reading Recovery (Pinnell, 1989), have effects on low-achieving first graders similar to those of Success for All. However, because Reading Recovery does not alter the school's program beyond first grade, the effects do not continue to grow; by the end of third grade, effect sizes average +.20 (Wasik & Slavin, 1990), in comparison to +.97 for Success for All's low achievers.

High-quality preschool programs have had substantial immediate effects on students' IQ's and language skills, moderate effects on retentions and special education placements, and important long-term effects on such outcomes as dropout and delinquency, but have had few effects on student achievement (see Berrueta-Clement et al., 1984).

In sum, none of the major alternatives to Success for All are as effective in increasing reading performance, and only the preschool studies have any evidence of reduced retentions or special education placements.

Success for All is a practical, replicable, and effective program for improving the performance of disadvantaged elementary students. It is expensive, but with recent increases in Chapter 1 funding, most school districts serving many disadvantaged students should be able to afford a credible form of the model, especially if preschool and/or extended-day kindergarten are provided by funds other than Chapter 1. Immediate and long-term savings introduced by Success for All may ultimately offset most of the program's cost. Success for All is considerably more effective than other,

equally expensive approaches to early education such as reducing class size, providing instructional aides, and implementing computer-assisted instruction.

For these reasons, Success for All appears to be a cost-effective means of bringing all children in disadvantaged schools to acceptable levels of academic performance.

Policy Implications of Success for All
*II. Compensatory Education**

Once upon a time (or so the story goes), there was a train company experiencing a high rate of accidents. The company appointed a commission to look into the matter, and the commission issued a report noting its major finding, which was that when accidents occurred, damage was primarily sustained to the last car in the train. As a result of this finding, the company established a policy requiring that before each train left the station, the last car was to be uncoupled! (From Slavin, 1991).

All too often in its twenty-five year history, compensatory education has primarily pursued a "last car" strategy in providing for the needs of low achieving students. The attention and resources of Chapter 1 and its predecessor, Title I, have mostly gone into identifying and remediating the damage sustained by individual children. Yet the fault lies not in the children, but in the system that failed to prevent the damage in the first place, just as the damage to the last car was due to the train system and had nothing to do with the last car in itself.

There are new winds of change in discussions of Chapter 1. The 1988 Hawkins-Stafford bill reauthorizing Chapter 1 introduced new flexibility in use of Chapter 1 funds and shifted the focus of Chapter 1 monitoring toward an insistence on outcomes for children. The bill also made it easier for schools serving highly impoverished populations to use their funds for all children, not just identified low achievers. Further, significant increases in Chapter 1 funding create new opportunities. As noted earlier, the 1992-93 Chapter 1 budget of $6.7 billion represents an increase of $2.4 billion over its 1987-88 level. However, all of these changes only create the possibility of significant reform. They do not guarantee that reform will actually take place, much less that students will actually benefit.

In their first twenty-five years, Chapter 1 and Title I have made an important contribution to the education of low achieving disadvantaged students. The Sustaining Effects Study of the 1970's found that Chapter 1 students learned more than other "needy" children, but did not close their substantial gap with "non-needy" students (Carter, 1984). Perhaps the best indication of the contribution made by Chapter 1 is indirect; the slow but steady reduction in the achievement gap between African American and Hispanic students and white students is often attributed to an effect of Chapter 1/Title I (e.g., Carroll, 1989).

Yet it is always possible to make a good program better. Chapter 1 can be much more than it is today. It can be an engine of change in the education of disadvantaged children. It can ensure the basic skills of virtually all children; it can in essence help our nation's schools put a floor under the achievement expectations for all non-retarded children, so that all children will have the basic skills necessary to profit from regular classroom instruction. It can help schools toward teaching of a full and appropriate curriculum for all students, but particularly for those who by virtue of being "at risk" too often receive a narrow curriculum emphasizing isolated skills. It can make the education of disadvantaged and at risk students a top priority for all schools.

Preventing Early Reading Failure

Perhaps the most important objective of compensatory education is to ensure that

*Portions of this section are adapted from Slavin (1991).

children are successful in reading the first time they are taught, and never become remedial readers. The importance of reading success in the early grades is apparent to anyone who works with at-risk students. The consequences of failing to learn to read in the early grades are severe.

One of the most important policy implications of research on Success for All is in providing a demonstration of what Chapter 1 could become. We have argued (see Slavin, 1991b) that Chapter 1 must move away from remediation toward prevention and early intervention to see that students do not fall behind in the first place, and should greatly increase its role in staff development for all teachers in Chapter 1 schools.

As noted earlier, disadvantaged students who have failed a grade and are reading below grade level are extremely unlikely to graduate from high school (Lloyd, 1978; Kelly, Veldman, and McGuire, 1964). Chapter 1 itself has few effects beyond the third grade (Kennedy, Birman, and Demaline, 1986). Retentions and special education referrals are usually based on early reading deficits.

One outcome of widespread reading failure is a high rate of retentions in urban districts. In many, 20% or more of first grade students are retained, and more than half of all students have repeated at least one grade by the time they leave elementary school (Gottfredson, 1988). In the early grades, performing below grade level expectations in reading is the primary reason for retention in grade.

