BACKGROUND PAPER 01-2

NEVADA'S CLASS-SIZE REDUCTION PROGRAM: PROGRAM DATA AND SUMMARY OF EVALUATION REPORTS

Nevada Revised Statutes **388.700—388.730**
"PROGRAM TO REDUCE THE PUPIL-TEACHER RATIO"

H. PEPPER STURM, COMMITTEE POLICY ANALYST
SENATE HUMAN RESOURCES COMMITTEE
NEVADA LEGISLATIVE COUNSEL BUREAU
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NEVADA'S CLASS-SIZE REDUCTION PROGRAM

PREPARED BY
PEPPER STURM, POLICY ANALYST
SENATE COMMITTEE ON HUMAN RESOURCES and Facilities

I. BACKGROUND AND PROGRAM INFORMATION

Following a review of the topic by a 1988 interim legislative study, the 1989 Nevada Legislature enacted the Class-Size Reduction Act. The measure was designed to reduce the pupil-to-teacher ratio in the public schools, particularly in the earliest grades and in classrooms where the core curriculum is taught.

The program was scheduled to proceed in several phases. The first step reduced the ratio in selected kindergartens and 1st grade for the 1990-1991 school year. The following phase was designed to improve 2nd grade ratios, followed by 3rd grade reductions and broadening kindergarten assistance. The 1991 Legislature made funds available for the 1991-1992 school year to reduce the ratios in 1st and 2nd grades and selected kindergartens at the 16 to 1 ratio. Due to budget shortfalls late in 1991 and continuing state fiscal needs, the 3rd grade phase was delayed until the 1996-1997 Fiscal Year when partial funding was provided at a 19 to 1 ratio. Those funding formulas continued through the 1999-2001 biennium.

After achieving the target ratio of 15 pupils to 1 teacher in the primary grades, the original program proposed that the pupil-to-teacher ratio be reduced to 22 pupils per class in grades 4, 5, and 6, followed by a reduction to no more than 25 pupils per class in grades 7 to 12. With the exception of the pilot program in Elko County conducted during the 1999-2001 interim, only the primary grades (K-3) have been addressed.

The program has been operating now for over a decade, and the Nevada Department of Education has produced a number of evaluation studies. Both the Nevada Department of Education and the Legislative Counsel Bureau collect data concerning the program and much of that information is contained in this report.

Pupil-Teacher Ratios

The following table displays the actual pupil-to-teacher ratios in the Class-size Reduction (CSR) Program target grades during the lifetime of the program. Note that the actual ratios fluctuate from year-to-year, reflecting the State's ability to project student growth and the number of teachers needed for the program.

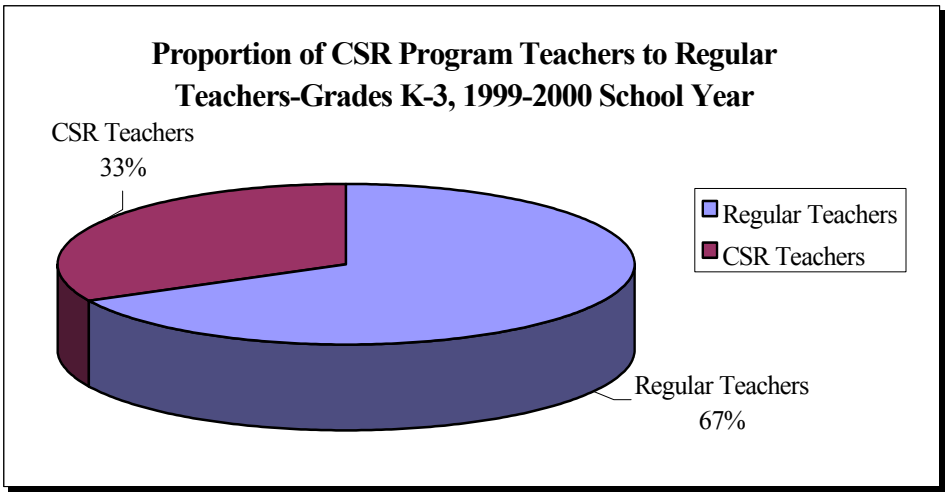
PUPIL-TEACHER RATIOS IN NEVADA SCHOOLS
KINDERGARTEN THROUGH 3RD GRADE
1989-1990 THROUGH 1999-2000 SCHOOL YEARS

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-8	1998-99	1999-2000
Kindergarten	21.5	22.9	22.8	22.4	23.3	23.5	24.6	23.4	23.2	22.7	23.7
1st Grade	25.4	16.1[1]	15.6	15.8	16.0	15.9	16.2	16.1	16.1	15.8	15.9
2nd Grade	25.9	25.6	16.3[2]	15.6	16.1	15.9	16.2	16.0	15.7	15.8	15.9
3rd Grade	27.1	27.0	27.2	27.0[3]	25.5	26.6[3]	27.2[3]	22.6	21.8	19.0	19.1

[1] Class-size reduction began in first grade and selected at-risk kindergartens in school year 1990-1991.
[2] Class-size reduction program was expanded to include second grade in school year 1991-1992.
[3] Expenditures of class-size reduction funds by Nevada's school districts for third grade in the 1992-1993 school year were canceled at the request of Governor Bob Miller. Funding to extend the program into third grade in 1993-1994 was not provided by the 1993 Legislature; however, the 1995 Legislature provided $7.3 million to begin third grade reductions in the 1996 -1997 school year. Third grade class-size money may also be used to fund approved programs to improve pupil achievement.
(Note: Shading indicates significant funding for CSR program)

Source: Nevada's State Department of Education and Fiscal Analysis Division, Legislative Counsel Bureau, 2000.

The actual funding allocation for Nevada's CSR Program is calculated by: (1) projecting student growth; (2) figuring in the number of teachers districts would have hired to keep pace with that growth under the old ratios; then (3) calculating the number of additional teachers needed to reduce the pupil-to-teacher ratio to the funded level (currently 16 to 1 for grades 1 and 2; 19 to 1 for grade 3). The CSR appropriations bill typically specifies the number of teachers to be hired, by grade. The measure also specifies the amount of the appropriation, by grade, based upon that estimated number of teachers multiplied by actual average of new hire salaries and benefits.



Source: Legislative Counsel Bureau, Fiscal Analysis Division, 2000.

The next chart provides information, by district, concerning the class-size target grades by school district.

