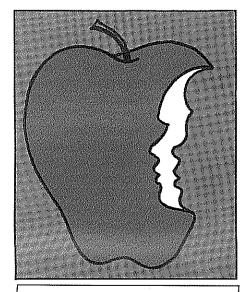
Report No. 5

June 1989



An

Overview

Louisiana for years has had policies to reduce both the pupil/teacher ratio and the maximum class size, particularly for grades K-3. However, much debate remains as to the relationship of smaller classes to improved student achievement.

Most research conducted outside Louisiana indicates that classes must be reduced to 15 or fewer students to improve learning. This research also indicates only "at-risk" students are likely to benefit from these smaller classes.

Louisiana would need an estimated 14,000 additional teachers at a state and local cost of more than \$350 million to have a maximum class size of 15 for all K-3 students. The local cost of additional class space is unknown. This huge cost would be a waste since the "average" or "above average" student is unlikely to benefit. Also, it would be very difficult to hire 14,000 additional qualified teachers in the foreseeable future.

State funds should be targeted to reduce class size for K-3 students with the greatest need and who are more likely to benefit. The federal Chapter I program is designed to assist such children, but coverage is limited due to inadequate federal funding.

Class Size: Impact & Cost

Louisiana throughout the 1980s increasingly has emphasized reducing the size of classes in grades K-3 in its public schools. This report examines research on the impact of class size and tracks Louisiana's progress in achieving smaller classes in the lower grades. The different ways of expressing class size--average class size, pupil/teacher ratio, maximum class size and actual class size also are examined.

Research on class size and the relationship to student academic achievement has continued throughout this century. However, Louisiana lacks the necessary data to track students over a period of years in order to assess the impact of class size on student achievement. Existing studies by researchers outside Louisiana provide some insight.

Various surveys have shown that public opinion strongly favors small classes. A 1988 nationwide Gallup Poll found that 75% of the respondents felt smaller classes contribute to greater student academic achievement. However, empirical research does not support conclusions that class size reductions should be general policy. At best, research findings on the positive impact of smaller classes are limited to specific groups of students in the lower grade levels. Findings of other research studies, shown on page 2, illustrate general conclusions about class size.

Average Class Size

Average class size, as used in this report, is the total number of students enrolled in a particular grade level divided by the total number of classes. Data on class size includes only regular students. Classes such as Chapter I, special education, agriculture, art, driver education, health, physical education, economics, industrial arts, journalism, trade and industry, ROTC, band and chorus are excluded from the average class size calculations.

The average class size can be quite different from the actual number of students in a class. For example, there may be 35 students in some classes and an equal number of other classes

Conclusions From Other Studies On Class Size

 Unless the number of students in a class is reduced to 15, little improvement can be expected in student achievement. In 1989, only 7% of Louisiana's public school classes had 15 or fewer students. (5,6)

 There is no ideal class size for all grades and all academic subjects. (1,2,3,4)

 The considerable cost associated with reducing class size may preclude significant class size reduction. (1,2,3)

 There is no evidence that reducing class size at the secondary level improves student achievement. (4)

 Few benefits can be expected by reducing class size unless teachers use teaching methods which take advantage of fewer students. (2,4)

 Greater student-teacher interaction is possible in smaller classes. (\mathcal{O})

 Smaller classes can benefit students with lower academic ability. Evidence is inconclusive whether smaller classes benefit average or above average students. (2,4)

 Children whose parents are "economically" disadvantaged appear to have greater achievement in small classes. (2,3)

 Children at the primary grade levels (K-3) may benefit from smaller classes, particularly in math and reading. (2,3,4)

 Teacher morale improves and teacher stress is reduced in smaller classes. (2,3,5)

 The evidence linking standardized test scores and class size is inconclusive. (1)

KEY

U.S. Department of Education, Office of Educational Research and Improvement, "Class Size and Public Policy: Politics and Panaceas," 1988.
Educational Research Service, Inc., "Class Size Research: A Related Cluster Analysis for Decision Making," 1986.
National Center on Effective Secondary Schools, "New Dimensions on Class Size and Academic Achievement," 1987.
Educational Research Service, Inc., "Class Size Research: A Recent Critique of Recent Meta-Analysis," 1980.
National Education Association, "Class Size," 1977.
Glass, Gene V. and Mary Lee Smith, "Meta-Analysis of Research on Class Size and Achieve ment," 1979.

with 15 students. The average class size would be 25.

