
SUCCESS FOR ALL, ROOTS AND WINGS: Strong Outcomes Continue for Elementary School Students

Success for All is an elementary school restructuring program that stresses prevention and intensive early intervention to ensure that all children can be reading at grade level by the end of third grade. Roots and Wings incorporates the Success for All model and adds achievement of high standards in basic skills in all subjects and immersion of students in simulated and real-life problem solving so they can apply what they learn. In essence, the Roots and Wings/Success for All model exemplifies the CRESPAR Talent Development emphasis at the elementary level of schooling. (See the accompanying box for descriptions of the components of these programs.)

Success for All began to be used as a specific program in six Baltimore and Philadelphia schools in the 1987-88 school year. Now, the program is being used in more than 400 schools nationwide. The development of Roots and Wings began in four disadvantaged elementary schools in Saint Mary's County, Maryland, in the school year 1992-93. Evaluation results are beginning to show major student growth, and the program is expanding to schools in Dade County, Florida, Memphis, Tennessee, and other districts.

Success for All

Seven years of continuous evaluation data are now available from the six original Success for All schools in Baltimore and Philadelphia. Varying numbers of years of data are also available from other Success for All schools in seven other districts. Thus Success for All evaluations cover a total of 23 schools, each with a matched control school, who have been using the program for up to seven years.

Common characteristics of these schools include large percentages of students receiving free lunch, large percentages of African American, Hispanic, or Asian students, and some schools with large percentages of language minority students. Most of the schools are in urban communities; some are in rural. These are, in short, elementary schools whose characteristics indicate that many of their students are at risk of not succeeding in school.

Evaluations at the individual sites show that students in Success for All schools increase their reading performance significantly more than students in their matched control school. In all cases, this performance was measured with reliable

and valid instruments—individually administered tests that are sensitive to all aspects of reading: comprehension, fluency, word attack, and word identification.

Multi-Site Replication. CRESPAR researchers at Johns Hopkins (Robert Slavin, Nancy Madden, Lawrence Dolan, and Barbara Wasik), at the University of Memphis (Steven Ross and Lana Smith), and at the Southwest Regional Laboratory (Marcella Dianda, now with the National Education Association) summarize the outcomes from all the schools involved in experimental-control comparisons, over all their years of involvement, by using a method of analysis called a multi-site replicated experiment. In brief, this method combines the effect sizes (a measure of the difference between scores of Success for All students and control group students) for all first-graders, second-graders, and so on in all of the schools.

Figure 1 shows the multi-site comparison of Success for All students and control students on mean reading grade equivalents and reports the effect sizes at each grade level. The comparison clearly shows that Success for All increases student reading performance. In every

district in almost every year, Success for All students achieved significantly better than matched control students.

The CRESPAR researchers also report further analyses of the effects of the program which find further positive outcomes. These include:

- The difference between Success for All students' reading scores and control group students' reading scores increases progressively with each year of program implementation. The difference in grade equivalents averages three months at the end of first grade, slightly more than a year by the end of fifth grade. Thus the program has not only an immediate effect on students' reading performance; the effect increases over successive years of use by schools.
- ESL Asian students, primarily Cambodian, performed far better than their control group counterparts in a school that integrated its ESL program into the Success for All model. These students exceeded their controls in reading grade equivalents by almost three years in third grade, more than two years in fourth grade, and about three years in fifth grade. Non-Asian students at this Success for All school also exceeded their controls.
- Evaluations of *Lee Conmigo*, the Spanish Success for All curriculum used in bilingual