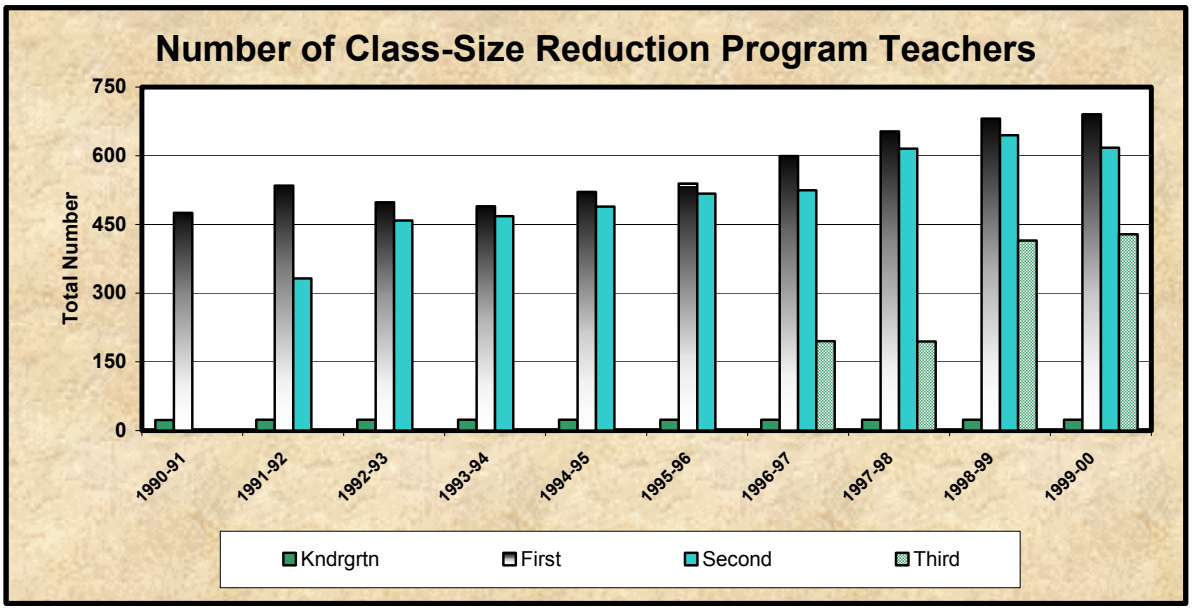
PUPIL-TEACHER RATIOS FOR SCHOOL YEAR 1999-2000
BY GRADE FOR NEVADA AND SCHOOL DISTRICTS

School District	Kindergarten	First	Second	Third
Carson City	25.1	16.0	15.2	19.7
Churchill	20.1	16.4	13.5	20.0
Clark	24.7	16.0	16.0	19.4
Douglas	23.7	16.0	15.8	18.7
Elko *	17.2	17.1	17.5	19.3
Esmeralda	4.5	15.0	10.0	15.0
Eureka	6.3	11.3	15.0	11.5
Humboldt	21.9	13.1	15.4	16.7
Lander	20.9	13.7	12.7	19.9
Lincoln	13.5	10.2	12.0	13.0
Lyon	20.4	15.4	15.4	18.6
Mineral	18.7	19.3	11.8	16.4
Nye	17.7	15.7	17.0	20.0
Pershing	12.1	9.9	16.2	18.8
Storey	11.7	12.0	18.0	13.0
Washoe	23.2	16.4	16.5	18.7
White Pine	17.7	17.7	13.4	18.1
STATE	**23.7**	**16.0**	**16.0**	**19.2**

Note: Elko's Demonstration Program allows the district to establish ratios of 22:1 in grades 1 through 6.

Source: Legislative Counsel Bureau, Fiscal Analysis Division, 2000.

In the current fiscal year, Nevada will employ 1,826 CSR teachers. The growth in the numbers of these teachers reflected on the chart below is a function of student growth in existing CSR grades, plus the addition of other grades as the program was phased in.

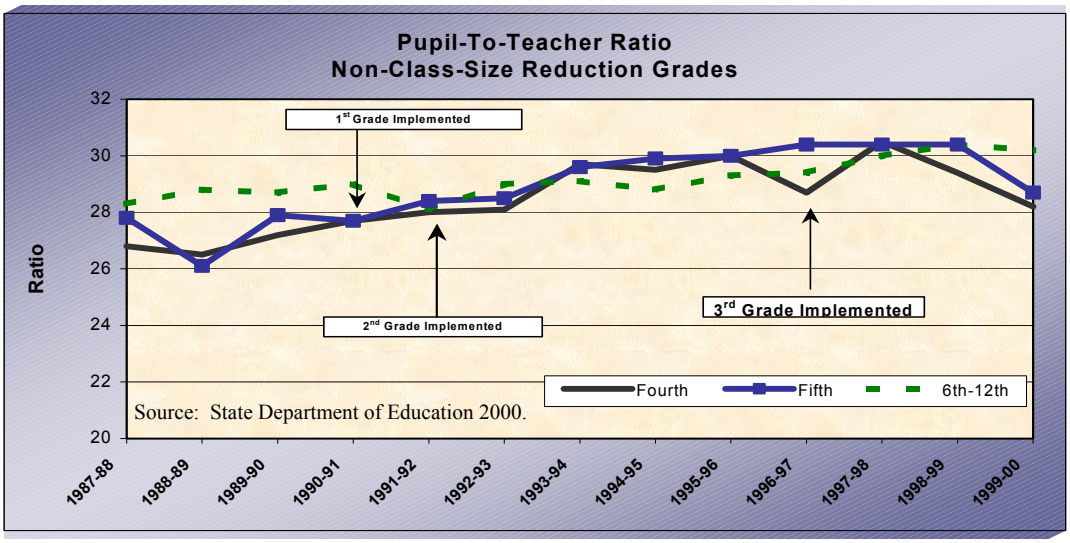


Source: Nevada Department of Education, 2000

	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00
Kindergarten	23	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
First	475.5	534.5	498.5	489.5	521.5	539.5	599	653.3	681.3	690.8
Second	0	332.5	458.5	468	489	517	524.5	615.8	644.8	617.8
Third						0	195	194.3	415.3	428.8

Effect Upon Pupil-To-Teacher Ratios In Other Grades

In the past, concerns have been raised by members of the State Board of Education and others concerning the effect of the CSR Program on grades other than the targeted primary grades. The following graph illustrates the changes in pupil-to-teacher ratios in the grades immediately above the target class-size reduction grades.



When ratios for fourth and fifth grades are reviewed, a definite increase can be seen across time as the CSR program was implemented in the primary grades.

Nevada Pupil-to-Teacher Ratio
Grades 6 Through 12
1987 Through 1999

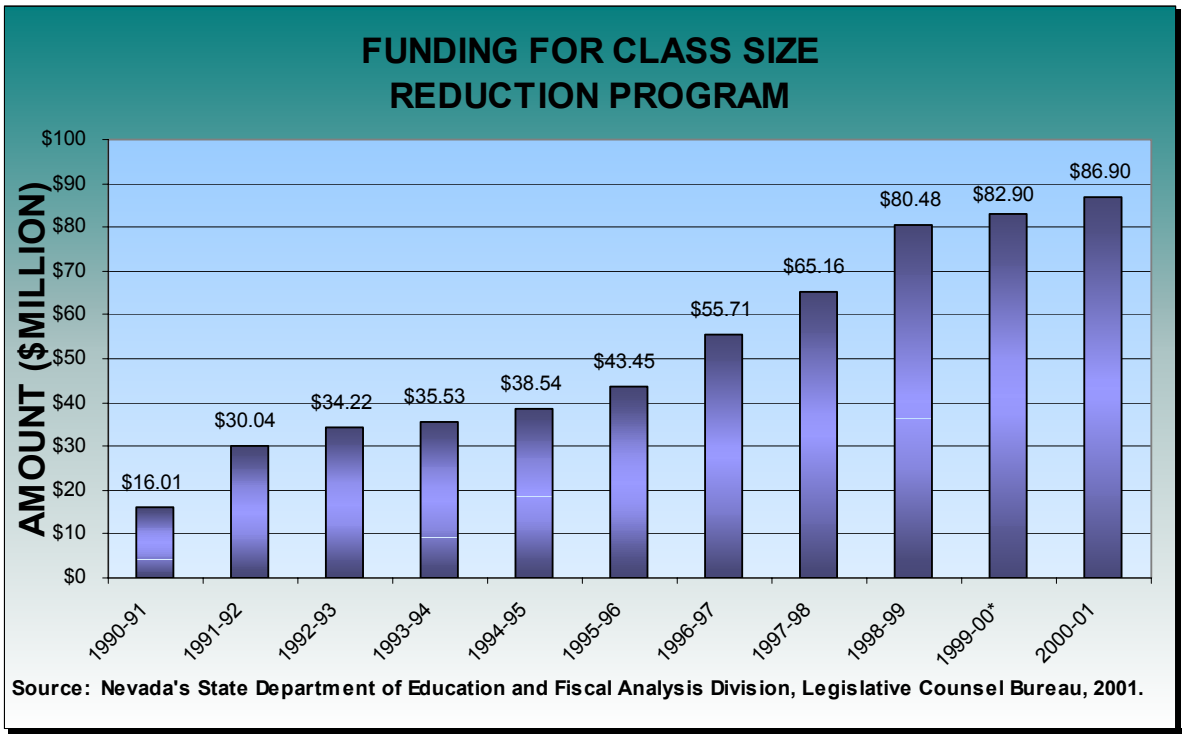
GRADE	1987-1988	1988-1989	1989-1990	1990-1991	1991-1992	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000
Fourth	26.8	26.5	27.2	27.7	28	28.1	29.7	29.5	30	28.7	30.5	29.4	28.2
Fifth	27.8	26.1	27.9	27.7	28.4	28.5	29.6	29.9	30	30.4	30.4	30.4	28.7
6th-12th	28.3	28.8	28.7	29	28.1	29	29.1	28.8	29.3	29.4	30	30.4	30.2