Because the Louisiana State Department of Education (SDE) changed the reporting of class size data after 1987, the years between 1981 and 1987 have been treated separately in this report.

Trends, 1981-1987

Between 1981 and 1987, Louisiana's public school average class size increased slightly, from 23.6 to 23.7. The smallest classes were in the 12th grade. There was a considerable difference between the average class size in grades K-3 and 9-12.

In 1981, the average class size in K-3 was 24.3 while it was 21.5 in grades 9-12, or 2.8 more students per class in grades K-3.

By 1987, that gap had decreased by more than 50%. The K-3 average class size was 23.8 while in grades 9-12 it was 22.4, or a difference of 1.4 fewer students in the upper grades.

Louisiana's larger K-3 classes are contrary to what research suggests should occur. First, research indicates class size must be reduced to 15 or fewer students before improved achievement can be expected. Second, research supports improved achievement only in grades K-3.

Louisiana's average class size in grades 9-12 was consistently smaller than in grades K-3. One reason high school classes are small is that they are "departmentalized," that is, there are different teachers for different courses. Students must schedule their classes so they take those courses required for graduation as well as a sufficient number of elective courses. High school classes may be particularly small in schools with a few students and a poor scheduling system. Departmentalized classes for the lower grades are not prevalent.

Pupil/Teacher Ratio

The pupil/teacher ratio is used in the state's Minimum Foundation Program (school aid formula) to determine how many teachers the state allots to each local school system. Lowering the pupil/teacher ratio for grades K-3 in the Minimum Foundation Program (MFP) does not mean that class size will be reduced in those grades.

Each school system receives its state aid in a lump sum, and teachers can be assigned to any grade level and school in the system provided the system employs the number of teachers allotted. The pupil/teacher ratio in the MFP formula includes guidance counselors, librarians and assistant principals within the teacher allotment. The pupil/teacher ratio is to provide state funding, not to establish a maximum class size. The actual class size may vary within a school and school system.

The Board of Elementary and Secondary Education (BESE) has recommended revisions in the MFP for 1989-90 to require that the additional teachers resulting from the reduction in the pupil/teacher ratio from 24 to one to the current 20 to one be employed in K-3 in order to receive state funding. The Legislature must approve this MFP change.

Actual Class Size

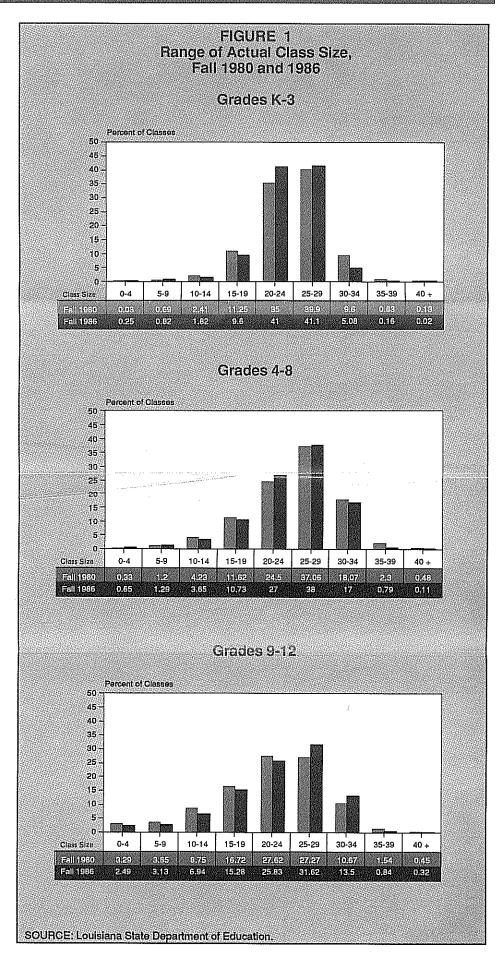
Actual class size refers to the actual number of students in a class. This data has been reported in the SDE's *Annual School Report* and now is included in its *Annual Financial and Statistical Report*. The number of students are to be reported to the SDE by October 1, but there is no specified date for the student count. The number of students are all those registered plus gains and losses.