Almost all children, regardless of social class or other factors, enter first grade full of enthusiasm, motivation, and self-confidence, fully expecting to succeed in school (see, for example, Entwistle and Hayduk, 1981). By the end of first grade, many of these students have already discovered that their initial high expectations were not justified, and have begun to see school as punishing and demeaning. Trying to remediate reading failure later on is very difficult, because by then students who have failed are likely to be unmotivated, to have poor self-concepts as learners, and to be anxious about or even hostile towards reading. Reform is needed at all levels of education, but no goal of reform is as important as seeing that all children start off their school careers with success, confidence, and a firm foundation in reading. Success in the early grades does not guarantee success throughout the school years and beyond, but failure in the early grades does virtually guarantee failure in later schooling. This is one problem that must be solved.

A growing body of evidence from several sources indicates that reading failure in the early grades is fundamentally preventable. The outcomes summarized earlier show that Success for All has been able to dramatically reduce the number of students who fail to learn to read. In addition, Reading Recovery (Pinnell, 1989), which provides at-risk first graders with one-to-one tutoring from specially trained certified teachers, has been found to substantially increase these students' achievement. These improvements have been found to maintain into the later elementary grades. Prevention of Learning Disabilities (Silver and Hagin, 1990) provides tutoring to at-risk first and second graders, with a focus on perceptual skills often lacking in learning disabled students. This program has also had markedly positive effects on students at-risk for learning disabilities. This and other evidence suggests that reading failure is preventable for nearly all children, even a substantial portion of those who are typically categorized as learning disabled.

If reading failure *can* be prevented, it *must* be prevented. Chapter 1 is the logical program to take the lead in giving schools serving disadvantaged students the resources and programs necessary to see that all children learn to read.

Enhancing Regular Classroom Instruction

One of the fundamental principles of Chapter 1/Title I has been that compensatory funds must be focused on the lowest achieving students in qualifying schools. In principle this makes sense, in that it avoids spreading Chapter 1 resources too thinly to do low achievers any good. But in practice this

requirement has led to many problems, including a lack of consistency or coordination between regular and Chapter 1 instruction, disruption of children's regular classroom instruction, labeling of students who receive services, and unclear responsibility for children's progress (Allington and Johnston, 1989; Stein, Leinhardt and Bickel, 1989).

It is time to recognize that the best way to prevent students from falling behind is to provide them with top-quality instruction in their regular classrooms. A substantial portion of Chapter 1 funds (say 20%) should be set aside for staff development and adoption of programs known to be effective by teachers in Chapter 1 schools. For example, by hiring one less aide, schools could instead devote $20,000 per year to staff development, a huge investment in terms of what schools typically spend but a small one in terms of what Chapter 1 schools receive. No one could argue that the educational impact of one aide could approach that of faithful and intelligent implementation of effective curricula and instructional practices in regular classrooms throughout the school; research on the achievement effects of instructional aides finds that they make little or no measurable difference in achievement (see Slavin, in press).

For this amount of money, a school could pay for extensive inservice, in-class followup by trained "circuit riders," and release time for teachers to observe each other's classes and to meet to compare notes, as well as purchase needed materials and supplies. The achievement benefits of effective classroom instruction all day would far outweigh the potential benefits of remedial service.

There are many examples of programs which have been much more successful for low achieving students than remedial services. In a review of the literature on effective programs for students at risk (Slavin, Karweit and Madden, 1989), we identified several such programs, including a variety of continuous progress models, cooperative learning, and peer tutoring. Programs directed at improving classroom management skills also often increase achievement. Many of the exciting innovations in curriculum currently being discussed are not affecting poor schools, but could do so with the support of Chapter 1 funds. In addition to particular classroom methods, schoolwide change programs such as James Comer's (1988) School Development model, Theodore Sizer's (1984) Re: Learning Approach, and Henry Levin's (1987) Accelerated Schools model (as well as Success for All) could be funded by Chapter 1 if it focused on staff development.

Success for All provides one demonstration of how a schoolwide emphasis on staff development and adoption of effective practices could be implemented under Chapter 1 funding and could greatly affect the learning of all students. Even Success for All schools with no extra resources were able to make a substantial difference in student reading achievement by using research-based approaches in a comprehensive schoolwide plan (see Slavin et al., 1992). Chapter 1 must help create a situation in which eligible schools are able to select from among a set of programs known to be effective and are then able to use Chapter 1 funds to obtain inservice, followup, and materials--whatever is needed to ensure top-quality implementation of whatever methods the schools have chosen.

To bring about a situation in which schools can choose from among effective programs, several initiatives are needed. Chapter 1 should be funding development and evaluation of promising practices, including third-party evaluations of programs which already exist. It should also be funding research on processes of disseminating effective practices to individual schools. It should be helping to establish training centers around the country that can help schools implement effective practices. It should be examining its funding and accountability requirements to see that they support rather than inhibit schools from using Chapter 1 funds to improve their overall instructional practices.