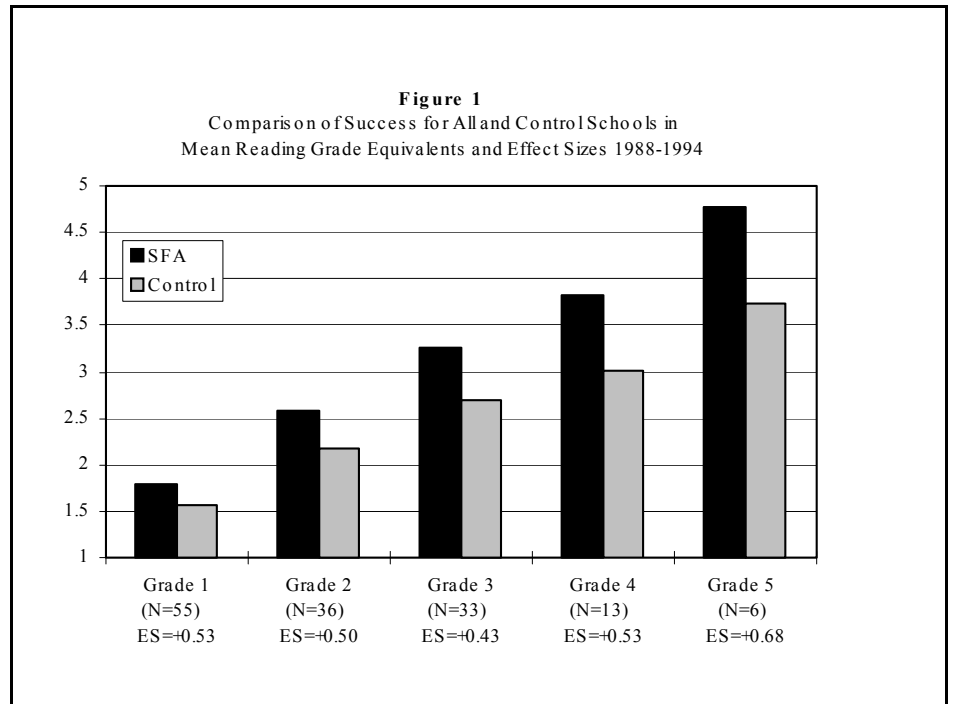
schools, show substantially positive increases in reading achievement for Spanish-dominant students taught in bilingual classes. Positive effects have also been found in Spanish-dominant students taught in sheltered English programs. In the schools using these adaptations, English-speaking students and students speaking languages other than English or Spanish also exceeded the performance of their control school counterparts.

- Success for All reduces the assignment of elementary school children to special education services. Evaluations consistently find particularly large effects on the reading performance of Success for All students who are initially achieving in the bottom 25 percent of their class—many of these students are thus maintained in their regular classrooms rather than assigned to special education. A study in two Success for All urban schools found that 3.2 percent of students in grades 1 and 2 were referred to special education over a two-year period for learning disabilities or mild mental handicaps; in control schools, 14.3 percent of first- and second-graders were referred.

What Does Impact Really Mean?

We present the numbers—effect sizes and grade equivalents and percentages of students not in special education—as rigorous scientific evidence of impact on the achievement of students. But impact is more than numbers. Impact is children whose early reading achievement will keep them from being tracked in future low-level courses and remediation activities—it is children who will be able to tackle and succeed at tough curricula, who will feel good about themselves and their accomplishments, who will enter and graduate from high school secure in the knowledge of their own capabilities.

The primary impact of these evaluations, according to the CRESPAR Success for All researchers, is in demonstrating that the success of all students can be routinely ensured in schools that are not exceptional or extraordinary and that were not producing much success prior to using the program. The researchers sum up the impact of the evaluation numbers this way: “The demonstration that an effective program can be replicated and can be effective in its replication sites removes one more excuse for the continuing low



achievement of children placed at risk in our society.”

Roots and Wings

The Roots and Wings program is taking a giant step forward in its evaluation—it’s effects are being assessed not only on the instruments routinely applied in Success for All evaluations, but also on a tough statewide performance-based test, the Maryland School Performance Assessment Program (MSPAP). Performance-based tests are designed to determine not only what students have learned, but how they can apply what they have learned.

The MSPAP is administered by the state each year at the third-, fifth-, and eighth-grade levels, with eleventh-grade administration yet to be added. MSPAP is the kind of assessment that most states are working toward using as part of their development and alignment of high standards, strong curriculum, and performance-based accountability measures geared to producing systemic change. On the MSPAP, third- and fifth-graders are asked to design and carry out experiments, write compositions in various genres, read and respond to extended passages, use mathematics to solve complex problems, and so on.

Student responses are rated by state contractors against well-validated rubrics on a five-point scale.