Source: Nevada Department of Education, 2000.

Although additional analysis would be needed to identify any direct correlation, it appears from the data that the ratios in the upper grades have increased when new CSR grades have been funded. The declines in fourth and fifth grades in the 1999-2000 school year will need to be monitored to determine whether it constitutes a trend.

Program Costs

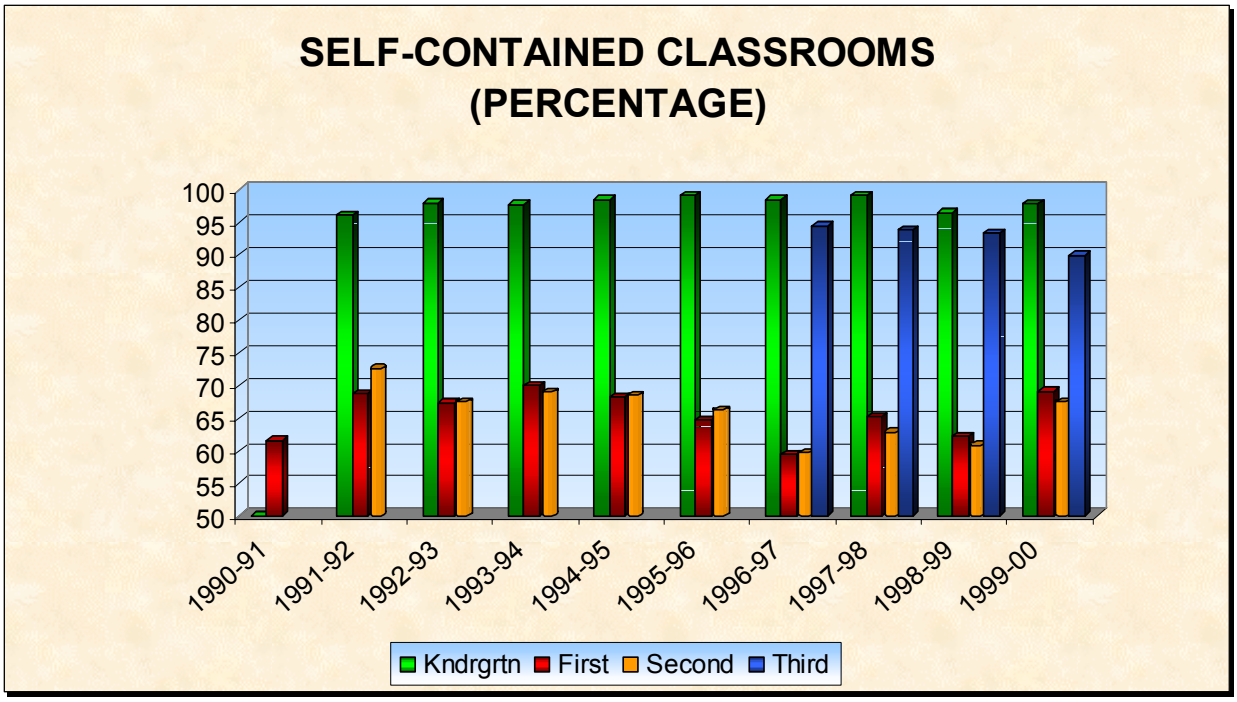
The graph below displays the actual cost of Nevada's CSR Program over time. Note that the program costs increase as new grades are phased into the program. By the end of the fiscal year, Nevada will have expended approximately $571 million for the direct costs of



funding the CSR Program, excluding any local capital expenditures or other local costs. In the 2001-2003 biennium, the *Executive Budget* is recommending $91.8 million in funding for class-size reduction for FY 2001-02 and another $97.8 million for FY 2002-03. The 2001 Legislature is reviewing this recommendation but has yet to act upon the proposal. Federal class-size reduction funding was newly funded last fiscal year and increased this year to $6.1 million. These federal funds must be used to supplement, not supplant, funds that districts receive from the state CSR program. If a district has already reduced class sizes to 18 or fewer children in grades one through three, the district is allowed to use the federal funds to make further class-size reductions or carry out activities to improve teacher quality, including professional development activities.

Classroom Configuration

The table below lists the percentage of "self-contained" 1st and 2nd grade classrooms, where one teacher is alone in the room with the students. After a four-year decline in self-contained classrooms (with the percentage of team-taught classes increasing proportionately), the percentage has stabilized around the mid-60s for the past three years. In School Year (SY) 1999-2000, about 69 percent of all 1st grade classrooms were self-contained, up from 61 percent the previous school year. Second grade self-contained classrooms made up 68 percent of the total in SY 1999-2000, up from 61 percent from the previous school year. Most of the 3rd grade classrooms are self-contained, as are nearly all kindergarten classes. With the higher pupil-to-teacher ratios in those classrooms, team-teaching has not been an option.



II. Summary of Previous Program Evaluations of Nevada's Class-Size Reduction Program

In general, the reports evaluating Nevada's Class-Size Reduction Program have contained mixed results. Generally reports have contained evaluation components, and certain reports have included survey data

Evaluation Reports

There have been six evaluation studies of the State's Class-Size Reduction Program since 1993. These evaluations have been conducted periodically by the State Department of Education. A summary of key findings follows:

1993 Evaluation Report

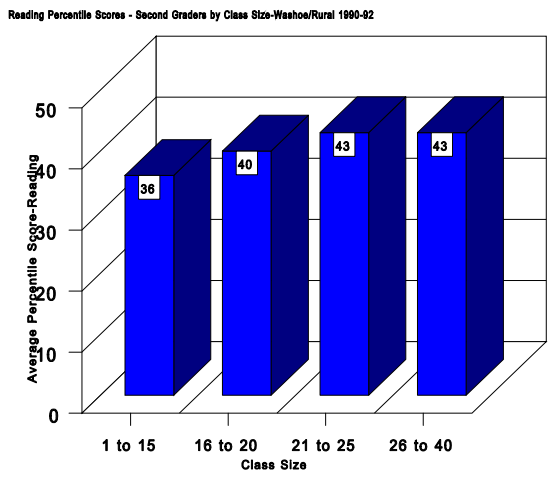
In 1993, the evaluation report found that:

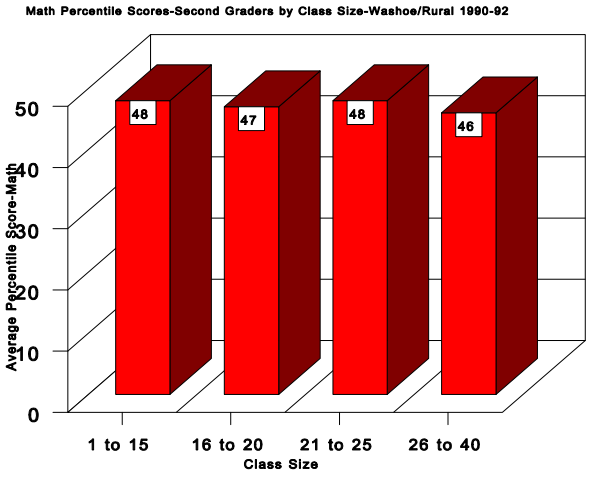
- Principals, teachers, and parents were very positive in their attitudes toward class-size reduction, and the dynamics created within the classroom contributed to an improved learning environment.

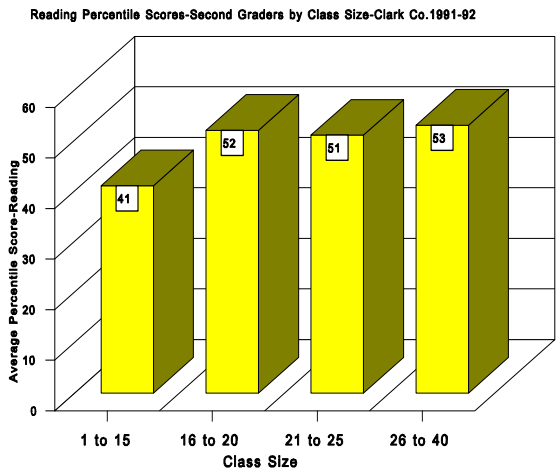
- School districts reported fewer special education referrals (a decrease of 5 percent) and less absenteeism by teachers (a decline of 7.1 percent).

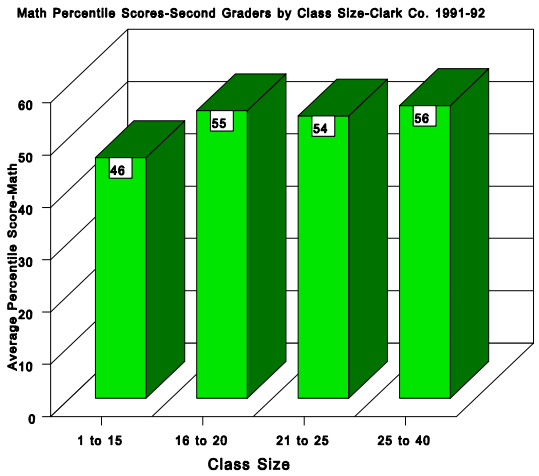
- However, achievement data did not produce exceptional results, except among certain subgroups.

Washoe and Rural Districts



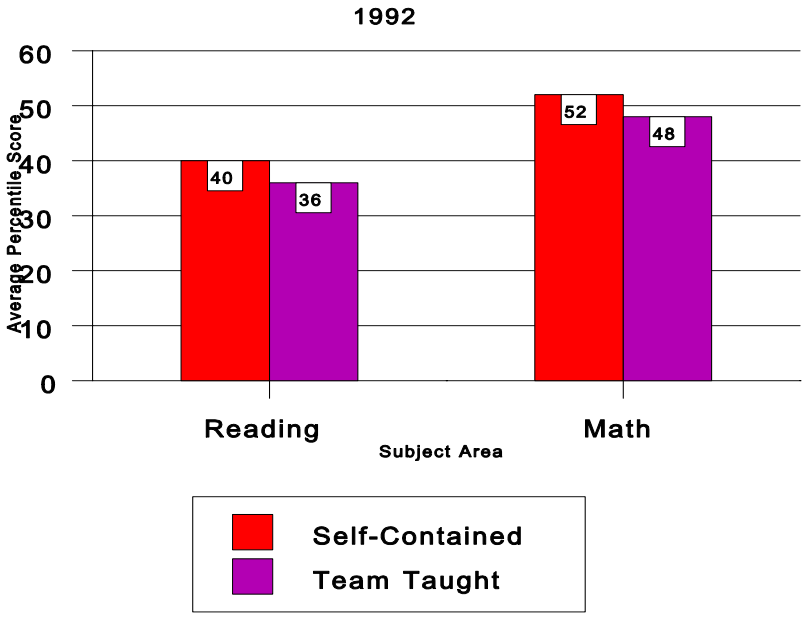






In general, test scores were higher for the 21 to 25 student teacher group. The next chart provides some information about achievement in self-contained versus "team taught" classrooms.

Reading and Math Percentile Scores of Second Grade Students by Class Configuration -- Washoe and Rural School Districts



According to the 1993 evaluation report, overall for the Washoe-Rural students there was a reliable and small difference in mean reading and math scores in favor of the self-contained classrooms. However, the difference was not large enough to be considered significant.

Possible Data Problems

- The Clark County School District, accounting for almost 65 percent of the state's students, tested in the Fall; all others tested in the Spring;

- The first year of the program was also the first year of the new CTBS/4 test; scores are typically lower the first year of a new assessment;

- There was no real control group; and

- Anecdotally, team-teaching may be taking place in higher growth (usually higher income) areas, while self-contained classrooms remain in older, less affluent areas.

The study concluded that only 20 percent of the variance in test scores could be accounted for – that other classroom-based factors were likely influencing test scores. More study was called for and, "There is much that is not known about how low student-teacher ratios can be used to greatest advantage."

1995 Evaluation Report

In 1995, the evaluation report—by the Northwest Regional Education Lab—addressed a series of key questions submitted by legislative staff and others. The evaluation also produced mixed results, with some students scoring higher in mathematics but lower in reading; these results were reversed for other groups. As with the 1993 results, academic gains appeared to be more predictable based upon student socioeconomic status rather than upon class size. The report concludes:

- Second grade reading scores tended to be lower in smaller (1-15) classrooms than in larger (over 15 students), while mathematics scores tended to be higher in smaller classrooms.

- When looking at third grade students who had attended Nevada schools in the second grade versus students who did not, the graduates of the State's second grades scored significantly higher in both reading and mathematics.

Third Grade Scores by Attendance in Second Grade

Reading	1993 Score	Percentile	1994 Score	Percentile	Clark 1993 Score	Percentile
Attended Nevada 2nd Grade	680	50	682	52	673	43
Attended Other 2nd Grade	674	45	670	42		
Could Not Determine	652	29	654	30	670	41
p	*<.01**		*<.01**		*.02**	
Mathematics	Score	Percentile	Score	Percentile	Score	Percentile
Attended Nevada 2nd Grade	674	49	675	50	670	52
Attended Other 2nd Grade	666	43	666	43		
Could Not Determine	644	26	658	36	667	49
p	*<.01**		*<.01**		*.02**	

*This difference is significant.

Finding*:* ***Students who attended Nevada schools during the first grade had significantly higher second grade reading and mathematics scores than did students who did not attend first grade in Nevada or for whom first grade attendance could not be determined by the teacher.***

Second graders who attended Nevada schools in first grade did better than those who did not. The scores are significantly higher except for the mathematics scores in 1993.

