Florida TaxWatch

center for Educational Performance & Accountability

A TaxWatch Series:
TAKING A FRESH LOOK AT FLORIDA'S CLASS SIZE LIMITS

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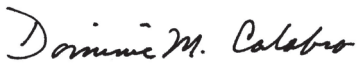
DEAR TAXPAYERS

Twelve years ago, Florida voters approved a constitutional amendment to limit the number of students in core classes in Florida's public schools. This action was taken with the expectation that smaller class sizes would result in improved academic performance, greater individual attention, and more creative approaches to learning.

To implement the constitutional amendment, the Florida Legislature has appropriated more than $27 billion to build the additional classrooms and hire additional teachers. Despite this substantial commitment of funds, and the concerted efforts of state and local educators, Florida school districts have struggled to comply with the class size limits.

Florida TaxWatch believes that it is a good time to look at what we as a state have to show for our investment in smaller class sizes, and will investigate the impacts and opportunities presented by this policy in a series of reports. The research summarized in this report—the first in that series—suggests that the gains in academic performance anticipated by the voters twelve years ago have not been realized, and that the costs associated with class size reduction are not supported. The research recognizes the potential for improved academic performance resulting from smaller classes in grades K-3, and suggests that relaxing the way class size is calculated for grades 4-12 will generate substantial savings which can then be re-invested in measures to improve the quality of teachers or provide much needed classroom resources.

The findings and recommendations contained in this report are intended to renew the discussion of smaller class sizes within the context of public policy, and to inform Florida taxpayers about the use of their tax dollars. I hope that you find the information helpful, enlightening, and useful as you think about and discuss this issue in your local community.



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BACKGROUND

In 2002, Florida voters approved an amendment to the Florida Constitution that set limits on the number of students in core classes (Math, English, Science, etc.) in Florida's public schools. Beginning with the 2010-11 school year, the maximum number of students in each core class would be limited to 18 students in pre-kindergarten through grade 3; 22 students in grades 4 through 8; and 25 students in grades 9 through 12.

To implement these limits, the 2003 Florida Legislature enacted Chapter 2003-391, Laws of Florida, which required the number of students in each classroom to be reduced by at least two students per year (beginning in the 2003-04 school year) until the maximum class size limits were met. Compliance would be determined at the district level for the 2003-06 fiscal years; at the school level for the 2006-09 fiscal years (this was subsequently extended to include the 2009-10 fiscal year); and at the classroom level for the 2010-11 (and beyond) fiscal years. The law also includes financial penalties for failure to comply. Subsection 1003.03(4) establishes a method for calculating an appropriate reduction in a district's class size categorical allocation based upon the extent to which the number of students exceeds the maximum for all classes.

As shown in Figure 1, through the 2013-14 school year, the Legislature has appropriated almost $27.6 billion to cover the facilities construction ($2.53 billion) and operating expenses ($25.06 billion) necessary to comply with the class size requirements.[1]

FIGURE 1: LEGISLATIVE APPROPRIATIONS TO REDUCE CLASS SIZES

Year	Operating Funds	Facilities Funds	Total Funds
2003-04	$468,198,634	$600,000,000	$1,068,198,634
2004-05	$972,191,216	$100,000,000	$1,072,191,216
2005-06	$1,507,199,696	$83,400,000	$1,590,599,696
2006-07	$2,108,529,344	$1,100,000,000	$3,208,529,344
2007-08	$2,640,719,730	$650,000,000	$3,290,719,730
2008-09	$2,729,491,033	$0	$2,729,491,033
2009-10	$2,845,578,849	$0	$2,845,578,849
2010-11	$2,913,825,383	$0	$2,913,825,383
2011-12	$2,927,464,879	$0	$2,927,464,879
2012-13	$2,974,748,257	$0	$2,974,748,257
2013-14	$2,974,766,164	$0	$2,974,766,174
Total to Date	**$25,062,713,185**	**$2,533,400,000**	**$27,596,113,185**

Source: http://www.fldoe.org/classsize/

Despite the significant appropriation and expenditure of state funds to comply, as of October 2013, 80 schools have yet to comply with the class size reduction mandate at the school level.[2]

Florida has invested a substantial amount of taxpayer money into class size reduction with the expectation that smaller class sizes will result in improved academic performance. The questions then become "what has Florida gotten for its $27.6 billion investment?" and "what are the implications for the future?"