Chapter 1 should not be a staff development program only; there is still a need for service

targeted to individual children (for example, to provide tutoring to first graders having difficulty in reading). However, without a major investment in staff development, Chapter 1 services will always be swimming against the tide, trying to patch up individual children's deficits without being able to affect the setting in which Chapter 1 students spend the great majority of their day, the regular classroom. Under current regulations, schools can use a small proportion of their Chapter 1 dollars for staff development, but this rarely goes into the kind of training, followup, and assessment needed to effectively implement validated programs. One-day workshops with no followup are far more typical.

The obvious objection to devoting substantial resources to staff development is that students not eligible for Chapter 1 would benefit from Chapter 1 dollars at least as much as those who are eligible. This objection can be answered in three ways.

First, Chapter 1 accountability procedures should continue to focus entirely on the achievement of Chapter 1-eligible students, so schools implementing programs for all students have to make certain that they are making a difference with low achievers.

Second, to withhold effective and cost-effective programs from eligible students because non-eligible students might benefit is perverse; it is like withholding funds intended for water treatment to instead serve individual children with typhoid.

Third, research finds that regardless of their own personal characteristics, poor students in schools with large numbers of poor children achieve less well than equally poor students in less disadvantaged schools (Kennedy, Jung, and Orland, 1986). There is a case to be made that students in schools serving disadvantaged students deserve assistance even if they are not low achievers themselves. We should be particularly concerned about poor and minority students who may be doing well enough to avoid Chapter 1 identification but are still not achieving their full potential. Such children may not need direct service, but there is certainly a strong rationale for federal assistance to improve the quality of their regular classroom instruction.

Chapter 1 is extremely important to our most vulnerable children. For more than twenty-five years it has focused attention and resources on low achieving students in disadvantaged schools. Yet Chapter 1 can be much more than it is today. It can become proactive in preventing learning problems rather than only reactive in remediating problems which are already serious. It can ensure literacy for every child, it can become a major force in bringing effective programs into schools serving disadvantaged students, and it can reward schools for doing a good job with at-risk students. Success for All provides one vision of what Chapter 1 schools might look like in practice if Chapter 1 focused on prevention and staff development rather than remediation.

Policy Implications of Success for All
*III. Special Education**

For more than twenty years, the most important debates in special education research and policy have revolved around the practice of mainstreaming, particularly mainstreaming of students with mild academic handicaps, such as those identified as learning disabled. From early on, most researchers and policy makers have favored mainstreaming academically handicapped students to the maximum extent possible (e.g., Leinhardt & Pallay, 1982; Madden & Slavin, 1983), and the passage of PL 94-142 in 1975 put the federal government squarely behind this effort.

Since that time, students with academic disabilities have certainly spent more time in

*This section is adapted from Slavin et al., 1991.

general education classes than they did before, but the number of students identified for special education services has risen dramatically. Since 1975, the proportion of students categorized as learning disabled has risen more than 250%, while the category of educable mental retardation has diminished only slightly (Office of Special Education and Rehabilitative Services, 1989).

Despite the increase in mainstreaming, significant proportions of both special and general education teachers have never been comfortable with the practice. At the school level, holding mainstreaming in place is often like holding together two positively charged magnets; it can be done, but only if external pressure is consistently applied. General education teachers are quite naturally concerned about the difficulty of teaching extremely heterogeneous classes, and special education teachers, seeing themselves as better trained to work with academically handicapped students and more concerned about them, are often reluctant to send their students into what they may perceive as an inappropriate environment.

Solutions to the problems of mainstreaming academically handicapped children have generally been built around attempts to improve the capacity of the general classroom teacher to accommodate the needs of a heterogeneous classroom. For example, forms of individualized instruction (e.g., Slavin, 1984; Wang & Birch, 1984), cooperative and peer-mediated instruction (e.g., Jenkins, Jewell, Leceister, Jenkins, & Troutner, 1990; Slavin, Stevens, & Madden, 1988), and teacher consultation models (e.g., Idol-Maestas, 1981) are based on the idea that to fully integrate academically handicapped students, teachers need new programs and skills.

Improving the capacity of the general education classroom to meet diverse needs is an essential part of a comprehensive strategy to serve academically handicapped students, but it is not enough. The problem is that once a child is academically handicapped (or significantly behind his or her peers for any reason), neither mainstreaming nor special or remedial education is likely to bring the child up to age-appropriate achievement norms. From a school organization perspective, the low achievement of the academically handicapped child puts a strain on the school (and the child him- or herself) that is likely to last throughout the child's school career. Mainstreaming may be the best alternative for most academically handicapped children, but it is the least unappealing of many unappealing options.

The Success for All model proposes a markedly different approach to the education of students who are likely to become academically handicapped. The key focus of this model is an emphasis on prevention and on early, intensive, and untiring intervention to bring student performance within normal limits. We call this "neverstreaming" because its intention is to see that nearly all children remain in the mainstream by intervening to prevent the academic difficulties that would lead them to be identified for separate special education services.