Trends, 1980-1986

Figure 1 compares actual class size for grades K-3, 4-8 and 9-12 between fall 1980 and 1986. In grades K-3, there was a decrease in the proportion of classes with 30-34 students, and an increase in the percentage of classes with 20-29 students. In grades 4-8, actual class size decreased between 1980 and 1986 while classes in grades 9-12 grew larger.

State Funding to Reduce Class Size

Between fiscal 1980-81 and 1988-89, the state appropriated approximately \$96 million to reduce class size in grades K-3. Between fiscal 1980-81 and 1983-84, \$2 million a year was appropriated to reduce class size in the first grade. In fiscal 1984-85, the pupil/teacher ratio in the MFP was reduced from 24 to one to 22 to one, and \$18 million was appropriated for that purpose. The for-



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mula remained the same until fiscal 1988-89 when \$16 million was appropriated to reduce the K-3 pupil/teacher ratio from 22 to one to 20 to one.

Class Size in 1987-88 & 1988-89

BESE has established a policy on maximum class size. (See Table 1.) This assures that regardless of the MFP pupil/teacher ratio funding, no classes can exceed a stipulated number of students. The maximum class size policy is one of the requirements public schools must meet in order to receive state approval and funding.

Act 447 of 1984 established a maximum class size of 20 for K-3, contingent on state funding which never has been fully funded. BESE's reduced maximum class size for K-3 from 29 to 26 beginning in fiscal 1989-90 will impact many local school systems. In 1988-89, 25% of the K-3 classes were between 26 and 29.

Most local systems in 1987-88 met BESE's maximum class size of 29 in K-3. In 1987-88, 98.7% of the classes in grades K-3 were within the maximum of 29 students and in 1988-89, the proportion increased to 99.3%. In grades 4-12 in 1987-88, 99.7% of the classes were within the maximum class size of 33 and in 1988-89, the proportion remained unchanged.

Average Class Size, Grades K-3

Average class size in grades K-3 decreased statewide between 1987-88 and 1988-89, from 23.4 to 22.5 in grades K-3. Most school systems (57 of 66) decreased their class size, while the remaining nine increased class size. Tensas Parish had the largest decrease in average class size in K-3, from 24.8 in 1987-88 to 20.3 in 1988-

History	y of Maximun	n Class Size
	Maximum	
Year	Class Size	Grade Level
1933	35	High school
1953	35	Elementary
1981	33	4-12
1981	30	К-3
1984	29	K-3
1989	26	K-3

89. Avoyelles Parish had the largest increase, from 22.5 to 24.3 students.

Average Class Size, Grades 4-8 & 9-12

The average class size in grades 4-8 in 1988-89 was 24.7. This was the highest average class size of the three groupings of grades. Orleans Parish had the highest average class size, 27.4 students, while Cameron Parish had the lowest, 19.6.

In grades 9-12 the average class size in 1988-89 was 23.3. Tensas Parish had the lowest average class size, 15.3, while Jefferson Parish had the largest, 26.1.

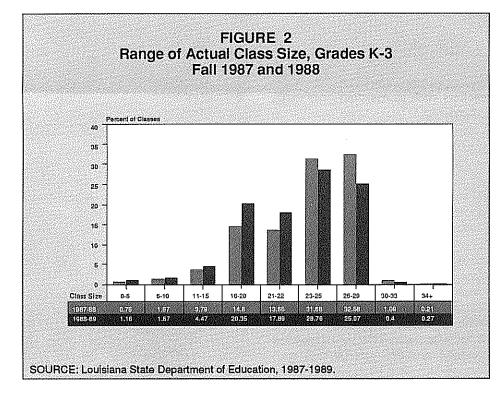
Actual Class Size Distribution, K-3

Figure 2 shows the change in actual class size distribution for grades K-3 between the fall of 1987 and the fall of 1988. Most K-3 classes had 21-25 students in 1988, while the fewest number of K-3 classes had 30 or more students.

There was a significant increase over 1987 in the percentage of classes with 16-20 students and a large decrease in the number of students in classes with 26-29 students. This suggests the \$16 million appropriated for fiscal 1988-89 to reduce class size in grades K-3 partially achieved the desired effect. Overall, actual class size decreased in grades K-3 from fall 1987 to fall 1988.