DISCUSSION

Common sense suggests that public school students will perform better in small classes than large classes. Students in smaller classes have greater opportunity for individualized attention and interaction with their teacher. Studies show that reducing the size of classes, especially in the first years of elementary school, can positively affect student achievement, and that the greatest influence on achievement occurs when class size is reduced to fewer than 20 students.[3] Class size reduction is popular with teachers and parents because it is believed to improve academic performance, curtail behavior problems, and accommodate more flexibility in teaching methods.[4]

Those who oppose class size reduction cite the enormous cost required to build new classrooms and hire new teachers, which comes at the expense of raising teacher salaries, professional development for teachers, improved instructional materials and technology, and other competing educational needs. Others question the extent to which improvements in student performance can be attributed to reduced class size and not to other educational programs and initiatives.

Class Size and Student Achievement

Meta-analysis is a technique used to provide statistical, as opposed to descriptive, reviews of research papers. Meta-analysis permits researchers to combine and contrast the results of a number of studies on a single topic (e.g., class size reduction) to determine the existence and magnitude of certain effects (e.g., improved academic performance).

Long before Florida set its class size limits, there was considerable research evidence to suggest that decreasing class size will not, by itself, improve student learning and that the most promising effects of class size reductions occur in grades K-3.[5]

Cone (1978) analyzed 25 studies of class size and student performance and concluded that student achievement was not significantly higher in smaller classes.[6] Glass and Smith (1978) collected information from 77 previous studies of class size, coded information using 25 specific items and analyzed it using a regression analysis. This yielded 725 comparisons based upon 900,000 pupils spanning 70 years of research in a dozen countries. The results are unequivocal. The researchers found:

- As class size increases, achievement decreases.
- This relationship remained stable over different subjects (i.e., reading, mathematics, language and social sciences), and different age ranges from 5 to 19 years.
- Reductions in class size have more beneficial effects at the lower end (i.e., below 20 pupils per class), whereas differences at the higher end over 25 pupils have little effect.[7]

Robinson and Wittebols analyzed 55 studies that dealt specifically with class size and student achievement in grades K-12 and found:

- The most promising effects of small classes on pupil learning are in grades K-3.
- In grades 4-8, smaller classes have a slight positive effect on pupil achievement, but not nearly as positive as in grades K-3.
- The data on grades 9-12 do not indicate that smaller classes have positive effects on student achievement.[8]

Despite evidence showing limited benefits from smaller classes, a number of states have implemented programs to reduce class sizes in grades K-12, with mixed results. In 1981, the Indiana General Assembly approved an initial $300,000 to reduce student-teacher ratios to 14:1 in 24 kindergarten, first and second grade classes around the state. This two-year project showed that:

- Students in classes with pupil-teacher ratios of 14:1 scored higher on standardized tests than those in larger classes (i.e., over 22 students).
- Students in smaller classes had fewer behavioral problems.
- Teachers of smaller classes felt that they themselves were more productive and efficient than they had been when they taught larger groups.[9]

Tennessee's Student Teacher Achievement Ratio (STAR) program randomly assigned students and teachers into small (13-17 students), regular (22-25 students), and regular with a full-time aide (22-25 students) classes. More than 7000 students participated in STAR, and researchers tracked their progress from the time they entered kindergarten through grade 3. Kruger's analysis of Tennessee's class size reduction experiment (1999) showed that:

- Elementary school students randomly assigned to small classes outperformed their classmates who were assigned to regular classes.
- This effect was concentrated in the first year that students participated in the program.
- The positive effects of class size were largest for black students, economically disadvantaged students, and boys.
- There was no strong consistent effect of adding an aide to the classroom.[10]

The results of the STAR Program have been widely criticized, for reasons related to the experimental design and implementation.

