

**Title VI, Class Size Reduction
Summary, 2000-2001**

Author:
Denise Piñon, Evaluation Associate

Program Description

The purpose of the Title VI, Class Size Reduction Program (Title VI, Public Law 106-554) is to reduce class sizes in grades K-3 to 18 or fewer students. The Class Size Reduction (CSR) program, which began during the 1999-2000 school year, allocates funds for recruiting, hiring, and training highly qualified teachers to boost achievement among students through increased personal attention. A primary intent of the CSR program is to provide a solid foundation for further learning by ensuring that all students learn to read independently by the third grade. The purpose of this report is to provide information for district administrators about program effectiveness and to facilitate decisions about program modification.

For the 2000-2001 school year, the Austin Independent School District (AISD) received a total of approximately \$3.1 million to reduce class sizes. Of that amount, approximately \$1.1 million was rolled over from the 1999-2000 school year. A minimum of 72% of these funds was required to be used for recruiting, hiring, or training certified teachers in grades K-3. In addition, up to 25% could be used for testing of and professional development for teachers. However, district-level decisions were made to use most of the funds for salaries and benefits for new teachers hired under the Class Size Reduction program—a total of approximately \$2.4 million. Another \$16,000 of the total allotment was used for recruiting teachers, and \$23,000 for professional development, which included non-CSR-funded teachers and teachers from 18 private schools (as allowed under the program's guidelines). Finally, \$81,000 was used for administrative and indirect costs.

Which Campuses Participated in the Class Size Reduction Program, and How Many Teachers were Hired?

District administrators determined that CSR funding for hiring teachers would be allocated to the elementary campuses with the highest percentages of low-income students. All 42 campuses that received CSR funding in 2000-01 also received Title I funding. During 2000-01, 81% of students at CSR-funded campuses participated in the federal free or reduced-price lunch program. A total of 63 teachers was hired with CSR funds at these campuses during 2000-01; two were added after the beginning of the school year. At two of the campuses, Harris and Pecan Springs, however, a CSR-funded teacher resigned during the fall semester and those positions remained unfilled by CSR-funded teachers. Note that 2000-01 data in this report are based on the 61 teacher positions that remained filled by means of CSR funds. Of the 61 teachers hired for 2000-01, 4 were kindergarten teachers, 23 taught first grade, 16 taught second grade, and 17 taught third grade. Finally, one teacher hired under the CSR program taught a classroom of kindergarten and first-grade students combined.

Did the Class Size Reduction Program Successfully Reduce Class Sizes in Grades K-3 to 18 or Fewer Students?

The campus-reported data show that, on average, class sizes were reduced to the target level of 18 students or fewer in grade levels in which a CSR-funded teacher was added in 2000-2001. In Spring 2001, principals were asked to provide class rosters from 2000-01 and 1999-2000 for grade levels to which a CSR-funded teacher was added during 2000-01. Based on these campus reports, in grade levels in which a CSR-funded teacher was added, the average class size was reduced by two students. Table 1 below details changes in class size for the 1999-00 and 2000-01 school years in grade levels impacted by the CSR program. In 1999-2000, class size averaged 18 students. In 2000-01, the average class size in grade levels where a CSR-funded teacher was added was 16 students. On average, across all campuses for *grade levels impacted* by the CSR program in 2000-01, there were 4.9 classes in those grade levels in 1999-2000, and 5.4 classes in 2000-01.

Table 1: Changes in Class Size Across 1999-2000 and 2000-01 Among Grade Levels Impacted by Extra Teachers Funded Through the Class Size Reduction Program

Changes in Class Size at Campus Grade Levels Impacted by the Class Size Reduction Program, 2000-01		
	<i>1999-00</i> <i>(n=232 classes)</i>	<i>2000-01</i> <i>(n=254 classes)</i>
Smallest Class	11	9
Largest Class	23	22
Average Class	18	16

Source: CSR Campus Survey Data from Spring 2001

Note that data in Table 1 were excluded when: 1) grade levels included multi-age classrooms, 2) CSR funding was added after the beginning of the school year, or the grade level assignment had been changed, and 3) a campus was not open in 1999-2000, and therefore could not provide comparison data on class size.

With the CSR Program in Place, What was the Certification Status of Teachers in the District?