Success One Year at a Time

One of the key concepts underlying "neverstreaming" is that programs must help students start with success and then maintain that success at each critical stage of development. First, all students should arrive in kindergarten with adequate mental and physical development. This requires investments in prenatal and infant and toddler health care, parent training, early stimulation programs for at-risk toddlers, effective preschool programs, and so on. Intensive birth-to-five programs such as the Milwaukee Project (Garber, 1988) and the Carolina Abecedarian Project (Ramey & Campbell, 1984) show that virtually every child can arrive at the school door with normal IQ and language skills.

The next critical juncture is assurance that all students leave first grade well on their way to success in reading and other critical skills. This requires effective kindergarten and first grade instruction and curriculum, family support programs to ensure parental support of the school's goals, and one-to-one tutoring or other intensive interventions for students who are having difficulties in reading.

Actually, success in passing from each grade level to the next might be considered a critical requirement for "neverstreaming" at all levels; programs and practices must be directed toward doing whatever it takes to see that all children make it each year. As students move into second and third grade and beyond, this would mean continuing to improve regular classroom instruction, to monitor student progress, and to intervene intensively as often as necessary to maintain at-risk students at a performance level at which they can fully profit from the same instruction given to students who were never at risk.

The idea here is to organize school and non-school resources and programs to relentlessly and systematically prevent students from becoming academically handicapped from their first day of school (or earlier) to their last (or later). Rather than just trying to adapt instruction to student heterogeneity, neverstreaming attacks the original problem at its source, attempting to remove the low end of the performance distribution by preventing whatever deficits can be prevented, intensively intervening to identify and remediate any remaining deficits, and maintaining interventions to keep at-risk students from sliding back as they proceed through the grades.

Is Neverstreaming Feasible?

For neverstreaming to be a viable concept, we must have confidence that prevention and early intervention can in fact bring the great majority of at-risk students to an acceptable level of academic performance and prevent unnecessary special education referrals. Several recent developments in research on programs for students at risk of academic difficulties have shown the potential of prevention and early intervention to keep students in the early grades from starting the process of falling behind that often ultimately results in assignment to special education. As noted earlier, there is a growing body of evidence to suggest that reading failure is fundamentally preventable for a very large proportion of at-risk students. Reading failure is a key element of the profile of most students identified as learning disabled (Norman & Zigmond, 1980).

The findings to date of the Success for All evaluations illustrate the potential of prevention and early intervention to keep students from falling far behind their agemates, to keep them from failing, and to keep them from being assigned to special education for learning disabilities. Most of the Success for All schools serve very disadvantaged student populations; many experience problems with truancy, inadequate health care, parental poverty, drug involvement, and other problems that are unusual even among urban schools. Yet in these schools, students are performing at or near national norms, and even the lowest achievers are well on their way to reading, are being promoted, and are staying out of special education. More typical schools without many of these challenges should be able to ensure that virtually all non-retarded students are successful in reading and other basic skills and can therefore stay out of separate special education programs.

How Many Students Can Be "Neverstreamed?"

It is too early to say precisely what proportion of the students now identified as having academic handicaps can be "neverstreamed"--prevented from ever having learning deficits serious enough to warrant special education. It may be that as our knowledge and experience grow, it will become possible to avoid separate special education for the great majority of students currently categorized as learning disabled, about 4.8% of all students ages 3 to 21 (Office of Special Education and Rehabilitative Services, 1989), plus some proportion of those identified as mildly mentally retarded and behaviorally handicapped.

Data from three to four years of implementation of Success for All in Baltimore show that even the very lowest achieving third graders are reading at a level that would allow them to participate successfully in regular classroom instruction. As noted earlier, only 3.9% of Success for

All third graders scored two years below grade level, one-third the proportion in the control schools. While 16% of Success for All students were at least a year below level, 38% of control students scored this poorly. With continuing improvements in curriculum and instruction through the fifth grade, these third graders should all complete their elementary years with an adequate basis in reading, and this should greatly increase their chances of success in the secondary grades. There is no reason to believe that similar strategies in mathematics, spelling, writing, and other subjects would not have similar impacts, particularly to the degree that success in these areas depends on reading skills.

The number of students who can be "neverstreamed" not only depends on the effectiveness of prevention and early intervention, but also on the degree to which general education can become better able to accommodate student differences. For example, use of cooperative learning, individualized instruction, and other strategies can also increase the ability of classroom teachers to meet individual needs. In one sense, the idea of neverstreaming is to work from two sides at the same time; making the classroom better able to accommodate individual differences, and reducing the severity of deficits in the first place to make accommodation of differences much easier.

The Role of Special Education in a "Neverstreamed" World

Some students will continue to need top-quality special education services, such as those who are retarded or severely emotionally disturbed, as well as those with physical, speech, or language deficits and those with severe learning disabilities. In a "neverstreamed" school, traditionally configured special education services would still be provided to these students, with an emphasis on prevention and early intervention and on providing services in the least restrictive environment. One effect of neverstreaming should be to allow special education to return to its focus on more severely impaired students, those truly in need of *special* services as distinct from enhancements to general education.

Special education also has a key role to play in providing consultation to classroom teachers on such issues as adapting instruction to accommodate diverse needs and learning styles, improving classroom management, and assessing students. For example, even students who are reading well may have learning and behavior problems that classroom teachers may need help to accommodate. Special education consultants might include among their responsibilities working with individual children for brief periods to learn how to succeed with them and then returning them to their teachers and tutors.