- Random procedures for assignment were mandated but no pre-test was administered. Researchers are unable assess whether there were any pre-existing differences in cognitive ability between class types.
- There is no data to support that teachers were randomly assigned.
- Since teachers knew they were part of an experiment, some have speculated there may be a Hawthorne or Henry effect, which would bias the results.
- The reassignment of students from regular classes to small classes (because of behavior problems or parents' request) complicates the analysis because these students were less likely to remain with the same cohort of peers, which might have an effect on academic achievement.
- Only 48% of the students who started the program remained in the database in grade 3.[11]

Wisconsin's Student Achievement Guarantee in Education (SAGE) Program began as a five-year study of class size reduction targeting schools in which at least 30% of the students were below the poverty level. An evaluation by the Wisconsin Center for Education Research sought to determine the sustained effect of reduced class size three to four years after students began the SAGE program as kindergarten or first grade students. The evaluators found:

- Significant gains in mathematics, reading and language arts, but more so in mathematics than in reading or language arts.
- The greater effects appear in 1st grade. Subsequent grades show some gain, but not as great as that in grade 1.
- The gains demonstrated in grades K-3 were not sustained into grade 4.[12]

A study conducted by a consortium of research groups (RAND, the American Institutes for Research, Policy Analysis for California Education, WestEd, and EdSource) evaluated the effects of class-size reduction in Grades K-3 in California on student achievement. The consortium found that:

- The relationship of class size reduction to student achievement was inconclusive. Although both overall exposure to class size reduction and statewide average test scores increased across cohorts, the magnitude of the changes in test scores did not track with the incremental changes in class size reduction.
- It could not be determined how much of the recent gain in achievement was attributable to class size reduction and how much was linked to other initiatives.[13]

In Connecticut, Hoxby (2000) analyzed the effects of class size on student achievement using longitudinal variation in the population associated with each grade in 649 Connecticut elementary schools. Using two different methods, Hoxby found that:

- Reductions in class size have no effect on student achievement.
- There is no evidence that class size reductions were more efficacious in schools that contain high concentrations of low-income or minority students.[14]

A 2010 study by Matthew M. Chingos, a research fellow at Harvard University's Program on Educational Policy and Governance, analyzed student-level data provided by the Florida Department of Education to follow all students in grades 4-8 who took the state reading and math tests between 2001 and 2007.

Chingos compared students who were more affected by the class size limits because they attended schools that had class sizes above the limits with students who were less affected because they attended schools that were in compliance with the limits.

The study found that:

- Class size reduction had no discernable impact upon student achievement, either positive or negative.
- Students in schools where districts were not forced to spend their money on class size reduction improved as much on state tests as those attending schools in districts subject to the constitutional mandate.
- Students attending schools that were required to reduce class size did no better on state math and reading tests than students attending schools that were given funding to spend as they saw fit.
- There was no significantly different impact on the average performance of ethnic and racial groups or between economically advantaged and disadvantaged students.[15]

In a May 2010 interview with Atlanta Journal Constitution columnist Maureen Downey, Chingos said "We do not know from this study whether giving districts more unrestricted state funds has positive effects or not, but the study strongly suggests that monies restricted for the purpose of funding class-size reduction mandates are not a productive use of limited educational resources."[16]

The results of international studies are consistent with the results of studies conducted in the United States. Levin (2001) uses longitudinal data on Dutch students who were enrolled in grades 2, 4, 6 and 8 during the 1994-95 school year. Using a quantile regression procedure, Levin found that, other than 8th graders at the 50th percentile, there is absolutely no evidence that class size affects achievement.[17]

Woessman and West (2006) used the international database of the Third International Mathematics and Science Study (TIMSS) to estimate the effects of class size on student achievement in math and science in school systems in 18 countries. They were able to find a statistically significant effect from smaller classes in only a small number of cases (France and Ireland in Math; Greece and Spain in Science).[18]

In a November 2010 speech, U.S. Department of Education Secretary Arne Duncan noted that high-performing education systems in Asia have larger classes than the U.S. South Korea averages about 36 students, Japan averages about 33, and China has as many as 50.[19]

Teachers in these countries teach larger, but fewer, classes. This leaves more time to prepare lesson plans and participate in training. Researchers disagree on the reasons why students in these large classes perform so well. Whatever the reason, it is clear from this that students are capable of learning in large classes.