Actual class size did not change in grades 4-12 between fall 1987 and 1988. The proportion of classes with 30-33 students decreased slightly, while the remaining student class size ranges showed slight fluctuations.

Table 2 illustrates the distribution of actual class size by public school system for K-3 in the fall of 1988.



Only 7.3% of classes had 15 or fewer students, and seven school systems had no classes of 15 or fewer students.

Claiborne Parish had the greatest percentage (33%) of classes with 15 students or fewer. Almost half (46.6%) of the statewide classes had between 21 and 25 students in the fall of 1988. Less than 1% of the classes exceeded the maximum class size of 29 in the fall of 1988.

Table 3 shows separate grade levels for K-3 classes for fall 1987 and fall 1988. Kindergarten classes had the largest decrease in actual class size between the two years. In the fall of 1988, the percentage of kindergarten classes with 26-29 students decreased, while the percentage of classes with 16-20 students increased over the prior year.

Impact of Pupil/Teacher Ratio

As noted, the MFP pupil/teacher ratio of 20 to one for grades K-3 does not assure fewer than 20 students in K-3 classes because (1) local systems do not have to place state-allotted teachers in specific grade levels or schools even though the number of state-allotted teachers is determined on a school-by-school basis, and (2) the pupil/teacher ratio provides funding for positions other than classroom teachers such as assistant principals, librarians and counselors.

PAR calculated the percentage of K-3 classes in each local system with 20 or fewer students to determine if the MFP 20 to one pupil/teacher ratio has had an impact on class size. In the school year 1988-89, when the pupil/teacher ratio for K-3 was lowered to 20 to one, only 27.6% of K-3 classes statewide had 20 or fewer pupils. This was only 1% higher than the previous year. Among local systems, the range was from a high of 82.9% in Caldwell Parish to a low of 4.9% in Orleans Parish. (See Table 4.) Most (55) systems had *more* K-3 class

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Percenta	ge Distribution	TABLE 2 of Classes F	3v Public Sc	hool Syste	nerene manare
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School System	<u>or Fewer</u>	1 *** 16-20 ***	$\frac{21425}{21}$	2 6-29	**************************************
Acadia Allen	3.2% 28.0	10.3% 36.4	34.8% 9.8	8.3	0.7% 17.4
Ascension Assumption Avoyelles	2.5 1.3 6.0	10.8 22.4 7.5	54:2 68:4 63:5	31.3 7.9 29.1	1,3 0,0 0.0
Beauregard Bienville	7.5 10.0	9.7 43.3	48.5 26.7	34.4 18.3	0.0 ¹¹ 1.7 ¹¹
Bossier Caddo	11.4 5.8	35.5 22.2	43.1 53.8	10.0 17.8	0.0 + 0.4
Calcasicu Caldwell Cameron	2,9 29.3 23.1	16:1 43:9 43:6	$\begin{array}{c} 50.7\\ 22.0\\ 25.6\end{array}$	***29,9 ***2,4 ********************************	0.4 0.0 0.0
Catahoula Claiborne	33.0 9,1	25.9 25.9	29.5 39.0	11.9 19.5	0.0
Concordia DeSoto	5.3*** 9.1***	60.0 27.3	**************************************	0.0 12.5	0.0 0.0
East Baton Rouge East Carroll East Feliciana	2.6 0.0	10.9 66.7 16.1	50.1 30.8 53.1	25,4 0,0 30,9	0.7 0.0 0.0
Evangeline Franklin	7.8 16.8	33.0 48.8	47.0 32.5	12.2 5.0	0.0 0.0
Grant Iberia	5.0 0.0	16.7 11.3	56.7 67.3	21.7 21.4	0.0 0.0
Iberville Jackson Jefferson	1.0 514 1777	17.0 49.5 14.8	66.0 36.0	15.0 9.0 26.1	1.0 0.0 0.4
Jéfferson Davis Lafayette	$7_{4}^{+++++++++++++++++++++++++++++++++++$	31.9 *****	47.5	13.4 47.0	0.5
Lafourche LaSalle	0,4 5.7	10.8 36.1	43:5 54:1	45.3 4.1	0.0 0.0
Lincoln Livingston Madison	7.9 3:2 6 1	25.4 20.5 28.6	41,3 56.3 55.1	25.4 19,6 10.2	0.3 0.0 0.0
Morehouse Natchitoches	3.9 2,4	18,3 30,4	51.0 58,4	26.9 8.8	0.0
Orleans Ouachita	3,3 2,6	1.6 22.7	16.2 68:8	78.8 6.3	0.5 0.0
Plaquemines Pointe Coupee Rapides	2;4 3;0 6*4	29,4 36,1	69.7 51.5	14.9 16.2	0.0
Red River	0,1 12,5 1.3	47.5	44,2 * * *	2.5	0.5 4 2.5 4 4 4 4 0.0
Sabine St. Bernard St. Charles	6;5,	42.7 10.8	⁶⁴⁴ 46.2 ⁴⁴⁴ 44 75.2 ₄₆	**************************************	0.0 0,0
St. Charles St. Helena St. James	经资源系统建备.7.3.2.2.2	26.5	学生地科学生 化化学	14.7	0.0 0.0 0.0
St. John	0.0	6.4	62.7 40,1	30.9 28.9	0.0 5.3
St. Martin St. Mary St. Tammeny	意志重重动着5;3+重要重	净准准30.4	5 53,1 a a a	医弗雷利耳 的复数	新始 第一時 利用 第一
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Vermilion Vernon	0,6 1,0 5 0	26.6 mm	66.7 47.8	5.6 33.3	0,6
Vermilion Vernon Washington Webster West Baton Rouge West Carroll	12,1 6,9	34:9 24:1	34.5 ± 4	11.9 10.6 34.5	0.0 0.0 0.0
West Feliciana	0.0	14.5	77.4	11.9 8,1	0.0
Winn City of Bogalusa City of Monroe	10.5 1.9	36.9 31.1	24.6 47.9	14.0	
State	7.3%	20.4%	64.8 4616%	· 注意.1%	0.7%
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ses with 20 or fewer students than the prior year, while 11 local systems had *fewer* such small classes.