If neverstreaming were to become institutionalized on a broad scale, it would create a need for a new category of teachers -- professional tutors. Effective tutoring is not simply a matter of putting one teacher with one student; there are several studies of tutoring that have found unsystematic forms of tutoring to have few effects on learning (see Wasik & Slavin, 1990). The education and supervision of tutors might take place under the auspices of special education, particularly as states and districts are moving toward funding formulas that allow special education personnel and monies to be used for prevention as well as for services to students who already have IEP's.

Unresolved Issues

Clearly, there is much we need to know to maximize the degree to which students at risk can be successfully "neverstreamed." We need to experiment with alternative models of early prevention, early childhood education, beginning instruction in reading and other basic skills, tutoring, family support, inservice, and school change to find ever more effective strategies in each of these areas and to find optimal mixes of elements. One important question is whether tutoring in reading and other basic skills is enough to keep all non-retarded students from falling behind, or whether instruction specific to neurological deficits needs to be provided for

some students, either preventatively or in the later grades.

At the policy level, many other issues must be resolved. First, we must have a consensus that investments in early education will pay off in the long run. Second, we must have a willingness to devote funds to prevention. This implies that there must be a willingness at the policy level to increase funds for early education for some period of time, because it would be irresponsible to strip funds away from remedial services for students already in the system to concentrate them on prevention and early intervention for younger students. In addition, regulatory changes allowing uses of special education, Chapter 1, and other categorical monies more flexibly are necessary. The Success for All program has substantially benefited from the new flexibility in Chapter 1 regulations introduced in the 1988 Hawkins-Stafford bill, but this flexibility is mostly limited to schools serving very disadvantaged populations.

At the moment, neverstreaming should be seen as a goal rather than a well-developed policy. However, if this goal is to be realized, we need to focus our energies on research, development, evaluation, and demonstration to move toward a day when students with learning disabilities and other students at risk of academic handicaps can confidently expect what neither mainstreaming nor special education can guarantee them today, not only services, but success.

Policy Implications of Success for All
IV. The School Reform Movement

We are in a time in American society where there is tremendous pressure to reform our schools. This pressure comes from constituencies at the national, state, and local community level. Reform efforts range from modest supplements to traditional classroom instruction to radical "break the mold" approaches to school change.

Success for All has many components that have been implemented in isolation in many educational environments. It benefits from past research which documents effective instructional programs for children at risk. One does not have to dig too deeply to recognize how the model has benefited from the development and research of others. For example, our tutoring model has benefited from the research on Reading Recovery (Pinnell, 1989), our family support team from Comer's (1988) School Development Model, our cross-grade regrouping from research in the Joplin Plan (Slavin, 1987), and our own instructional approaches draw extensively on our earlier research on the benefits of cooperative learning (Slavin, 1990). We have not tried to reinvent the educational wheel. However, we have put together many existing "wheels" to create a vehicle to optimize success for every child.

What is different about our model is not so much the individual strategies, but the way these strategies are woven together as a comprehensive system of complementary parts. We of course start with effective instruction within the regular classroom. Next a set of multi-staged interventions are available whenever danger signs are noted. The model involves many changes in both the organization and curriculum of schools. There is always a back-up strategy to ensure success. In the case of Success for All we believe the whole is indeed greater than the sum of its parts.

We have learned, as have others, the characteristics of successful replication of an educational reform. First, we require that central administration, building leaderships and school staffs want to become involved in the program. At this stage of program maturity we insist that school staffs vote with 80% affirmation that they want the model. This is critical at the early stage of an innovation. Second, our staff development

model continues over multiple years once the initial training is completed. The model is comprehensive and staff need continual support and feedback regarding the quality of implementation. Finally, we recognize the critical importance of an on-site facilitator. A facilitator who is knowledgeable about the teaching process, earns the respect of the staff, and is well organized makes all the difference in the quality of the program. With a committed site, a long-term staff development plan, and a talented facilitator, we know we can make a substantial difference in the lives of children.

Conclusion

More than a decade ago, Ronald Edmonds (1981, p. 23) put forth three assertions:

a) We can, whenever and wherever we choose, successfully teach all children whose schooling is of interest to us;

b) We already know more than we need to do that; and

c) Whether or not we do it must finally depend on how we feel about the fact that we haven't so far.

Edmonds' conclusions were based on his studies of effective and ineffective schools serving poor and minority children. His key assumption was that if the characteristics of effective schools could be implanted in less effective schools, all children could learn. Yet this transfer turned out not to be an easy one. Making a run-of-the mill school into an outstanding one takes much more than telling staffs the characteristics of outstanding schools.