All teachers hired under the Class Size Reduction program were certified in accordance with CSR and district requirements. A broader examination of data on teacher permits and elementary certification is shown in Table 2. The table shows permits and certification types outside of regular certification from the State of Texas for 1999-2000 and 2000-2001. Table 2 shows that the percentage of teachers with school district permits, emergency teaching permits, temporary class assignment permits, or alternative certification remained at approximately the same level between 1999-2000 and 2000-2001 among teachers in CSR-funded campuses (13.6% and 13.8%, respectively). The percentage of teachers with these permits in campuses that did *not* receive funding from the CSR program was lower in 1999-2000 (9.9%) and 2000-2001 (7.1%).

Table 2: Permit/Certification Information for Teachers at Campuses Receiving Class Size Reduction Funding and Campuses that did not Receive CSR Funding

Percentages of Teachers with the Following Types of Permits/Certification											
		<i>School District Permit</i>		<i>Emergency Teaching Permit</i>		<i>Temporary Class Assignment Permit</i>		<i>Alternative Certification</i>		<i>Total</i>	
		%	<u>n</u>	%	<u>n</u>			%	<u>n</u>	%	<u>n</u>
CSR-Funded Campuses	1999-2000	4.9%	36	3.6%	26	0%		5.1%	37	13.6%	729
	2000-2001	4.0%	29	5.0%	36	0%		4.8%	35	13.8%	723
Non-CSR-Funded Campuses	1999-2000	6.5%	37	1.8%	10	0%		1.6%	9	9.9%	570
	2000-2001	5.3%	29	1.1%	6	0%		.7%	4	7.1%	547

Source: AISD Professional Personnel Files

Did Student Achievement at CSR-Funded Schools Improve?

Results on the Reading and Mathematics sections of the Texas Assessment of Academic Skills (TAAS) were compared across 1999-00 and 2000-01 for all 14 schools that had 3rd grade teachers funded by CSR during 2000-01:

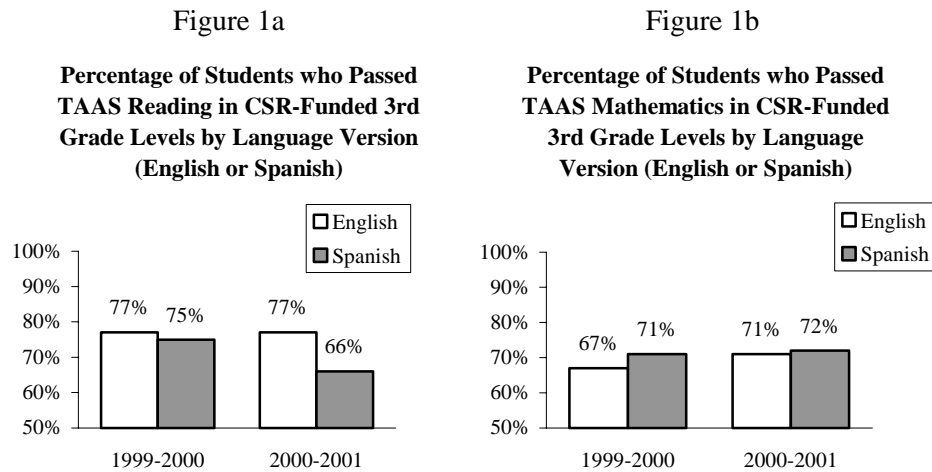
©Allan ©Barrington ©Brown ©Hart ©Mathews ©Walnut Creek
 ©Allison ©Blackshear (2) ©Dawson ©Jordan ©Odom
 ©Andrews ©Brooke ©Galindo ©Langford ©Palm

Results from the set of *all students with valid test scores who were not in special education* were used. This data set was used because AISD did not hire special education teachers under the CSR program in 1999-2000 or 2000-01.

Figures 1a and 1b on the next page show the percentages of students who mastered the Reading and Mathematics sections of the English and Spanish versions of the TAAS in 1999-2000 and 2000-01. Among schools that received funding for 3rd grade teachers, the percentage of 3rd grade students who passed the Reading portion of the English language version of the TAAS remained the same (77%) between 1999-00 and 2000-01. Among those same schools, 67% of 3rd grade students passed the Mathematics portion of the English version of TAAS in 1999-00; 71% passed in 2000-01.

The effect of the additional teachers on student achievement as measured by the TAAS cannot be precisely determined. One reason is that class sizes did not, in general, change significantly. Another possible reason is that professional development was not coordinated to impact classroom practice. See the section below about professional development in CSR-funded campuses.