Class Size & Student Behavior and Attitudes

Although there is a considerable body of research on the effects of class size on student achievement, there is very little research on how students' behavior and attitudes are affected by smaller classes. The conventional wisdom is that, with smaller classes, teachers will be able to devote more time to an individual student, offer more individualized learning activities, more closely monitor student progress, and keep students on-task, all of which will limit disciplinary problems and student misbehavior.

In a small-scale study conducted by the University of Utah, the same teacher taught two different kindergarten classes, one small (23-28 students) and one large (34-39 students). Both classes were taught in the same room, using the same teaching program and equipment. The teachers observed that:

- The larger group was more aggressive than the smaller group with more incidents of pushing, crowding and striking and was generally noisier, more chaotic and harder to teach.
- In contrast, the atmosphere in the smaller class was described as 'more relaxed and permissive' in which children appeared to make several friends, be more well-adjusted, more patient and helpful to each other, less dependent upon one friend and exhibiting more variety and creativity in their play.[20]

Finn et al (2003) conclude on the basis of their review that the research evidence supports two main conclusions:

- Students in small classes in the elementary grades are more engaged in learning behaviors, and they display less disruptive behavior than students in larger classes.
- Effects on processes appear to fade out by later grades and that class size seems to affect student engagement more than teaching, though there is some evidence that teachers' interpersonal styles benefit from small class reductions.[21]

A 2005 British study used a time sampling method on a sample of 257 children in 16 small (25 or under) and 26 large (31 and over) year 6 classes (aged 10-11 years). Researchers found that:

- In small classes there were more individualized task related contacts between teacher and students, and a more active role for students. These results confirmed those from earlier research on children aged 4-5 years.
- Against expectation, class size did not affect student on-task behavior or peer interaction.[22]

Evidence of a statistical association between class size and suspension and attendance records was found in a follow-up study of grade 10 students who had participated in the original STAR project in Tennessee. Fewer 'dropped out' of school, the average number of days absent from school was lower than those who had been in 'regular' or 'regular plus aide' classes, and they continued to make better grades.[23]

The previously referenced 2010 study by Matthew M. Chingos, who analyzed student-level data provided by the Florida Department of Education to follow all students in grades four through eight who took the state reading and math tests between 2001 and 2007, found that there were no discernible impacts on student absenteeism and behavior problems.[24]

Class Size and Flexible Teaching Methods

It is important to look at what happens in smaller classrooms, especially with respect to opportunities for teaching students in smaller classes and how teachers respond to those opportunities. The conventional wisdom about small classes is that they minimize disruption and free teachers to give students greater individual attention and to use more creative approaches. But study after study has found that educators rarely change their instructional styles to match the size of their class. Educators seem to devote the same overall amount of time to individual instruction in small and large classes.[25]

A Shapson study (1978) of 62 fourth and fifth grade classes in 11 Toronto schools investigated the effects of class size and teachers' expectations about the effects of class sizes, students' attitudes and opinions, student achievement and other classroom variables.

Shapson concluded that:

- Variations in class size in these two grades resulted in few changes in classroom functioning.
- Class size is perceived as beneficial by teachers.
- Students' attitudes toward school, however, are unlikely to change; neither are teachers' instructional styles.[26]

Blatchford and Mortimore (1994) found that, based on the literature, reducing class size has little effect on teachers' methods and argued that teachers do not change their methods of teaching when faced with smaller classes.[27] Similarly, Stecher and Bohrnstedt (undated) found in California schools that class size, teaching styles, and teaching practices were very similar in reduced and non-reduced size classes, except that more time was spent on working one-to-one, for example with 'problem readers.'[28]

Molnar, et al (1999) looked at SAGE classrooms in Wisconsin in some detail and found that:

- Reduced class size permits some movement towards more student-centered teaching but the main effect appears to be a focus on students as individuals.
- Many, if not most, of the techniques and methods that teachers use may be the techniques and methods that they have used in normal-sized classrooms. The difference is that now techniques and methods are directed at individuals.
- This attention to individuals is frequently implemented in one-to-one situations, in small groups formed on the basis of need.[29]