Class Size Reduction

Some school systems have reported difficulty in reducing their K-3 class size. Some of the reasons cited are lack of available classroom space to accommodate additional classes, inadequate time and difficulty hiring additional teachers, and lack of local funds to pay the supplemental salaries and benefits to more teachers.

According to a 1987 survey conducted by the Education Writers Association, 10% of Louisiana's school buildings were rated inadequate on the basis of physical condition, overcrowding and availability. However, Louisiana's percentage of inadequate school buildings was well below the national average of 25%.

Reduction Cost

PAR calculated the state and local cost to reduce the maximum class size in grades K-3 to 15 students--the size which research indicates would benefit certain types of students academically. The estimated state and local costs are shown in Table 5.

If strictly enforced, no more than 15 students would be in a class, except certain types of large classes such as band, physical education and chorus. An additional 14,304 teachers statewide would be required to bring the present K-3 maximum class size down to 15 based on actual class size data for the fall of 1988.

The total state and local cost would be \$350.3 million--\$291.3 million state and \$56.4 million local. The local cost excludes construction of additional classrooms or renovation of existing buildings, a solely local responsibility. A maximum class size of 15 would be poor use of existing classroom space since most schools were designed to accommodate 30 or more students in a classroom. Data is not available to determine the cost of building more schools and/or renovating existing facilities.

Chapter I Programs

Chapter I is a federally-funded program that requires no state or local matching funds. In 1965, Congress initiated the program in recognition of the relationship between poverty and educational deprivation. The program had a 1987 budget for all states of \$3.9 billion which made it the federal government's largest expenditure for elementary and secondary education,

	1. A state of the state of t	TABLE 3 tribution of Cl all 1987 and 1	asses, Grades K-3 988	
Number		Den Colori, Marian (* 1996), formanistiko (* 1997)	1987	an a
of Students	Kindergarten	First Grade	Second Grade	Third Grade
15 or Fewer	3.9%	6.4%	6.7%	7.1%
16-20	14.6	14.5	14.5	14.7
21-25	52.3	48.8	41.7	40.3
26-29	28.3	29.7	35.3	35.9
Number		Fall	1988	
of Students	Kindergarten	First Grade	Second Grade	Third Grade
15 or Fewer	5.1%	7.4%	7.3%	8.8%
16-20	23.8	22.8	19.3	18.8
21-25	51.6	49.6	44.3	42,4
26-29	19.1	22.3	28.5	29.0