Figures 1a and 1b also show that among schools that received funding for 3rd grade teachers, 75% of 3rd grade students passed the Reading portion of the Spanish version of TAAS in 1999-2000; 66% passed in 2000-01. Among those same schools, 71% of 3rd grade students passed the Mathematics portion of the Spanish version of TAAS in both 1999-2000; 72% passed in 2000-01.



Source: AISD Office of System-wide Testing

Note that these results are from campuses that had a third grade teacher added in 2000-01 through the Class Size Reduction program. As with the data from the English version of the TAAS, results of the Spanish version are from tests of all students with valid test scores who were not in special education. Spanish TAAS data are from campuses that had a third grade teacher added in 2000-01 through the Class Size Reduction program, except for the following campuses: Barrington, Mathews, and Odom. These schools had Spanish TAAS results that were unavailable due to small subgroup sizes (i.e., less than 5 students) in 1999-2000 and/or 2000-01.

For 2000-01, there were no measures of achievement for K-2 students that could be used for comparison purposes with 1999-00. The Texas Primary Reading Inventory (TPRI) is used to assess early reading skills in K-2 students.

The TPRI was administered to these students in 2000-01, but in 1999-2000, a different test of reading achievement was administered.

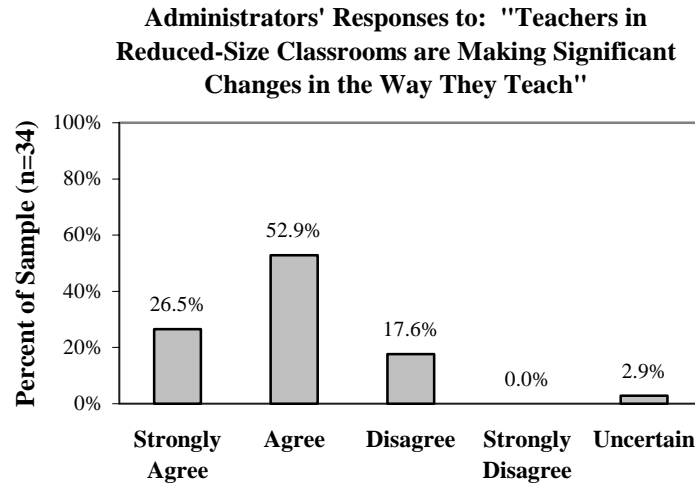
Did Professional Development in CSR-Funded Campuses Address Reductions in Class Size?

The CSR program guidelines reflect research evidence suggesting that class size reduction alone will not impact the quality of instruction students receive. Yet, the reduction of class sizes offers avenues for teachers to incorporate different practices that may improve students' learning. This section discusses evidence of campus-based professional development that was related to work with smaller classes and perceptions about whether classroom practices changed as a result of reduced class sizes. This section also describes the professional development workshops that were funded in part by the Class Size Reduction program.

A short questionnaire was attached with the Spring 2001 request for student rosters to all 42 campuses receiving CSR funds. The purpose of the questionnaire was to determine the extent of professional development activities at the campus that were geared toward working with smaller classes. Completed surveys were received from all 42 campuses. Respondents included 31 principals, eight campus instructional specialists, and three staff members who did not list their position at the campus.

About half of the 42 respondents (n=22) replied that professional development activities related to class size reduction had occurred at the campus level, including meetings about the following: working with small groups on phonics, mathematics, and guided reading; readers' and writers' workshops involving small groups and individualized instruction; managing cooperative groups with fewer students; setting up and maintaining effective centers; flexible grouping; classroom arrangements; and strategies for maximizing the benefits of smaller classes.

Figure 3: Administrators' Responses to a Survey Question About Changes in Teaching as a Result of the Reduced Class Size (n=34)



Source: Employee Coordinated Survey, 2001

School administrators at CSR-funded campuses also completed survey questions as part of the district's annual Employee Coordinated Survey that dealt specifically about the CSR program. One question asked administrators at CSR-funded campuses to assess whether teachers in reduced-size classes had made significant changes in the way they teach. Of 34 administrators who responded, 27 (80%) responded that they "strongly agree" or "agree" that teachers in reduced-size classrooms had made significant changes in their teaching. See Figure 3 above.