The class size reduction consortium that evaluated the effects of class-size reduction in grades K-3 in California on student achievement found that:

- Students in reduced size third-grade classes received more individual attention, but similar instruction and curriculum.
- Teachers in both reduced and non-reduced size third-grade classes reported spending similar amounts of time and covering similar amounts of curriculum in language arts and in mathematics.[30]

A statewide statistical survey in Florida suggested that teacher practices may potentially be more important than class size reduction. Research supports alternative measures to reduction in class size that do improve student achievement. These measures are related more to improving teaching practices than to the number of students in a classroom.[31]

In England, Hargreaves et al (1998) observed that there was little variation in the teaching style of teachers when they worked with large or small classes. Seven pairs of teachers were matched and, as 'buddies,' taught each others' classes. The findings of this study suggest that the teachers used to the large classes had difficulty maximizing the opportunities offered in the small classes because they weren't used to teaching small numbers of students.[32]

Class Size and Teacher Quality

Researchers Christopher Jepsen and Steven Rivkin investigated the effects of year-to-year differences in class size as a result of California's class size reduction program on student achievement and related changes in teacher quality.
Jepsen and Rivkin found that:

- Many of the 25,000 new teaching positions created during the first two years were filled by teachers without certification or prior teaching experience. Other positions were filled by experienced teachers who switched grades or schools (or both).
- Although the reduction in class size raised school average mathematics and reading achievement, the accompanying increase in the share of teachers with neither prior experience nor full certification dampened the benefits of smaller classes, particularly in schools with high shares of economically disadvantaged, minority students.
- Having a first-year teacher, as opposed to a teacher with at least two years of experience, reduced achievement in mathematics and reading.[33]

The class size reduction consortium that evaluated the effects of class-size reduction in Grades K-3 in California on student achievement found that:

- Class size reduction was associated with declines in teacher qualifications and a more inequitable distribution of credentialed teachers.
- To meet the increased demand for teachers, many districts hired teachers without full credentials.
- Most of the uncredentialed teachers were hired by schools serving the most disadvantaged students, in part because these schools were slower to implement class size reduction, and more certificated teachers had already been hired elsewhere.
- Class size reduction had only a modest effect on teacher mobility. While there was some initial increase, the effect was small and soon disappeared.[34]

International studies also support the need for quality teachers. Findings from the Organization for Economic Cooperation and Development's Programme for International Student Assessment (PISA) suggest that education systems prioritizing higher teacher quality over smaller classes tend to perform better, which confirms other research showing that raising teacher quality is a more effective measure to improve student outcomes.[35]

SUMMARY OF OVERALL FINDINGS

Based on a literature review, the findings of studies analyzing the effects of class size reduction on student achievement, student behavior, student behavior and attitudes, teaching methods and teacher quality suggest the following recurring themes:

- Reducing class size will not, by itself, improve student achievement.
- The most promising effects of class size reductions occur in grades K-3.
- Reductions in class size have more beneficial effects when class size is below 20 students.
- The positive effects of class size are largest for minority and economically disadvantaged students.
- It cannot not be determined how much of any demonstrated gains in student achievement are attributable to class size reduction and how much are linked to other initiatives.
- Students in small classes in the elementary grades are more engaged in learning behaviors, and display less disruptive behavior than do students in larger classes.
- Reducing class size has little effect on teachers' instructional methods and styles.
- The increase in the number of teachers with limited experience and credentials that accompanies reduced class sizes dampens the benefits of smaller classes, particularly in schools with high percentages of minority and economically disadvantaged students.
- Raising teacher quality is a more effective measure to improve student outcomes.

IMPLICATIONS GOING FORWARD

Districts Struggle to Comply

Despite the significant appropriation and expenditure of state funds to comply, Florida school districts continue to struggle to meet the class size limits. Schools that do not comply with the class size limits are subject to a financial penalty. The Department of Education calculates an appropriate reduction in a district's class size categorical allocation based upon the extent to which the number of students exceeds the maximum for all classes. The reduction is then transferred to schools that are in compliance.