The greatest importance of the research on Success for All is that it brings us closer to making Edmonds' vision a reality. Only when we have confidence that we can take a *typical* school serving disadvantaged children and ensure the success of virtually every child can we really force the essential political and policy question. Given that we know that we can greatly improve the educational performance of at-risk children, *are we willing to do what it takes to do so?* The findings of research on Success for All and related prevention and early intervention programs make it impossible to continue to say that the problems of education in the inner city cannot be solved. The Success for All schools, which include some of the most disadvantaged schools in Baltimore, Philadelphia, Memphis, Charleston, South Carolina, and Montgomery, Alabama, do not have hand-picked staffs or principals. If they can achieve success with the great majority of at-risk children, so can most schools serving similar children. It takes money, but increasingly the money is already in place as Chapter 1 funds increase for high-poverty schools, or can be found from other sources. What is most needed is leadership, a commitment at every level of the political process to see that we stop discarding so many students at the start of their school careers.

If we had an outbreak of a curable disease, we would have a massive outpouring of publicity and funding to do what is necessary to cure it. *Reading failure is a curable disease*. If we are a caring nation, or even if we are only a self-interested but far-sighted nation, the knowledge that reading failure is fundamentally preventable must have a substantial impact on our policies toward education for at-risk children.

There is much more we need to learn how to do and much more we need to learn about the effects of what we are already doing, but we already know enough to make widespread reading failure a thing of the past. Next September, another six million children will enter kindergarten. If we know how to ensure that all of them will succeed in their early schooling years, we have a moral responsibility to use this knowledge. We cannot afford to get another generation slip through our fingers.

References

Allington, R.L., & Johnston, P. (1989). Coordination, collaboration, and consistency: The redesign of compensatory and special education interventions. In R.E. Slavin, N.L. Karweit, & N.A. Madden (Eds.), *Effective Programs for Students at Risk*. Boston: Allyn & Bacon.

Berrueta-Clement, J.R., Schweinhart, L.J., Barnett, W.S., Epstein, A.S., & Weikart, D.P. (1984). *Changed Lives*. Ypsilanti, MI: High/Scope.

Carroll, J.B. (1987). The national assessments in reading: Are we misreading the findings? *Phi Delta Kappan, 68*, 424-428.

Carter, L.F. (1984). The sustaining effects study of compensatory and elementary education. *Educational Researcher, 13* (7), 4-13.

Comer, J. (1988). Educating poor minority children. *Scientific American, 259*, 42-48.

Edmonds, R.R. (1981). Making public schools effective. *Social Policy, 12*, 56-60.

Entwisle, D. & Hayduk, L. (1981). Academic expectations and the school achievement of young children. *Sociology of Education, 54*, 34-50.

Farr, B., Quilling, M., Bessel, R., & Johnson, W. (1987). *Evaluation of PRIME TIME: 1986-1987. Final Report*. Indianapolis: Advanced Technology, Inc.

Garber, H.L. (1988). *The Milwaukee project: Preventing mental retardation in children at risk*. Washington, DC.: American Association on Mental Retardation., 3E-12.

Gottfredson, G.D. (1988, April). *You get what you measure, you get what you don't: Higher standards, higher test scores, more retention in grade*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Idol-Masestas, L. (1981). A teacher training model: The resource/consulting teacher. *Behavioral Disorders, 6*, 108-121.

Jenkins, J.R., Jewell, M., Leceister, N., Jenkins, L., & Troutner, N. (1990, April). *Development of a school building model for educating handicapped and at risk students in general education classes*. Paper presented at the annual convention of the American Educational Research Association, Boston.

Karweit, N.L. (1989a). Effective preschool programs for students at risk. In R.E. Slavin, N.L. Karweit, & N.A. Madden (Eds.), *Effective Programs for Students at Risk*. Boston: Allyn & Bacon.

Karweit, N.L. (1989b). Effective kindergarten programs and practices for students at risk. In R. E. Slavin, N. L. Karweit, & N. A. Madden (Eds.), *Effective Programs for Students at Risk*. Boston: Allyn & Bacon.

Karweit, N.L. (in press). A year to grow: Denial of access or needed breathing space. In R.E. Slavin, N.L. Karweit, & B.A. Wasik (Eds.), *Preventing Early School Failure: Research on Effective Strategies*.

Karweit, N.L., Coleman, M.A., Waclawiw, I., & Petza, R. (1990). *Story Telling and Retelling (STaR): Teacher's Manual.* Baltimore, MD: Johns Hopkins University, Center for Research on Effective Schooling for Disadvantaged Students.

Kelly, F.J., Veldman, D.J., & McGuire, C. (1964). Multiple discriminant prediction of delinquency and school dropouts. *Educational and Psychological Measurement, 24,* 535-544.

Kennedy, M.M., Birman, B.E., & Demaline, R.E. (1986). *The effectiveness of Chapter 1 services.* Washington, DC: Office of Education Research and Improvement, U. S. Department of Education.

Kennedy, M.M., Jung, R.K., & Orland, M.E. (1986). *Poverty, achievement, and the distribution of compensatory education services.* Washington, DC: Office of Educational Research and Improvement, U. S. Department of Education.

Leinhardt, G., & Pallay, A. (1982). Restrictive educational settings: Exile or haven? *Review of Educational Research, 52,* 557-78.

Levin, H. (1987). Accelerated schools for disadvantaged students. *Educational Leadership, 44* (6), 19-21.