In addition to campus-initiated professional development pertinent to working with smaller classes, faculty at CSR-funded campuses had the opportunity to attend district-wide professional development sessions funded by the CSR program. During 2000-01, staff at AISD spent \$23,000 on professional development activities, including two day-long workshops entitled, "Improving our 21st Century Classrooms with New Techniques," and "Changing the Status Quo." The first workshop included sessions on setting high expectations for all students and strategies for improving student achievement in math and language arts. The second workshop comprised break-out sessions on topics such as standards and assessment in mathematics and science, diversity in the classroom, parent involvement, stress reduction, and working with special

education students, among others. CSR program funds for these workshops were combined with funds from Title I, and participants included staff, administrators, and parents from AISD campuses and the central office, as well as staff and parents affiliated with 13 out of 30 (43%) private/non-public schools in Austin that participated in federal grants programs during 2000-01.

How did Campuses Cope with the Search for Extra Teachers, Materials, and Space, due to the CSR Program?

To assess the impact of the Class Size Reduction program on recruitment and potential campus difficulties in finding space and materials for the extra teachers, a human resources staffing coordinator was interviewed about teacher recruitment, and campus administrators were asked to respond to survey questions on the district's Coordinated Survey.

The CSR program guidelines for 2000-01 allowed districts to use a portion of funds for teacher recruitment. Staff at AISD spent \$16,200 on recruitment materials for teachers, including production of a recruitment videotape and brochures and folders for prospective teachers. CSR funds were also used for signing bonuses to teachers at these campuses, which all received Title I funds. Due to changes in recruitment strategies overall by the Department of Human Resources, the number of vacancies district-wide on the first day of school dropped from 150 in 1999-2000 to 22 in 2000-2001. However, 50% of campus administrators at CSR-funded campuses (17 out of 34 who responded) indicated on a Coordinated Survey question that it was difficult to recruit state-certified teachers for reduced-size classes. Just 15% (n=5) responded that recruiting CSR teachers was "easy" and 35% (n=12) responded that teacher recruitment was "neither easy nor difficult."

Campus administrators (N=33) indicated fewer difficulties providing space and instructional materials for CSR-funded teachers:

- ¥ 22% (n=7) indicated that providing necessary space was easy;
- ¥ 52% (n=17) indicated that the task was neither easy nor difficult;
- ¥ 27% of respondents (n=9) indicated that providing space was difficult.

Administrators at CSR-funded schools (N=34) reported comparatively fewer difficulties in providing adequate instructional supplies as a result of additional classes:

- ¥ 38% (n=13) indicated that providing instructional supplies was easy;
- ¥ 44% (n=15) reported that the task was neither easy nor difficult;
- ¥ 18% (n=6) of the respondents indicated that providing instructional materials was difficult.

Conclusions and Recommendations

Concentrate allocation of CSR-funded teachers at campuses in greatest need.

Class sizes were not reduced significantly; on average, class sizes decreased by two students in grade levels where a CSR-funded teacher was allocated. District staff should reconsider its policy concerning which campuses will receive CSR-funded teachers. Perhaps allocating more CSR-funded teachers to the most struggling campuses—or areas such as bilingual education, given the TAAS mastery rates on the Spanish test—would yield more pronounced effects on class sizes and student learning, rather than simply adding one or two extra teachers to each AFL campus. The results of a meta-analysis by Glass, Cahen, Smith, and Filby (1982) suggest that class sizes of 15 students would be needed in order to see noticeable differences in student performance. This study was cited by those planning the class size reduction effort in Tennessee known as Project STAR (Mosteller, 1995), where class sizes of 22-26 to 13-17 were compared as part of this controlled study. Given that some classes in the CSR program had as many as 22 students, further reductions could be made by targeting funds at campuses where student achievement might benefit most from smaller classes and improved teaching practices that are in line with the district's designated curriculum in reading and mathematics.

The data collected to examine effects of the Class Size Reduction program suggest mixed results on achievement as well as logistical concerns, such as difficulties hiring state-certified teachers. Although administrators reported changes in instructional practices, student achievement on the third grade TAAS did not generally reflect improvements, especially among students who took the Spanish language version of TAAS. While these findings may be related to non-

significant differences in class sizes, a more probable reason could be that teachers' practices in the classroom changed only marginally. That is, teachers may not have significantly changed the way they taught when working with their smaller classes. Although classroom observations were not a part of this evaluation, other research was used in a report by the US Department of Education to support the conclusion that professional development and support should be part of class size reduction efforts (US Department of Education, May 1998).