The four Roots and Wings pilot schools in St. Mary’s County showed extraordinary gains from 1993 to 1995 for their third- and fifth-graders on all six MSPAP scales—reading, language, writing, math, science, and social studies.

The State of Maryland also increased over this time period, but far less than the Roots and Wings schools. Averaging across the six scales, the percentage of Maryland third-graders scoring satisfactory or better increased in 1993-95 by 8.6 points, in comparison to a gain of 18.9 for Roots and Wings schools. For fifth-graders, the state gained an average of 6.4 percentage points, while Roots and Wings schools gained 13.0. Roots and Wings schools served many more children in poverty, had three times as many Title I students, and had mobility rates twice the state average.

The evaluation of Roots and Wings is important in documenting positive effects of the program, of course, but it is also important for another reason. This is the first formal evaluation we have conducted using longitudinal data from a new state performance measure. States are moving toward the use of such performance measures, and current Title

I legislation requires that schools adopt similar approaches to assess Title I programs by the year 2000.



PROGRAM COMPONENTS

SUCCESS FOR ALL

Success for All stresses prevention and intensive early intervention in order to ensure the success of all children in learning to read. The program may differ somewhat in different school sites, depending on each school's needs and resources, but the following components are characteristic of schools implementing the full program:

- **Pre-kindergarten and kindergarten programs** focus on oral language development, using thematic units, the Story Telling and Retelling (StaR) program, Peabody Language Development Kits, and a variety of curriculum supplements.
- **The Beginning Reading/Reading Roots curriculum**, initiated in the second semester of kindergarten or the beginning of first grade, emphasizes language skills, the use of interesting “shared stories” that students work on cooperatively, auditory discrimination, and sound blending.
- **The Beyond the Basics/Reading Wings curriculum**, used from the first reader level through the fifth grade, integrates reading and writing and is centered on the school's or district's basal or literature series, or on novels.
- **One-to-one tutoring** is provided by certified teacher-tutors. Tutoring is provided in twenty-minute blocks each day to each eligible student.
- **Students are grouped heterogeneously** for homeroom and most of the school day, but regrouped during 90-minute reading periods at homogeneous reading levels across grades one through three. Tutors are used as reading teachers during this time to reduce class size.
- **All students are assessed every eight weeks** in order to make new reading group and tutorial placements.
- **A full-time facilitator** is assigned to work with teachers to implement and monitor the program use.
- **A Family Support Team** is established to help support parents in ensuring the success of their children. The Team focuses on attendance, coordination of outside social services, parent involvement, and student behavior.
- **A Building Advisory Committee** is established to help shape program policy and guide program development.
- **Grade-level teacher teams** meet at least every two weeks to allow for the faculty to problem-solve and support one another.
- **Staff development** is provided prior to and during the program.
- **Schools have a commitment** to reducing special education referrals and reducing student retention, to making scheduling adjustments to accommodate grouping and tutoring activities, and to supplementing their libraries to address the needs of the reading curriculum.

ROOTS AND WINGS

The Roots and Wings Program incorporates Success for All, and adds an integrated science, social studies, writing, and mathematics curriculum that provides daily opportunities for children to work together to solve simulated and real-life problems using the knowledge they have learned in class. The two major components of this curriculum are WorldLab and MathWings.

- **In WorldLab**, students engage in elaborate simulations to apply what they are learning in real contexts. The simulations draw from the entire content of grades 1-6 science and social studies, and integrate reading, writing, mathematics, and fine arts with that content. In typical units, students may represent the 13 original colonies and negotiate the United States constitution; they may serve as engineers designing, testing, and marketing efficient vehicles or bicycle helmets; they may become members of a village council in Africa considering how to balance the needs of farmers and herders with those of conservationists; they may become architects in Japan designing earthquake-resistant buildings; they may engage in real activities in their own community—plan a new park, solve urban problems, assess the extent of pollution.
- **In MathWings**, students in heterogeneous grade 3, 4, and 5 classrooms get actively involved in learning and communicating mathematics through conceptual development, problem solving in real-world applications, and maintenance of necessary mathematical skills. Based on the standards devised by the National Council for Teachers of Mathematics, the curriculum includes solving of complex problems through extensive use of calculators, computers, and manipulatives, hands-on activities in cooperative groups, and frequent performance assessment.