Second Grade Scores by Attendance in First Grade				
Reading	1993 Score	1993 Percentile	1994 Score	1994 Percentile
Attended Nevada 1st Grade	643	45	639	41
Attended Other 1st Grade	637	40	627	33
p	*.04**		*<.01**	
Mathematics	Score	Percentile	Score	Percentile
Attended Nevada 1st Grade	623	55	621	54
Attended Other 1st Grade	619	53	613	48
p	*.09*		*.01**	

*This difference is significant.

- A gains analysis comparing test score gains for the same students as they moved from second to third and to fourth grade did not show significant differences by the class-size ratio experienced in second grade with one general exception, mathematics scores were higher for the Washoe County and rural students (tested in the Spring) in larger classes (greater than 15 to 1).

In the next chart, gains from second grade through the fourth grade (from 1992 through 1994) were compared for rural and Washoe students. The actual scores of these students were examined over the two-year period. These gains were not significant.

Fourth Grade Gains of Students by Second Grade Class Size	
Reading Gains	1992-1994
1-15 Students	37
Over 15 Students	32
p	*.32*
Mathematics	1992-1994
1-15 Students	18
Over 15 Students	19
p	*.51*

Third Grade Scores by Second Grade Class Size						
Reading	1993 Score	Percentile	1994 Score	Percentile	Clark 1994 Score	Percentile
1-15 Students	679	49	681	51	677	47
Over 15 Students	685	54	688	57	675	45
p	*<.01**		*<.01**		*.75*	
Mathematics	Score	Percentile	Score	Percentile	Score	Percentile
1-15 Students	673	49	676	51	672	54
Over 15 Students	678	53	682	56	672	54
p	*>.01**		*<.01**		*.96*	

*This difference is significant.

Finding: ***The mathematics and reading scores were higher for third graders who attended second grade in large classrooms than for those who attended second grade in small classrooms.***

The 1995 study concluded:

- There was a tendency for greater gains in mathematics to be associated with larger second grade classrooms, and greater gains in reading associated with smaller second grade classrooms.

- There are several factors overwhelmingly more important in predicating pupil achievement scores – special education status; ESL status, ethnicity, free lunch eligibility, and class configuration (in descending order), each accounted for more variance in scores than did class size.

Low SES Third Grade Scores by Nevada Second Grade Attendance

Reading	1993 Score	1993 Percentile	1994 Score	1994 Percentile	Clark 1994 Score	Clark 1994 Percentile
Attended Nevada 2nd Grade	661	35	661	35	651	27
Attended Other 2nd Grade	665	38	652	29		
Could Not Determine	638	21	643	23	655	30
p	*<.01**		*.10*		*.07*	
Mathematics	**Score**	**Percentile**	**Score**	**Percentile**	**Score**	**Percentile**
Attended Nevada 2nd Grade	657	35	654	33	650	32
Attended Other 2nd Grade	653	32	646	27		
Could Not Determine	629	17	648	28	653	35
p	*.02**		*.11*		*.14*	

*This difference is significant.

Finding: ***In 1993 third grade rural and Washoe students who were eligible for free or reduced cost lunch scored higher in mathematics but lower in reading if they attended Nevada schools in second grade. There were no significant differences in 1994 in any districts.***

The evaluation also concluded that while a portion of the differences between student scores can be explained by the class-size and student characteristics, most of the differences (approximately 90 percent) were unexplained by the data.

Role of Class Size in Student Scores		
Reading	**1993**	**1994**
Percentage of Reading Scores Explained by Class Size	0.1	0.2
Percentage of Reading Scores Explained by Student Characteristics	10.5	10.5
Mathematics		
Percentage of Mathematics Scores Explained by Class Size	3.4	0
Percentage of Mathematics Scores Explained by Student Characteristics	7.4	8.2

1997 and 1998 Evaluation Reports

After 1995, the Nevada Department of Education began working on an evaluation model for the CSR Program that would not require additional costs or result in an undue reporting burden for schools and teachers. This new evaluation design was communicated to the Legislature in the spring of 1996. The key feature of this design was the sole use of existing data that is routinely collected as a part of the Proficiency Testing Program, which tests students at grades four and eight. In 1997 and 1998, the reviews were based solely on the examination of state-mandated tests, and the results were very similar for both years. Those studies concluded that:

- When mean scale scores and percentiles for reading, language, and math tests were examined by the attendance variable, it was found that higher scores were associated with having had two years of class-size reduction experience.

- However, the overall results were not borne out for all subgroups of students. For example, there was no indication that the test scores of minority students or students in a low socioeconomic bracket had been affected by the class-size reduction experience. This finding is particularly disturbing since class-size reduction programs were originally designed to help at-risk students.

PERCENTILES BY CLASS-SIZE REDUCTION EXPERIENCE
(October 1997 Testing)

Fourth Graders with:	Reading Total	Language Total	Mathematics Total
2 Years of CSR Experience (n=14,513)	49	54	51
1 Year of CSR Experience Grade 2 (n=1,466)	49	54	52
1 Year of CSR Experience Grade 1 (n=277)	47	50	46
No CSR Experience (n=2,915)	48	50	48

The 1998 study also noted "We also have no explanation for the fact that the overall results showing a relationship between CSR experience and higher test scores do not hold for certain subgroups of fourth graders."

1999 Evaluation Report

In 1999, the Department's report analyzed eighth graders as well as 4th graders (the 8th graders would have experienced class-size reduction in grades 1 and 2 if they had lived in Nevada). The findings of this report were as follows:

- *TerraNova* test scores in reading, English, and mathematics are slightly higher for students with at least two years of reduced class-size experience than for students with no reduced class-size experience.
- Results are less clear for students with only grade 1 experience.
- The 8th graders who had class-size reduction experience also scored somewhat higher that those without reduced class-size, although the difference was relatively small.

Grade 4: Percentiles by Class-Size Reduction Experience (October 1998 Testing)

Fourth Graders with:	Reading Total	Language Total	Mathematics Total
2 Years of CSR Experience (n=17,160)	48	49	51
1 Year of CSR Experience Grade 2 (n=1,781)	46	47	50
1 Year of CSR Experience Grade 1 (n=299)	48	48	50
No CSR Experience (n=3,152)	47	46	49

Grade 8: Percentiles by Class-Size Reduction Experience (October 1998 Testing)

Eighth Graders with:	Reading Total	Language Total	Mathematics Total
2 Years of CSR Experience (n=12,263)	51.9	50.3	49.4
1 Year of CSR Experience Grade 2 (n=1,110)	49.7	48.6	48.0
1 Year of CSR Experience Grade 1 (n=155)	47.2	42.8	42.6
No CSR Experience (n=8,377)	48.4	46.1	45.3

Note: For all three subjects, eighth graders who had experienced class-size reduction in both first and second grades had higher scores than those who had experienced no class-size reduction.

Again, the evaluation found that the overall impact upon test scores of various categories of students was mixed. Certain subgroups did not seem to benefit: limited English-proficient students did not have higher test scores; students from low socioeconomic families did not show evidence of any academic benefit; there is no clear relationship between reduced class-size and test scores for Native-American or African American students in Nevada. Special education pupils and Asian, Hispanic, and White students did seem to benefit from the program, although the study noted that the difference was not large. The evaluation also took note of the range of test scores by subgroups of students – for example, white fourth grades percentile scores ranged from 49 to 55, while Hispanic students ranged from 34 to 45.