From the 2010-11 school year, when the maximum number of students in each core class would be limited to 18 students in pre-kindergarten through grade 3; 22 students in grades 4 through 8; and 25 students in grades 9 through 12, through the 2012-13 school year, more than $24.7 million has been reallocated from schools that failed to meet the class size limits to schools that did comply.[36]

TABLE 2: FUNDS REALLOCATED TO SCHOOLS IN COMPLIANCE

Year	Traditional Schools	Charter Schools	Total
2010-11	$7,826,281	$88,885	$7,915,166
2011-12	$10,851,866	$163,213	$11,015,079
2012-13	$5,674,696	$107,836	$5,782,532
		Total	$24,712,777

To help local school districts comply with the class size limits and avoid the financial penalties, the legislature has authorized the use of:

- Policies designed to encourage students to take dual enrollment courses and courses from the Florida Virtual School.
- Policies to implement early graduation from high school.
- Methods to maximize the use of instructional staff.
- Innovative methods to reduce the cost of school construction.
- Joint-use facilities.
- Alternative class scheduling and non-traditional calendars.[37]

Even with these additional methods, local school districts continue to struggle to meet the class size limits. The Broward County school district expects to pay a $200,000 penalty this year for not meeting class size limits at 21 of its schools. Had the state not allowed districts to calculate class size for magnet schools based on school-wide averages, instead of period by period, the district would have faced a $1.1 million fine.[38]

Broward County's efforts to comply with the class size limits have angered parents in Weston, where students at an elementary school were students were pulled out of their regular classrooms and placed in a newly created class of first- and second-graders in an unused portable which, according to some parents, lacked any semblance of a classroom. Parents said they weren't given advanced warning and were sent a letter just a day before the changes took effect.[39]

Pressure to comply with the class size reduction mandate has forced some school districts to cut corners. In Lake County, a December 2013 whistle-blower complaint regarding class size violations resulted in a finding that some high school students in core classes above the 25-student cap were shuffled on paper into a "leadership skills" class. The class existed only during the week the state was verifying class size numbers; the class never met; and the students physically remained in their original classrooms. Several other schools were also deemed to have broken the law. The district now faces an undetermined fine for breaking the law.[40]

The pressure to comply has caused some districts to "throw up their hands" and ignore the class size limits. Brevard County has intentionally allowed about 30 of its 82 schools to have more students per class than state law permits. The district expects to pay a financial penalty of approximately $170,000 to the state, (which would pay the salaries and benefits of 3-4 teachers), an amount that is substantially less than the cost of hiring enough new teachers to be in compliance.[41]

Marion County school administrators have also made the decision to intentionally violate the class size limits, a decision that has (according to the Department of Education) made Marion County the state's worst violator of the class size limits. To district officials, the decision is about saving money for important programs, like art and music, as well as to keep students in school. The district would have to spend $10 million to hire the 200 teachers needed to meet class-size mandates.

Facing a financial penalty of $1 million for non-compliance, the district chose instead to add more children to classrooms and save many vital programs and maintain

salaries of the district's nearly 6,000 employees. Administrators say they are not proud of the strategy, but they defend it as being a "sound business decision" to balance the budget.[42]

It appears the pressure to comply with the class size limits will continue, at least for the foreseeable future. According to data from the Florida Department of Education, public school enrollment in grades 4-8 is projected to increase by almost 65,000 students (FTE) through the 2018-19 school year; enrollment in grades 9-12 is projected to increase by almost 23,000 students (FTE) during this same period. Enrollment in kindergarten through grade 3 is projected to decline by more than 75,000 students (FTE) during this same period.[43]

PROJECTED STUDENT (FTE) ENROLLMENT: 2014-15 THROUGH 2018-19

Year	Grades K-3	Grades 4-8	Grades 9-12
2014-15	854,303.59	1,034,222.78	816,070.60
2018-19	778,974.26	1,099,101.51	838,936.17
	(75,329.33)	64,878.73	22,865.57