Lloyd, D.N. (1978). Prediction of school failure from third-grade data. *Educational and Psychological Measurement, 38,* 1193-1200.

Madden, N.A., & Slavin, R.E. (1983). Mainstreaming students with mild academic handicaps: Academic and social outcomes. *Review of Educational Research, 53,* 519-569.

Madden, N.A., Slavin, R.E., Karweit, N.L., Dolan, L., Wasik, B., Shaw, A., Leighton, M., & Mainzer, K. L. (1991, April). *Success for All: Third year results.* Paper presented at the annual convention of the American Educational Research Association, Chicago.

Madden, N.A., Slavin, R.E., Karweit, N.L., Dolan, L., & Wasik, B.A. (1991). Success for All. *Phi Delta Kappan, 72,* 593-599.

Madden, N.A., Slavin, R.E., Karweit, N.L., Dolan, L.J., & Wasik, B.A. (1992, April). *Success for All: Fourth year results.* Paper presented at the annual convention of the American Educational Research Association, San Francisco.

Norman, C., & Zigmond, N. (1980). Characteristics of children labeled and served as learning disabled in school systems affiliated with Child Service and Demonstration centers. *Journal of Learning Disabilities, 13,* 542-547.

Nye, B.A., Zaharias, J.B., Fulton, B.D., Achilles, C.M., & Hooper, R. (1991). *The lasting benefits study: A continuing analysis of the effect of small class size in kindergarten through third grade on student achievement test scores in subsequent grade levels.* Nashville, TN: Tennessee State University.

Office of Special Education and Rehabilitative Services (1989). *Annual report to congress on the implementation of the Handicapped Act.* Washington, DC: U. S. Department of Education.

Pinnell, G.S. (1989). Reading Recovery: Helping at-risk children learn to read. *Elementary School Journal, 90,* 161-182.

Ramey, C.T., & Campbell, F.A. (1984). Preventive education for high-risk children: Cognitive consequences of the carolina abecedarian project. *American Journal of Mental Deficiency, 88*. 515-523.

Silver, A.A., & Hagin, R.A. (1990). *Disorders of learning in childhood*. New York: Wiley.

Sizer, T. (1984). *Horace's compromise: The dilemma of the American High School*. Boston: Houghton Mifflin.

Slavin, R.E. (1984). Team assisted individualization: Cooperative learning and individualized instruction in the mainstreamed classroom. *Remedial and Special Education, 5* (6), 33-42.

Slavin, R.E. (1987). Ability grouping and student achievement in elementary schools: A best-evidence synthesis. *Review of Educational Research, 57*, 293-336.

Slavin, R.E. (1990). *Cooperative learning: Theory, research, and practice*. Englewood Cliffs, NJ: Prentice Hall.

Slavin, R.E. (1991). Chapter 1: A vision for the next quarter-century. *Phi Delta Kappan, 72* (8), 586-592.

Slavin, R.E., Madden, N.A., Karweit, N.L., Dolan, L. & Wasik, B.A. (1992). *Success for All: A relentless approach to prevention and early intervention in elementary schools*. Arlington, VA: Educational Research Service.

Slavin, R.E. (in press). School and classroom organization in beginning reading: Class size, aides, and instructional grouping. In R.E. Slavin, N.L. Karweit, B.A. Wasik, & N.A. Madden (Eds.), *Preventing Early Reading Failure: Research on Effective Strategies*. Boston: Allyn & Bacon.

Slavin, R.E., Karweit, N.L., & Madden, N.A. (1989) (Eds.). *Effective programs for students at risk*. Boston: Allyn & Bacon.

Slavin, R.E., & Madden, N.A. (1991). *Success for All at Buckingham Elementary: Second year evaluation*. Baltimore, MD: Center for Research on Effective Schooling for Disadvantaged Students.

Slavin, R.E., Stevens, R.J., & Madden, N.A. (1988). Accommodating student diversity in reading and writing instruction: A cooperative learning approach. *Remedial and Special Education, 9*, 60-66.

Stein, M.K., Leinhardt, G., & Bickel, W. (1989). Instructional issues for teaching students at risk. In R.E. Slavin, N.L. Karweit, & N.A. Madden (Eds.), *Effective Programs for Students at Risk*. Boston: Allyn & Bacon.

Stevens, R.J., Madden, N.A., Slavin, R.E., & Farnish, A.M. (1987). Cooperative Integrated Reading and Composition: Two field experiments. *Reading Research Quarterly, 22*, 433-454.

Wang, M.C., & Birch, J.W. (1984). Comparison of a full-time mainstreaming program and a resource room approach. *Exceptional Children, 51*, 33-40.

Wasik, B.A., & Slavin, R.E. (1990, April). *Preventing early reading failure with one-to-one tutoring: A best-evidence synthesis*. Paper presented at the annual convention of the American Educational Research Association, Boston.

Word, E., Johnston, J., Bain, H.P., Fulton, B.D., Zaharias, J.B., Lintz, M.N., Achilles, C.M., Folger, J., & Breda, C. (1990). *Student/Teacher Achievement Ratio (STaR): Tennessee's K-3 Class Size Study, Final Report*. Nashville: Tennessee State Department of Education.