The report concluded that a more comprehensive study was needed to determine the impact of CSR upon pupil achievement.

2001 Evaluation Report

The most recent report, in draft form at present, used a pilot study approach and focused upon data solely from the Clark County School District for fourth grade students tested in fall of 1998. Several conclusions from this evaluation are worth noting.

Classroom Configuration

- With regard to classroom configuration, there were no differences in student/family characteristic (i.e., low-socioeconomic status), with the exception of special education characteristic – special education students tended to be in self-contained classrooms.
- With regard to classroom configuration and test scores – the results showed no significant differences in test scores by whether the student was in a team-taught or self-contained classroom configuration, with the exception of students with Limited English Proficiency (LEP) – such students had higher test scores in they were in a self-contained classroom.

Teacher Characteristics

- Schools with high proportions of teachers with less than four years' experience, and school with a low proportion of teachers who hold advanced degrees tend to have students with lower test scores.
- The percentage of LEP students was not significantly related to the percentage of teachers with bachelor's degrees versus the percentage having earned advanced degrees.
- There is a significant relationship between teacher experience and test scores.

The evaluation notes that establishing evidence that teacher experience and education can have a positive impact upon student achievement, especially in at-risk schools, supports the idea of providing incentives for highly qualified teachers to teach and mentor other teachers in low-performing schools.

Survey Data Reports

The Nevada Department of Education conducted two major surveys of key personnel and parents involved in the CSR Program. Of these, the survey administered during the 1995-1996 school year was the more complete.

1995-1996 Nevada Class-Size Survey Results

The survey component of the Nevada Department of Education's 1997 report contained some significant information. Among the findings from this segment of the report are the following:

- Class-size reduction continues to receive positive support statewide from principals, teachers, and parents.

- Most respondents feel that having a smaller class means that each child will receive the individual attention needed to fully understand the skills that are being taught.

SURVEY RESPONSE CONCERNING PERCEIVED EFFECT OF NEVADA CLASS-SIZE REDUCTION PROGRAM ON TEACHING AND LEARNING 1995-1996

	Percent Reporting Some or Great Improvement	Percent Reporting No Change	Percent Reporting a Decline
Principals	**74**	**16**	**3**
Teachers	**74**	**17**	**5**
Parents	**74**	**22**	**4**

Source: *1995-1996 Class-Size Reduction Survey Results for Nevada*, Statewide Results Prepared by the Clark County School District, 1996.
Note: Responses listed do not include those who left these questions blank.

Even though many respondents stated that team-teaching is preferable to 30 to 1 ratios, they believe it is not as beneficial as each teacher having a self-contained classroom of 15 to 1.

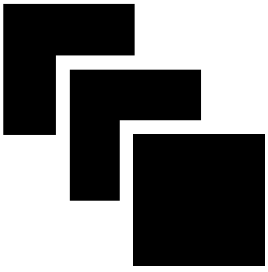
1995-1996 SURVEY RESPONSE: TOP TWO COMMENTS CONCERNING NEVADA'S CLASS-SIZE REDUCTION PROGRAM

	What Is Most Advantageous Aspect (Or What Effect on Child)?	What Aspect Interferes with Success (Or What Problems as it Affects Your Child)?
Principals	More one-on-one and small group instruction/interaction	C Lack of space/ classrooms C Team-teaching
Teachers	C More one on one and small group instruction C Team-teachers can share ideas and learn from each other	C Lack of space/ classrooms C Team-teaching
Parents	C Teacher can give child more individual attention C Students feel more confident and have higher self-esteem in a small class	C There are no problems C Team-taught classrooms overcrowded and noisy

Source: *1995-1996 Class-Size Reduction Survey Results for Nevada,* Statewide Results Prepared by the Clark County School District, 1996.

Elko Pilot Program Survey Information—2001

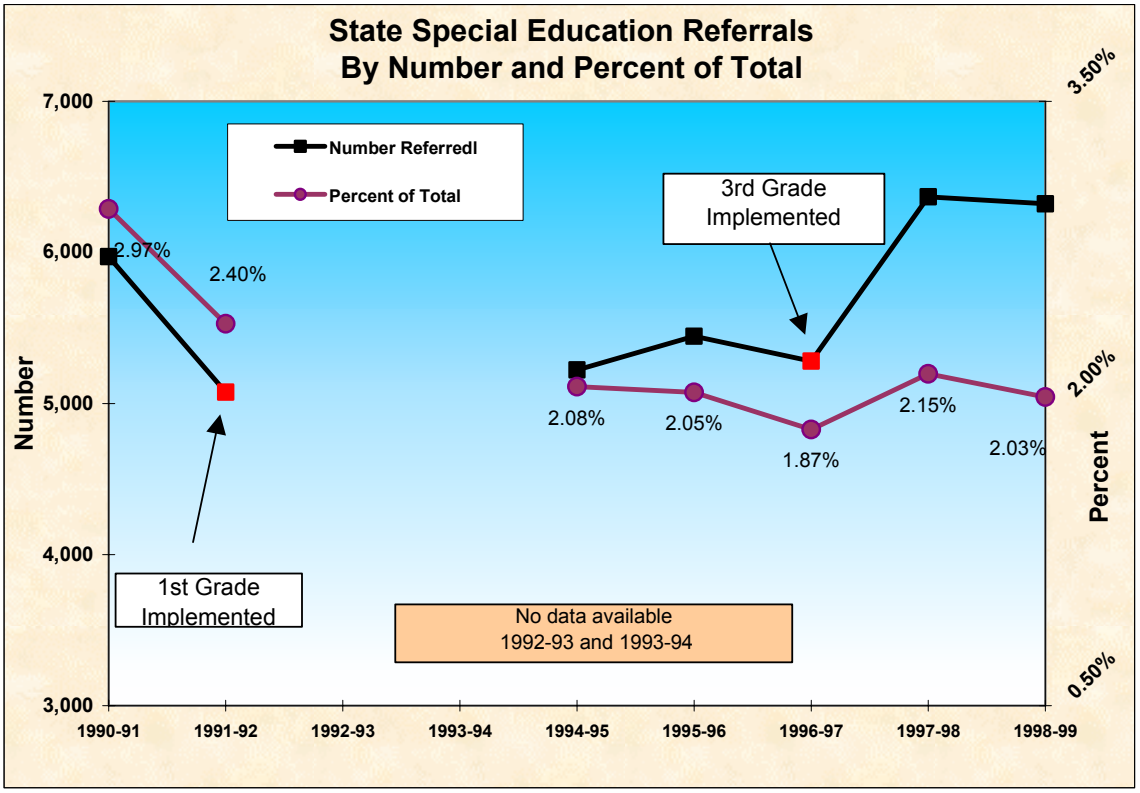
The Elko pilot program evaluation report includes detailed survey information from Elko parents with regard to the pilot program. Surveys included teacher interviews and surveys, principal surveys, and surveys and focus groups with parents. A summary of the survey information about the Elko Pilot Program is contained in Section IV of this report.



III. Additional Evaluation Data

Special Education Referrals

The following table displays the total statewide special education referrals for all ages and grades. It should be noted that the data is not separated by grade or by whether the pupil was part of a federal program to identify children with disabilities beginning at ages 3 and 4.