Use professional development funds for high-quality professional development with a focus on reading.

The data collected on professional development at the campus level, as well as the survey responses from administrators, show that the Class Size Reduction program has likely stimulated a focus on instructional practices that are appropriate for smaller classes. This focus should be continued, but to more fully ensure that teachers strengthen instructional practices that will increase reading achievement, professional development should be targeted toward teachers impacted by class size reductions. Ideally, this professional development also would be fully aligned with the district-designated curriculum, Balanced Literacy. Professional development provided in an environment where a teacher may be coached (or alternatively, observe and learn about strong instructional practices) in Balanced Literacy will likely impact practice, more so than a series of sessions in a professional development conference that may or may not be pertinent to instructional practices in reading. The district's on-going partnership with the Institute for Learning has yielded a focus on instructional improvements, system-wide, and on the need to incorporate instructional practices that integrate academic rigor. These efforts call for focused professional development in line with the district's vision on curriculum and instruction, and could well be funded by CSR. Additionally, area superintendents and principals at campuses that receive funds through the CSR program should consider adding CSR-funded teachers to the K-3 bilingual program and funding professional development in reading for third grade teachers whose students will take the Spanish language TAAS.

Use CSR funds to ensure that teachers are fully certified.

The CSR program guidelines require that teachers hired for the purpose of reducing class size are fully certified. Doing so has helped prevent the hiring of under-qualified teachers in an attempt to fill all of the extra teaching positions, as was the case in California in 1998-99 (CSR Research Consortium, June 2000). However, administrators in AISD should recognize that, in 2000-01, there were more teachers with emergency teaching permits at CSR-funded campuses (5.0%, as shown in Table 2), compared with the other elementary campuses in the district (1.1%), and therefore develop strategies for addressing this discrepancy. Given that Class Size Reduction funds may be used for costs involved in meeting State certification requirements, district staff may want to consider use of these funds to ensure that teachers with school district and emergency permits in CSR-funded campuses (i.e., those individual teachers *not* funded by CSR) will meet State certification requirements. In this way, the district would help ensure that CSR-funded campuses, which have high levels of economically disadvantaged and minority group students, have an increased percentage of teachers with full certification—whether it is obtained from the State or through alternative routes.

Finally, principals at CSR-funded campuses should be aware that if a CSR-funded teacher position is vacated before the end of the year, the replacement teacher may continue to be funded through the CSR program. With the instructional practices being encouraged under the Principles of Learning initiative, and professional development centered on working with smaller classes, there is potential for greatly improving the instruction students receive and for boosting achievement.

Acknowledgements

The author would like to thank Monica Muñoz from the AISD Grant Development and Program Support Office for her assistance with questions about the CSR budget and allocations during 2000-01. Additionally, Pam Hall from the Office of Human Resources and her staff of professional coordinators assisted with questions about the placement of CSR-funded teachers.

References

- CSR Research Consortium. (2000). *Class Size Reduction in California: The 1998-99 Evaluation Findings*. Technical report. Retrieved October 30, 2000, on a pdf file at <http://www.classsize.org>
- Glass, G.V., Cahen, L.S., Smith, M.L., and Filby, N.N. *School class size: Research and Policy*. Beverly Hills, CA: Sage, 1982.
- Mosteller, F. (1995). The Tennessee study of class size in the early school grades. *The future of children: Critical issues for children and youths*, 5, 113-127.
- US Department of Education. (May 1998). *Reducing Class Size: What do we Know?* (SAI 98-3027). Retrieved May 18, 1999, from <http://www.ed.gov/pubs/ReducingClass/>

AUSTIN INDEPENDENT SCHOOL DISTRICT

Division of Accountability and Information Systems

Joy McLarty, Ph.D.

Office of Program Evaluation

Holly Williams, Ph.D.

Holly Koehler, Ph.D.

Author

Denise Piñon, Ph.D.

Programmer

Veda Raju



Board of Trustees

Kathy Rider, President

Doyle Valdez, Vice President

Loretta Edelen, Secretary

Johna Edwards

Olga Garza

Rudy Montoya

Ingrid Taylor

Ave Wahrmond

Patricia Whiteside

Superintendent of Schools

Pascal D. Forgione, Jr., Ph.D.

Publication Number 00.17

January 2002