TABLE 4 Percent of Classes With Fewer Than 20 Students, Grades K-3

Public	Fall
School System	1988
Acadia	13.5%
Allen	64.4
Ascension	13.3
Assumption Avoyelles	23.7
Avoyelles Beauregard	7.5 17.2
Bienville	53.3
Bossier	46.9
Caddo Calcasieu	28.0
Calcasieu Caldwell	19.0
Cameron	79.5
Catahoula	58.8
Claiborne Concordia	$41.5 \\ 65.3$
DeSoto	65.3 34.1
East Baton Rouge	23.9
East Carroll	69.2
East Feliciana Evangeline	16.0 40 9
Franklin	$40.9 \\ 62.5$
Grant	21.7
Iberia	11.3
Iberville Jackson	17.9
Jackson Jefferson	$55.0 \\ 32.3$
Jefferson Davis	$32.3 \\ 39.1$
Lafayette	7.4
Lafourche LaSalle	11.2
LaSalle Lincoln	41.8 33.3
Livingston	23.8
Madison	34.7
Morehouse Natchitoches	21.1
Natchitoches	200
Orleans	32,8 4.9
Orleans Ouachita	4.9 25.3
Orleans Ouachita Plaquemines	$\frac{4.9}{25.3}$ 15,5
Orleans Ouachita	4.9 25.3
Orleans Ouachita Plaquemines Pointe Coupee	$\begin{array}{r} 4.9 \\ 25.3 \\ 15.5 \\ 32.5 \end{array}$
Orleans Ouachita Plaquemines Pointe Coupee Rapides Red River Richland	$\begin{array}{r} 4.9\\ 25.3\\ 15.5\\ 32.5\\ 41.9\\ 60.0\\ 49.4 \end{array}$
Orleans Ouachita Plaquemines Pointe Coupee Rapides Red River Richland Sabine	$\begin{array}{c} 4.9\\ 25.3\\ 15.5\\ 32.5\\ 41.9\\ 60.0\\ 49.4\\ 50.5\end{array}$
Orleans Ouachita Plaquemines Pointe Coupee Rapides Red River Richland	$\begin{array}{r} 4.9\\ 25.3\\ 15.5\\ 32.5\\ 41.9\\ 60.0\\ 49.4 \end{array}$
Orleans Ouachita Plaquemines Pointe Coupee Rapides Red River Richland Sabine St. Bernard St. Charles St. Helena	$\begin{array}{c} 449\\ 25.3\\ 15.5\\ 32.5\\ 41.9\\ 60.0\\ 49.4\\ 50.5\\ 10.9\\ 42.9\\ 41.2\end{array}$
Orleans Ouachita Plaquemines Pointe Coupee Rapides Red River Richland Sabine St. Bernard St. Charles St. Helena St. Helena St. James	$\begin{array}{c} 449\\ 25.3\\ 15.5\\ 32.5\\ 41.9\\ 60.0\\ 49.4\\ 50.5\\ 10.9\\ 42.9\\ 41.2\\ 57.3\end{array}$
Orienns Ouachita Plaquemines Pointe Coupee Rapides Red River Richland Sabine St. Bernard St. Charles St. Helena St. James St. John	$\begin{array}{c} 449\\ 25.3\\ 15.5\\ 32.5\\ 41.9\\ 60.0\\ 49.4\\ 50.5\\ 10.9\\ 42.9\\ 41.2\\ 57.3\\ 6.4 \end{array}$
Orleans Ouachita Plaquemines Pointe Coupee Rapides Red River Richland Sabine St. Bernard St. Charles St. Helena St. Helena St. James	$\begin{array}{c} 449\\ 25.3\\ 15.5\\ 32.5\\ 41.9\\ 60.0\\ 49.4\\ 50.5\\ 10.9\\ 42.9\\ 41.2\\ 57.3\end{array}$