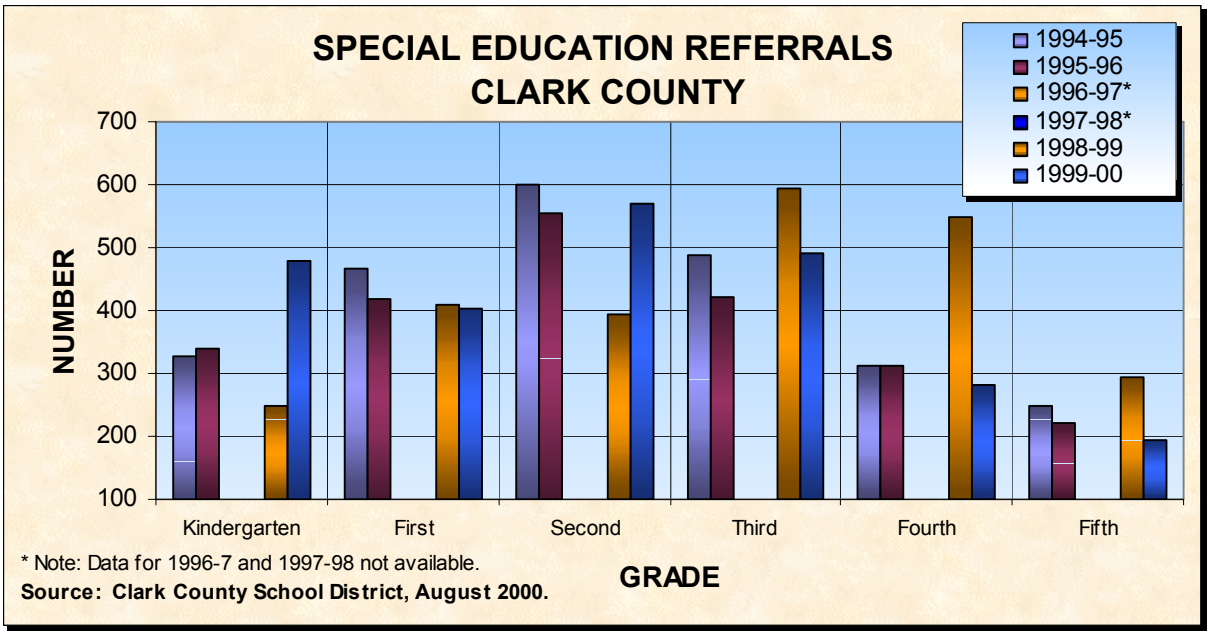


Source: State Department of Education, 2000.

	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
Number of Referrals	5,972	5,076	N.A.	N.A	5,223	5,445	5,280	6,368	6,323
Total Enrollment	201,316	211,810			250,747	265,041	282,131	296,621	311,063
Referrals as a % of Total	2.97%	2.40%			2.08%	2.05%	1.87%	2.15%	2.03%

Next, Nevada's largest district, Clark County School District, was asked to provide special education referral information by grade. Unlike the previous figure, this table includes data that

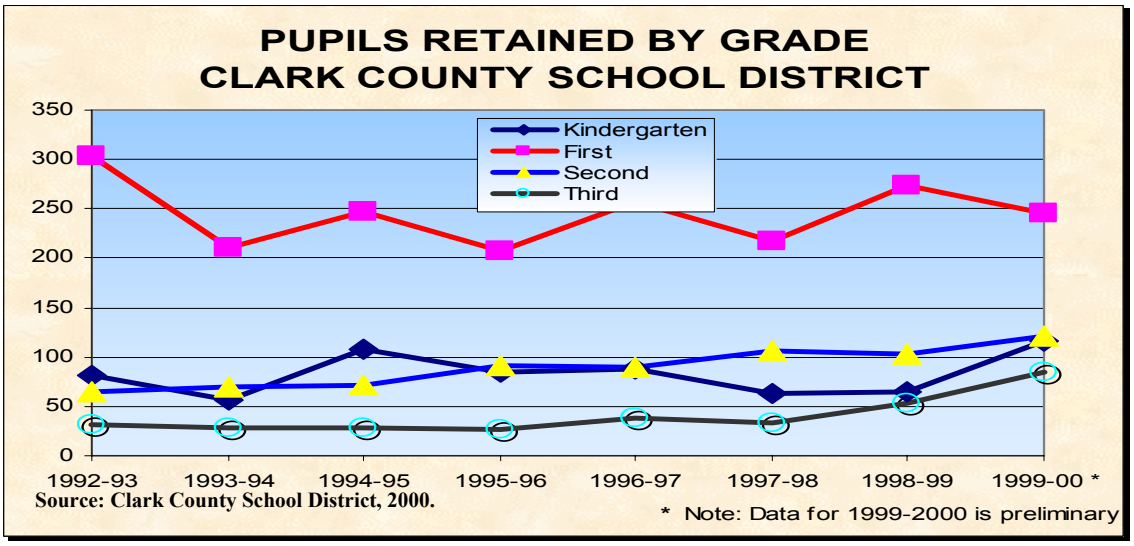
has not been adjusted for growth. The general trend toward declines of referrals in the class-size grades (grades 1 and 2) is all the more dramatic due to the high growth in the primary grades over that same time period. However, it should be noted that the increase in grade 2



referrals in the 1999-2000 school year departs from the downward trend. Again, the Clark County School District advises caution in interpreting these results. Early identification of some individuals prior to kindergarten may skew this data

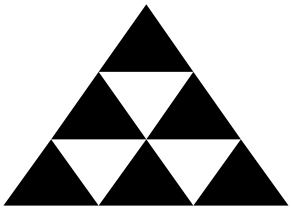
Grade Retention

The impact of the Class-size Reduction (CSR) Program upon pupil retention is less clear. Clark County School District was also asked to review its records concerning grade retention in the primary grades. The following table lists district retentions in kindergarten through 3rd grade.



CLARK COUNTY GRADE RETENTION								
	1992-93	**1993-94**	**1994-95**	**1995-96**	**1996-97**	**1997-98**	**1998-99**	**1999-00 ***
Kindergarten	82	56	107	85	88	63	65	116
First	304	211	247	207	257	218	274	246
Second	65	70	72	91	90	106	103	121
Third	31	28	29	26	38	34	53	84

Again, these are raw numbers and have not been adjusted for growth. The chart shows an initial decline in 1st grade retentions beginning after the first year the CSR Program was introduced. The number has crept upward somewhat since the 1992-1993 school year; however, overall student growth has been significant over the same time span. Retentions in the 2nd grade have remained essentially flat or increased slightly over time. Retentions in both 3rd grade and kindergarten have seen slight growth in recent years. Since there was no formal statistical analysis of this data, especially with respect to class-size students versus growth (new) students, caution should be used in attributing any changes to the CSR Program.



IV. SUMMARY OF MAJOR FINDINGS – ELKO COUNTY SCHOOL DISTRICT CLASS-SIZE DEMONSTRATION PROJECT

Assembly Bill 700 of the 1999 Legislative Session authorizes a demonstration project for the Elko County School District to reduce pupil-teacher ratios to 22 to 1 in grades K through 5 in an effort to eliminate team teaching. The Legislature also required that the Elko County School District evaluate the effectiveness of its demonstration project in improving pupil achievement and report its findings in an interim report to the Legislative Committee on Education on or before February 15, 2000, with a final report to the Legislature on or before February 15, 2001.

In response, the Elko County School District in July 1999, requested that Great Basin College, the Nevada Department of Education, and the Legislative Bureau of Educational Accountability and Program Evaluation (Bureau) assist in the evaluation. A separate report, titled *Report on the Elko County School District Class-Size Reduction Demonstration Project* contains detailed information about the pilot.

