Class Size, Pre-kindergarten, and Educational Adequacy:

Costs and Funding Options for Florida

Policy Brief

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Executive Summary

Since 1998, Florida voters have passed three amendments that pressure state officials to increase education spending. The 1998 amendment introduced constitutional language establishing the importance of education to the state and its citizens, requiring "adequate provision…for a uniform, efficient, safe, secure, and high quality system of free public schools." Two amendments followed in 2002, requiring free, high-quality pre-kindergarten and mandating the reduction of class sizes.

The analysis in this brief suggests that the recurring costs of the class size and pre-K amendments will be $3 billion per year after full implementation. For pre-K, the actual costs estimated here are close to the estimates being used by the Legislature; for class size, the actual costs estimated here are lower.

Florida now has the lowest overall tax rates in the country. This analysis suggests that full funding of the two amendments would raise Florida's ranking only slightly, from 50th to 49th. Therefore, Florida would remain a low tax state.

One of the biggest genuine uncertainties remains the constitutional requirements for educational adequacy required by the 1998 amendment. Estimating these costs is quite difficult compared with pre-K and class size reductions, which are much more explicit about the requirements.

It is therefore recommended that the Legislature:

1. Fund an independent, external review of CSR costs and benefits to provide a steady source of objective information as the amendments are implemented.
2. Perform a cost study for educational adequacy to provide preliminary estimates of potential additional funding requirements.
3. Create a bipartisan tax and expenditure commission in advance of the constitutionally mandated commission of 2007 to make sure that the amendments can be implemented by means of a stable funding source.

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Section 1: The Issue

Florida voters are concerned about an apparent lack of resources in their schools. Over the past six years, they have expressed this concern forcefully by passing three constitutional amendments aimed at addressing the perceived problem. These votes have conveyed a strong message to state officials, requiring them to take action.

In 1998, 71 percent voted to amend the constitution so that it is "a paramount duty of the state to make adequate provision for the education of all children residing within its borders," establishing the importance of education to the state and its citizens. Moreover, voters affirmed that "adequate provision shall be made by law for a uniform, efficient, safe, secure, and high quality system of free public schools."

In 2002, 59 percent of voters supported an additional constitutional requirement to provide "every four-year old child in Florida [with] a high quality pre-kindergarten learning opportunity [that is] high quality, free, and delivered according to professionally accepted standards." On the same ballot, 52 percent of voters supported a separate amendment requiring the reduction of class sizes to no more than 18 students in grades K-3, 22 students in grades 4-8, and 25 students in grades 9-12. No other state constitution has such stringent requirements for its education system, or for any other government program. The recent constitutional amendments therefore represent a strong statement on the part of voters.

But the words in the constitution represent just a first step toward implementation of the requirements. Responsibility for that implementation lies solely and explicitly with one party: the State of Florida. This brief compares the likely costs of the three amendments with the state's current revenues. Also considered is whether the amendments could be funded without placing an undue economic burden on Florida citizens. Low taxes are one factor in the state's economic well-being; so are the benefits of a high quality education system.

Section 2: Background

Funding for education has increased substantially in nearly every state over the past several decades, according to commonly used measures. From 1981-2001, national K-12 education spending increased at a rate of 2.6 percent per year annually (adjusted for inflation). Education spending in Florida has also increased, but at the slower rate of 1.4 percent annually over the same period.[1] The state now ranks 38th in the nation in spending on K-12 education.[2]

But even the smaller numbers in Florida may over-estimate the real resources available in the state's schools. Economists have long believed that services such as education must continue to spend more money just to provide the same service, and not simply because of inflation.[3] Like businesses, schools compete with other organizations in the private sector to attract employees. The fact that opportunities for workers have improved in the private sector means that schools have more difficulty attracting and retaining teachers and administrators with the same skills. This is especially true for women, who make up 75 percent of all teachers.

It is true, then, that inflation-adjusted education spending has increased in recent years. But the actual resources available to schools have increased more slowly, and may actually have decreased. By one estimate, the rate of inflation overestimates resources by a full 1 percent per year.[4] If this is correct, then resources in Florida have been essentially stagnant, even as the economic benefits to education have grown significantly.

It is possible to place too much emphasis on dollars as a factor affecting education quality, especially in a budgetary analysis such as this. More so than most states, Florida has engaged in a wide variety of other reforms, from high-stakes testing to charter schools, that are all part of the state's efforts to improve education. Combined with the state's relatively low spending, it is therefore clear that Florida's school improvement efforts have focused on accountability rather than on enhancing resources. The recent votes approving constitutional amendments that enshrine a standard of quality suggest that the public may demand a more balanced approach.