Orleans Ouachita Plaquemines Pointe Coupee Rapides Red River Richland Sabine St. Bernard St. Charles St. Helena St. John St. John St. Landry St. Martin St. Mary	$\begin{array}{c} 449\\ 25.3\\ 15.5\\ 32.5\\ 41.9\\ 60.0\\ 49.4\\ 50.5\\ 10.9\\ 42.9\\ 41.2\\ 57.3\\ 6.4\\ 257.3\\ 6.4\\ 25.7\\ 35.9\\ 25.6\end{array}$
Orienns Ouachita Plaquemines Pointe Coupee Rapides Red River Richland Sabine St. Bernard St. Charles St. Helena St. John St. Landry St. Martin St. Mary St. Tammany	$\begin{array}{c} 449\\ 25.3\\ 15.5\\ 32.5\\ 41.9\\ 60.0\\ 49.4\\ 50.5\\ 10.9\\ 42.9\\ 41.2\\ 57.3\\ 6.4\\ 25.7\\ 35.9\\ 25.6\\ 18.1\end{array}$
Orienns Ouachita Plaquemines Pointe Coupee Rapides Red River Richland Sabine St. Bernard St. Charles St. Helena St. James St. John St. Landry St. Martin St. Mary St. Tammany Tangipahoa	$\begin{array}{c} 449\\ 25.3\\ 15.5\\ 32.5\\ 41.9\\ 60.0\\ 49.4\\ 50.5\\ 10.9\\ 42.9\\ 41.2\\ 57.3\\ 6.4\\ 25.7\\ 35.9\\ 25.6\\ 18.1\\ 18.6\end{array}$
Orienns Ouachita Plaquemines Pointe Coupee Rapides Red River Richland Sabine St. Bernard St. Charles St. Helena St. John St. Landry St. Martin St. Mary St. Tammany	$\begin{array}{c} 449\\ 25.3\\ 15.5\\ 32.5\\ 41.9\\ 60.0\\ 49.4\\ 50.5\\ 10.9\\ 42.9\\ 41.2\\ 57.3\\ 6.4\\ 25.7\\ 35.9\\ 25.6\\ 18.1\\ 18.6\\ 42.3\end{array}$
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Orients Ouachita Plaquemines Pointe Coupee Rapides Red River Richland Sabine St. Bernard St. Charles St. James St. John St. Landry St. James St. John St. Landry St. Martin St. Mary St. Tammany Tangipahoa Tensas Terrebonne Union Vermilion Vernon	$\begin{array}{c} 449\\ 25.3\\ 15.5\\ 32.5\\ 41.9\\ 60.0\\ 49.4\\ 50.5\\ 10.9\\ 42.9\\ 41.2\\ 57.3\\ 6.4\\ 25.7\\ 35.9\\ 25.6\\ 18.1\\ 18.6\\ 42.3\\ 16.2\\ 31.5\\ 27.2\\ 17.4 \end{array}$
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Orients Ouachita Plaquemines Pointe Coupee Rapides Red River Richland Sabine St. Bernard St. Charles St. Helena St. James St. John St. Landry St. Martin St. Mary St. Martin St. Mary St. Tammany Tangipahoa Tensas Terrebonne Union Vermilion Vermon Washington	$\begin{array}{c} 449\\ 25.3\\ 15.5\\ 32.5\\ 41.9\\ 60.0\\ 49.4\\ 50.5\\ 10.9\\ 42.9\\ 41.2\\ 57.3\\ 6.4\\ 25.7\\ 35.9\\ 25.6\\ 18.1\\ 18.6\\ 42.3\\ 16.2\\ 31.5\\ 27.2\\ 17.4 \end{array}$
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accounting for 20% of the U.S. Department of Education's budget. Every school district in the nation has a Chapter I program which targets funds for additional assistance to schools with students from low income families.