Summary of Evaluation Findings

A summary of the report's major evaluation findings include:

- Classroom observations found little difference in student classroom behavior between 16:1 classrooms versus 22:1 classrooms.

- *TerraNova* scores were consistently improved for grades 3-6 in classes with reduced 22:1 size.

- Majority of parents experienced greater contact with teacher and more parental involvement.

- Teachers in grades 1-2 were more likely see no or positive effects from 22:1 class size.

- Vast majority of teachers in grades 3-6 saw positive effects.

- Most significant areas of positive effect are: more one-on-one instruction and better discipline.

The report contains detailed tables of data with regard to student test scores, classroom observations, classroom behavior, survey data, interview data, and other information relating the pilot project.

The charts of the following pages provide some indication of the information contained within the report:

COMPARISONS OF CLASSROOM BEHAVIOR OF SAME TEACHERS IN DIFFERENT TYPES OF CLASSROOMS IN MARCH AND DECEMBER 2000 CLASSROOM OBSERVATIONS

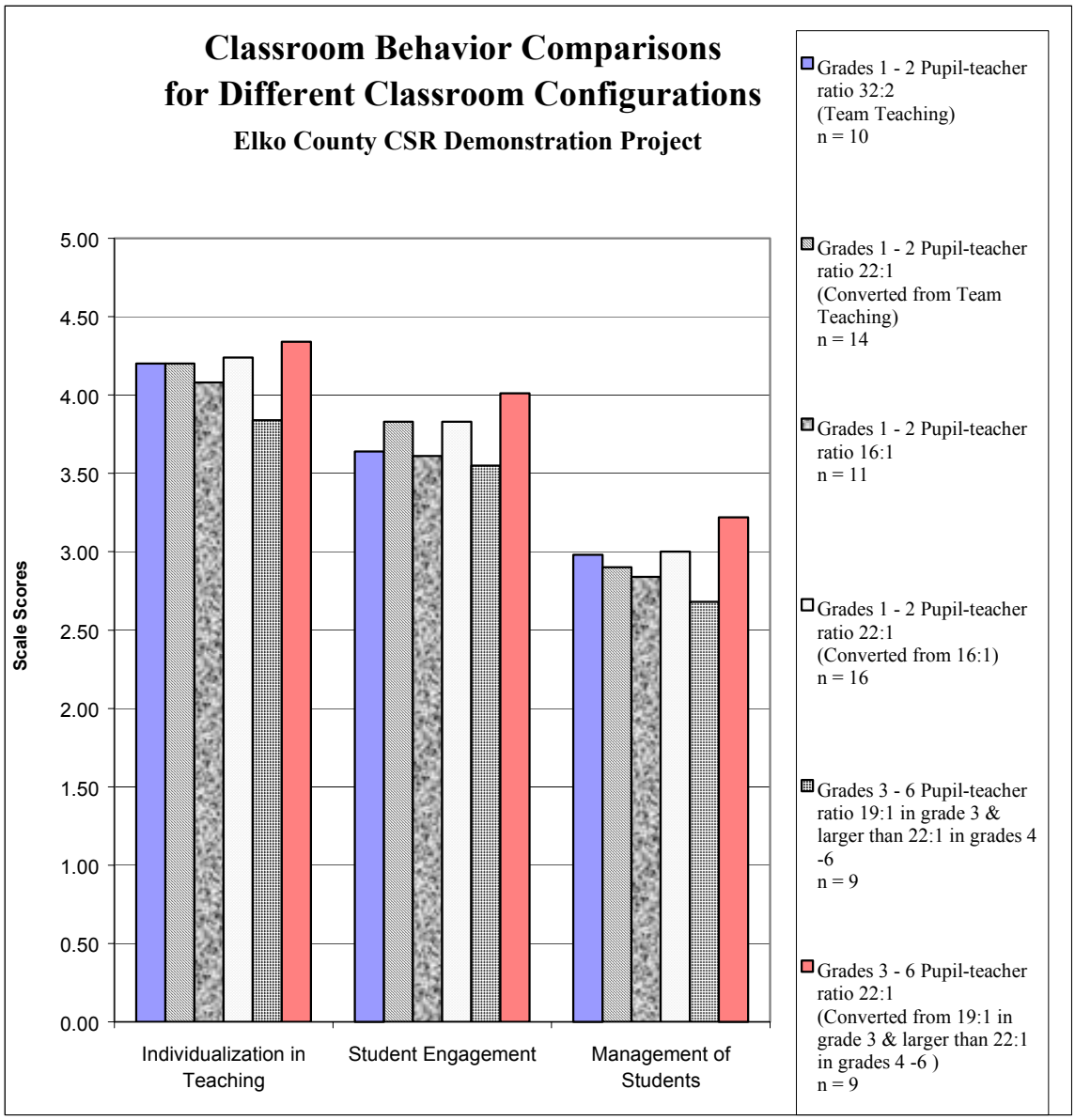
(Scale Scores out of Possible 5)

Grades	Types of Classrooms	Individualization in Teaching	Student Engagement	Management of Students
Grades 1 - 2	**Pupil-teacher ratio 32:2** (Team Teaching in March 2000) n = 10	4.20	3.64	2.98
	Pupil-teacher ratio 22:1 (Converted from Team Teaching in Fall 2000) n = 14	4.20	3.83	2.90
	Pupil-teacher ratio 16:1 (March 2000) n = 11	4.08	3.61	2.84
	Pupil-teacher ratio 22:1 (Converted from 16:1 in Fall 2000) n = 16	4.24	3.83	3.00
Grades 3 - 6	**Pupil-teacher ratio 19:1 in grade 3 & larger than 22:1 in grades 4 -6** (March 2000) n = 9	3.84	3.55	2.68
	Pupil-teacher ratio 22:1 (Converted from 19:1 in grade 3 & larger than 22:1 in grades 4 –6 in Fall 2000) n = 9	4.34	4.01	3.22

Source: Elko County School District Demonstration Program Evaluation, Preliminary Results, 2001.

Scale for Scoring

1 = Never Observed
2 = Seldom Observed
3 = Sometimes Observed
4 = Often Observed
5 = Constantly Observed



Source: Elko County School District Demonstration Program Evaluation, Preliminary Results, 2001.

Elko Pilot Program Survey Information—2001

The pilot program evaluation report includes detailed survey information from Elko parents with regard to the pilot program. Surveys included teacher interviews and surveys, principal surveys, and surveys and focus groups with parents. In summary the findings noted:

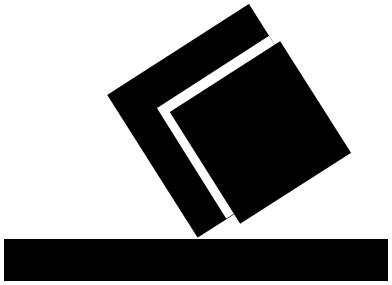
- Parental satisfaction with reduced class sizes, with parents noting, as in previous studies, perceived advantages in pupil discipline issues and greater individualized attention – most parents also indicated improved academic performance and

improved social aspects. Parent surveys noted the advantages and disadvantages of team teaching.

- Teachers were most likely to see positive effects, especially as the program entered its second year – many noted improved physical space, increased student social interaction, fewer discipline problems, increased use of materials and increased academic interaction between student and teacher.

- In general, principals were positive and tended to see improvements as well.

The report concludes that more data needs to be collected if pilot program extended.



V. SELECTED REFERENCES TO MATERIALS CITED

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