CONCLUSIONS

Twelve years after Florida voters approved an amendment to the Florida Constitution that sets class size limits, it's a good time to take a step back and look at where we are as a state and what we have to show for our investment. This meta-analysis shows some important things for Florida's class size requirements moving forward:

- The overall findings do not support the costs associated with class size reduction, and suggest that smaller investments in other educational practices may produce similar or better improvements in student achievement. This is consistent with findings of studies from other states and other countries.
- The state of Florida has invested $27.6 billion to reduce class sizes with the expectation that smaller class sizes will result in improved academic performance. The most definitive study of class size reduction in Florida (Chingos, 2010) found that class size reduction had no discernable impact upon student achievement, either positive or negative.
- Even in those schools where the class size limits have been met and student performance has improved, it cannot be determined with any certainty how

much of any demonstrated gains in student achievement is attributable to class size reduction and how much is linked to other initiatives (e.g., mentoring programs). Having said that, just as researchers could not link demonstrated achievement gains to the reduction in class size, they could not eliminate class size as the cause of the achievement gain either.

- Florida's focus on limiting class sizes to 18 students in pre-kindergarten through grade 3 is consistent with many studies that show that the greatest influence on student achievement occurs when class size is reduced to fewer than 20 students, especially in the first years of elementary school.
- Reducing class size in grades 4-12 is not necessarily the most cost-effective investment available. Greater gains may be achieved through investment in other areas of education reform.
- Although students in smaller classes are more likely to receive more individual attention, reducing class size has little effect on teachers' instructional methods and styles. Students may receive more one-on-one time with their teacher, but they are likely to receive similar instruction and curriculum to students in larger classes.
- Concerns about the decline in teacher quality that accompanies the hiring of so many new teachers to fill the new classrooms cannot be overemphasized. The increase in the number of teachers with limited experience and credentials dampens any benefits of smaller classes, particularly in schools with high percentages of minority and economically disadvantaged students.
- Despite the substantial investment of state funding and the flexible methods to comply afforded by Florida law, local school districts continue to struggle to meet the class size limits. Schools that fail to comply have a portion of their class size categorical allocation reallocated to other schools that have complied. Districts like Broward, which have a difficult time complying with the class size limits, stand to have a portion of its class size categorical allocation reallocated to other schools, making it even more likely that these districts will take classroom space and dollars from other programs to support class size reductions. Districts like Brevard, where the financial penalty is considerably less than the costs to comply, may continue to accept the financial penalty rather than incur the costs of compliance.

- Florida's continued K-12 enrollment growth is projected to occur in the grades where research shows reduced class sizes have the least positive effect on student achievement. Enrollment in grades where research shows reduced class size has the most positive effect is projected to decrease. This should make it easier for districts to maintain reduced class sizes in the grades where the reduced class sizes will have the most positive effects.

RECOMMENDATIONS

Florida TaxWatch supports Florida's continued efforts to reduce class sizes to 18 students or fewer in pre-kindergarten through grade 3. This is where Florida's investment in class size reduction will have the greatest influence on student achievement.

Florida TaxWatch supports a Constitutional Amendment that would permit local school districts to achieve the class size reduction mandate on a "school level class size average" basis for grades 4-12. This will give school districts additional flexibility while only modestly affecting the way the class size limits are applied, and will generate savings, estimated at $7 to $10 billion over a ten-year period.[44]

Florida TaxWatch supports the reinvestment of the savings realized by permitting local school districts to achieve the class size reduction mandate on a "school level class size average" basis for grades 4-12 into measures to improve teacher quality and to improve student achievement.

Florida TaxWatch supports additional research to explore the conditions under which class size reduction is most effective in improving student achievement. We need to better understand which administrative and classroom practices are most effective in small classrooms and whether these differ from best practices in larger classes.

It should be expressly clear and understood that TaxWatch is NOT recommending a reduction in the annual legislative appropriation for education. Calculating class size on a school level average for grades 4-12 is expected to generate millions of dollars annually in savings, which could then be reinvested to improve the quality of teachers or provide much needed classroom resources. TaxWatch will continue to investigate and report on these savings.

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