Figure 1
All Baltimore Success for All Schools: (Year 4)
Average Grade Equivalents and Effect Sizes

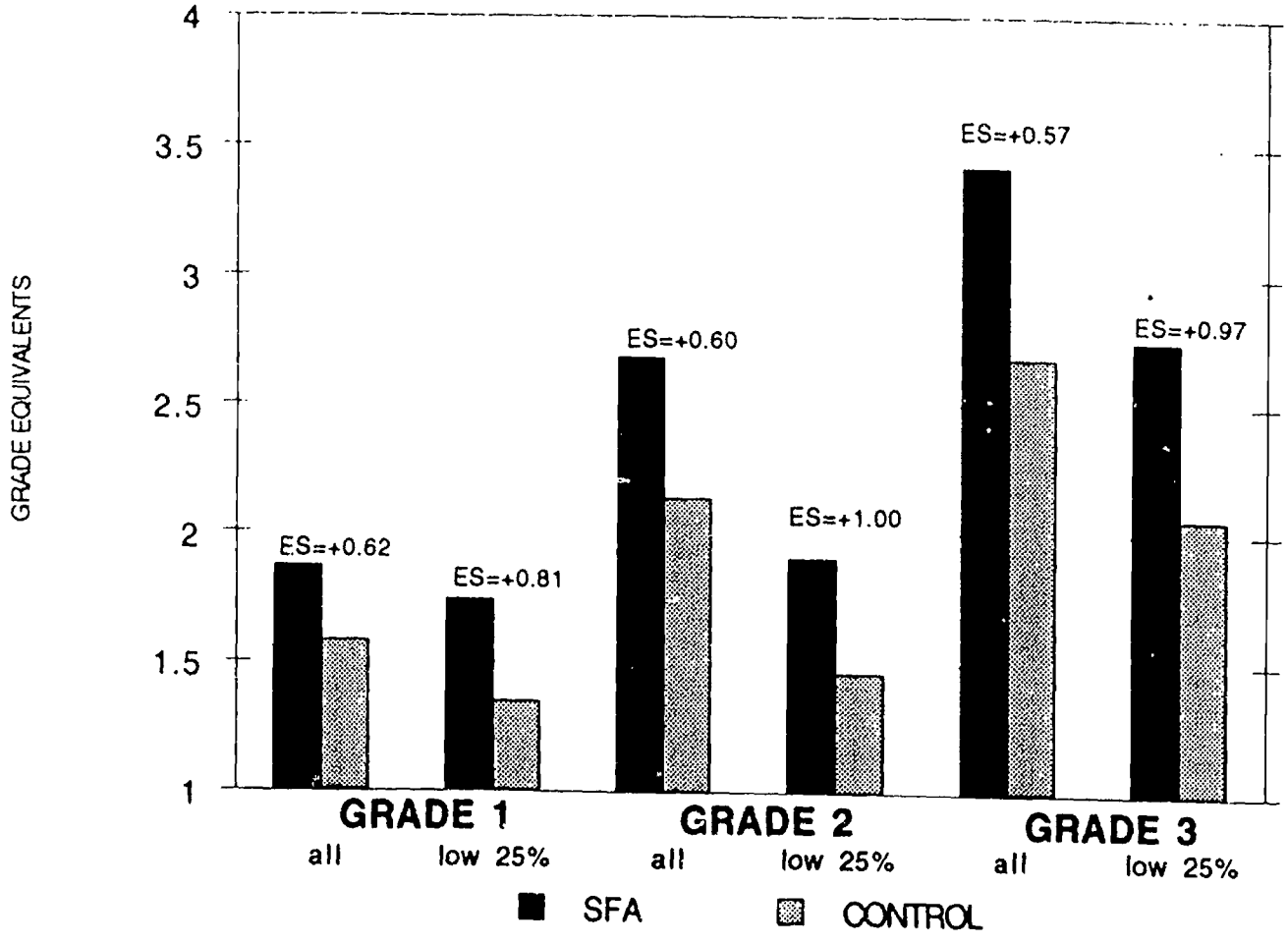


Table 1

Estimated Costs of Success for All with Varying Services

	High-need school		Moderate-need school		Low-need school	
	FTE	$	FTE	$	FTE	$
Facilitator	1.0	47,000	1.0	47,000	1.0	47,000
Tutors	5.0	235,000	3.0	141,000	2.0	94,000
Social Worker	1.0	47,000	0.5	23,500	---	
Parent Liaison	1.0	19,000	1.0	19,000	1.0	19,000
Attendance Aide	1.0	19,000	1.0	19,000	---	
Materials		15,000		15,000		15,000
Training: * Consultation		23,600		23,600		23,600
Total		$402,600		$285,100		$195,600
Add Preschool ** (@ $102,000)		$504,600		$387,100		$297,600
Add Full-Day ** Kindergarten (@ $135,000)		$639,600		$522,100		$432,600

* Includes training fees and travel, but not released time.

** Does not include space, furniture, basic supplies.

Note: Costs are estimated using 1991 estimates, with salaries plus benefits for teachers at $47,000, aides $19,000.