In Louisiana, schools are ranked according to the level of resident low income families based upon a percentage of free lunch recipients in a school's attendance area. Once a school has been judged eligible for Chapter I funding, students are selected to participate in Chapter I programs based upon their degree of educational deprivation. These students then receive up to two hours a day of instruction in math, reading and language arts in small classes.

In grades K-6, the Chapter I maximum pupil/teacher ratio is 12 to one, while grades 7-12 maintain a maximum of 15 to one. The maximum pupil/teacher ratio may be reduced to eight to one by employing a teacher aid in the classroom to assist a fulltime teacher.

One limitation to the federal Chapter I program is the selection process used to determine eligibility for participation in Chapter I. It is possible for a district with 10 schools with very low income students to target resources to five of the schools, while another district with 10 not so poor schools may target its poorest two schools. However, those two schools may have fewer poor children than the five schools in the other district that received no Chapter I funding.

Conclusions

The cost of reducing K-3 class size to a maximum of 15 for all students in those grades is too large for Louisiana to undertake.

TABLE 5			
Estimated Salary and Benefits Per (Classroom	Teacher	
	State	Local	Total
Classroom Salary Per Teacher ^{al} Group Health & Life Insurance, Employer Contributions ^b Retirement Employer Contributions ^c	\$15,800 1,560 3,160	\$2,950 390 590	\$18,750 1,950 3,750
Total Average Cost Per Teacher	\$20,520	\$3,930	\$24,450
Cost of Additional Teachers for Maximum		the second states	
Classroom Teacher Salaries Group Health & Life Insurance, Employer Contributions	State (Millions) \$ 226.3 22.3	Local (Millions) \$ 42:3 5.5	Total (Millions) \$ 268.3 27.0
Classroom Teacher Salaries Group Health & Life Insurance, Employer Contributions Retirement Employer Contributions	(Millions)	(Millions)	(Millions)
Group Health & Life Insurance, Employer Contributions	(Millions) \$ 226.8 22.8	(Millions) \$ 42.3 5.6	(Millions) \$ 268.3 27.9

PAR estimates more than 14,000 additional teachers would be required at a cost in excess of \$350 million. Moreover, since most research on class size suggests the "average" or "above average" student will not benefit from smaller classes, it would be a waste of money to pursue this objective. Instead, policies should be designed to assist those students who are in most critical need of more educational assistance which small classes can help provide.

Smaller classes in the lower grades are but one of many factors affecting student learning. Classroom teachers obviously are a major factor -- their degree of competency, effectiveness and expectations that all students can learn. Another factor is "time on task," which is the time the teacher spends on instructional activities. Smaller classes are designed to allow a teacher to spend more time with each student, but little is gained if instructional time is wasted. Other factors relate to the school principal and his leadership in maintaining discipline and a good faculty with high morale, the extent of parental involvement, and the socioeconomic makeup of students.

A significant reduction in class size could be achieved only at a tremendous cost, and research does not conclude that learning automatically increases as class size decreases. To add 14,300 classroom teachers to achieve a maximum class size of 15 in grades K-3 would increase the total number of classroom teachers by more than 30%. It would be virtually impossible to recruit this large number of additional qualified teachers in the foreseeable future.

A more practical and less costly option would be to target expanded supplemental programs to students most in need of additional instructional assistance.

As PAR Report No. 3 in its Assignment: Education series concluded, Louisiana has a high percentage of "at-risk" youth and projections indicate the percentage will increase.

Recommendations

The state should develop and fund its own supplemental program to provide smaller classes for "at-risk" students. The state program should target the same type of "economically" and "educationally" disadvantaged students with similar guidelines and criteria as the federal Chapter I program, with emphasis on expanding the number of students not being reached by Chapter I. Unlike the Chapter I program which includes all elementary and secondary grade levels, the state program should be limited to grades K-3 and the maximum class size should be 15. The state supplemental program must be coordinated with the federal Chapter I program.

• For all K-3 regular education students, the present pupil/teacher ratio of 20 to one and the maximum class size of 26, to go into effect next year, should remain unchanged until adequate early childhood intervention programs have been implemented for "atrisk" students and Louisiana develops its own research data to indicate if smaller classes are advantageous for all K-3 students.

The additional teachers resulting from the reduction in the pupil/teacher ratio should be employed in K-3 in order for local school systems to receive state funds for minimum salary and related benefits. This would ensure that the state's objective, to lower class size in grades K-3, would be achieved.

• As previously recommended in PAR's Report No. 2 in its "Assignment: Education" series, the state should institute an accurate, current and effective management information system to monitor student progress and implementation of state policies and objectives.

• There should be a precise definition of class size and classroom teachers to ensure accurate data collection throughout the state.

• The SDE should survey annually the availability of classroom space in the state to determine whether local school systems will be able to provide classrooms for additional classes.

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