



## EPSL | Education Policy Studies Laboratory

# 2000-2001 EVALUATION RESULTS OF THE STUDENT ACHIEVEMENT GUARANTEE IN EDUCATION (SAGE) PROGRAM

## EXECUTIVE SUMMARY

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### MAJOR FINDINGS AND DISCUSSION 2000-2001

The Student Achievement Guarantee in Education (SAGE) program is a statewide effort to increase the academic achievement of children living in poverty by reducing the student-teacher ratio in kindergarten through third grade to 15:1. Schools participating in the SAGE program are also required to implement a rigorous academic curriculum, to provide before- and after-school activities for both students and community members, and to implement professional development and accountability plans. The SAGE evaluation is being conducted under contract with the Department of Public

Instruction by the School of Education at the University of Wisconsin–Milwaukee.

During the 1996–97 school year SAGE was implemented in 30 schools located in 21 school districts throughout the state of Wisconsin. It encompassed 80 kindergarten classrooms, 96 first-grade classrooms, and 5 mixed-grade classrooms enrolling 1,494 kindergarten and 1,723 first-grade students. Although SAGE was implemented in kindergarten classrooms, students in kindergarten were not tested. The effect of SAGE on kindergarten students is determined when they are tested as first-grade students the following year. In 1997-98, the SAGE evaluation added 1,541 students in 113 second-grade classrooms in the original 30 SAGE. In 1998-99, the SAGE evaluation was made up of 85 kindergarten, 89 first-grade, 83 second-grade and 88 third-grade classrooms enrolling 1,416 kindergarten, 1,525 first-grade, 1,446 second-grade and 1,531 third-grade students. In 1999-00, first-grade students were not evaluated. The 1999-00 SAGE evaluation was made up of second-grade and third-grade classrooms enrolling 1,636 and 1,611 students respectively. In 2000-01 first-grade and second-grade students were not tested. The 2000-01 SAGE evaluation involved 1,542 third-grade students in 93 SAGE classrooms.

To measure academic achievement, third-grade students in SAGE schools and in a group of Comparison schools were administered the Comprehensive Test of Basic Skills (CTBS)\* Complete Battery, Terra Nova edition, Level 13, Form A in the spring of 2001. Following is a summary of the major findings of (1) the achievement effect of class size reduction, (2) the analysis of SAGE classrooms and schools, and (3) questions for future analysis and discussion.

\*This year the Milwaukee Public Schools adopted the Basic Multiple Assessments Plus test to test all third-grade students in the district. To avoid compromising the testing for both the SAGE Evaluation Project and the Milwaukee Public Schools, an agreement was reached to have the third-grade SAGE students in the Milwaukee Public Schools take the Basic Multiple Assessments Plus test during the SAGE testing window. The Basic Multiple Assessments Plus test contains more subtests than the Comprehensive Test of Basic Skills (CTBS) used in the SAGE Evaluation; however, both tests are Level 13 Form A and are on the same scale.

#### The Achievement Effect of Class Size Reduction Third Grade, 2000-01

- The SAGE achievement advantage persists. When scores are adjusted for pre-existing differences in socioeconomic status, ethnicity, attendance, and prior knowledge, a SAGE advantage from the beginning of first grade to the end of third grade is shown on all subtests. From the end of first grade to the end of third grade, a SAGE advantage is shown on all subtests. From the end of second grade to the end of third grade, a SAGE advantage is shown in the third-grade reading subtest (Pages 32-33, Tables 18-20).
- Adding students lowers the average performance of classrooms. Each student added to a classroom beyond the 15:1 SAGE student-teacher ratio results in a decrease of approximately one scale score point in the class average in all academic scores (Page 40, Tables 24-26).
- No significant differences in achievement gains were found between 15:1 and 30:2 classrooms (Page 43).

### The Analysis of SAGE Classrooms and Schools

Findings regarding teaching from the 2000-2001 SAGE evaluation obtained from interviews and observations in selected second- and third-grade classrooms as well as data from the teacher and the principal questionnaires administered in all SAGE Schools reaffirmed and amplified previous findings.

- The major effect of reduced class size is increased individualization. When teachers have fewer students, they can attend to the needs of each student because they have greater knowledge of each student, they have more time for instruction resulting from reduced time spent on discipline, and they have greater enthusiasm for their work.
- The type of individualization that reduced class size engenders is increased teacher-student interaction in one-on-one situations, in small group tutoring, or in total class teaching. The understandings of individual students are constantly being elicited, displayed, and critiqued.
- In higher-achieving second- and third-grade classrooms, as in higher-achieving first-grade classrooms, the amount and type of individualization differ from those found in lower-achieving classrooms. Teachers in higher-achieving classrooms stress a full range of goals but emphasize the acquisition of basic knowledge and skills, mostly through the use of explicit instruction. Time spent on instruction is maximized because a structured management system based on rules and routines is used and lessons are carefully planned and paced.
- In lower-achieving second- and third-grade classrooms, as in lower-achieving first-grade classrooms, the amount and time, and, in some cases, the type of individualization differs from that of higher-achieving classrooms, chiefly because of the student and lesson management that is used. All of the lower-achieving classrooms tended to use more permissive student management techniques and often displayed emergent, randomly sequenced lessons. Generally, first-grade teachers focused on more personal goals using experiential learning. Teachers in lower-achieving second- and third-grade classrooms had goals and methods more similar to the higher-achieving teachers.

### Questions for Future Analysis and Discussion

Taken together, findings and analyses of student achievement and classroom data over the five-year span of the SAGE evaluation project point to a number of questions to be addressed in future studies:

- Does student mobility have a significant impact on achievement performance of students in SAGE classrooms?
- Does specialized professional preparation of teachers have an impact on the academic performance of classrooms?
- What types of staff development programs are most likely to augment the benefits of class size reduction?
- What are the lasting benefits to students of participation in the SAGE program in the early elementary grades?