Section 3: Data

If implemented as stated, the 2002 constitutional amendments will increase real spending in Florida schools. Because none of the constitutional amendments has been acted upon so far, however, any cost estimates are, in fact, speculative. Moreover, the wording of the constitutional amendments is vague enough that the true costs depend on how the amendments are interpreted and translated into policies. A range of estimates is discussed below, along with the specific assumptions that informed them.

Costs of Class Size Reduction

The most commonly cited estimates for the class size reduction (CSR) amendment were made by the Florida Revenue Estimating Conference (REC) of June 27,

2002, before the vote was taken on that amendment.[5] These estimates were used as the basis for debate and public discussion in the months leading up to the vote and have since been used for policy implementation. The REC cost estimates range from $20-$28 billion through 2010-2011. The discussion below suggests that neither end of this range is a clear representation of the true costs, however.

When trying to estimate the CSR costs, several important questions arise about the meaning of the amendment. First, in which classrooms do class sizes need to be reduced? The amendment applies to all grades, K-12, but it explicitly does not apply to "extracurricular" classes. Second, by how much will class size actually be reduced? The class sizes specified in the amendment—18 students in grades K-3 and so on—are *maximums*. This means that many classes will have to have even fewer students than the caps state. For instance, if a school has 19 third graders, then the group would have to be split into two classes that are well below the maximum sizes. There has also been some question about whether the size of every eligible classroom needs to be reduced, or whether districts can instead use averages for groups of grades or schools, providing some flexibility and lower costs. The amendment is fairly specific: class size should be reduced in every classroom. Therefore, all of the estimates below make this assumption.

The total costs of CSR will also depend on two other important questions: first, how many classrooms will be needed? Second, how will the classrooms be made available? The answers to these questions depend on the choices made by school officials, which are difficult to predict. To what degree will schools try to reduce the number of classrooms that need to be created—by extending the school day, using temporary dividers in existing classrooms, or making better use of under-utilized space?

To the extent that new classrooms do need to be created, will districts buy portables, build new buildings in new locations, or build new classrooms attached to existing buildings? The answers to all of these questions could have a significant impact on the overall costs.

The two REC estimates share many important assumptions.[6] Indeed, the only difference is in the way schools will create the additional classroom space. The low REC estimate assumes that 75 percent of new space requirements will be met by purchasing portable classrooms and the remaining 25 percent will be provided through construction at new school sites. The high estimate essentially reverses these numbers: 88 percent of new space requirements will be met through new construction at new sites. Construction at new sites is more expensive than add-on construction to existing buildings because of land acquisition costs and additional operating costs that go along with entirely new buildings. Every school must have a principal, for instance, and a new building requires a new principal.

Several other unofficial estimates of CSR costs were made by the Office of Economic and Demographic Research (EDR). In addition to the method of creating new classroom space, these estimates vary in terms of teacher salaries. Three estimates are available from the EDR, in addition to the two REC estimates discussed above. These are summarized below in Table 1.

Table 1: Summary of CSR Cost Estimates

Estimate	Key Assumptions	Cumulative Cost (through 2010-2011)	Annual Recurring Cost (after 2010-2011)
REC (low)	* 25-75 split between new construction and portables * teacher salary equals statewide average	$20.0 billion	$2.4 billion
REC (high)	* 88-12 split between new construction and portables * teacher salary equals statewide average	$27.5 billion	$2.6 billion
EDR (low)	* 0-100 split between *new* construction and portables * teacher salary equals average for BA degree, no experience	$12.5 billion	$1.5 billion
EDR (medium)	* 100-0 split between *add-on* construction and portables * teacher salary equals average for all current BA teachers	$19.6 billion	$1.9 billion
EDR (high)	* 100-0 split between *new* construction and portables * teacher salary equals statewide average	$26.8 billion	$2.6 billion

Implicit in all five estimates is the idea that every newly created classroom will require a new physical space (portables, new construction, etc.). Whether this is true depends on how, and how much, CSR capital funds are provided. If funding is based on the low capital costs above, most schools could probably meet the requirements through a combination of increasing the utilization of existing space and providing inexpensive portables. If more capital funds are provided, districts will likely take advantage of the opportunity to create high quality space. In many locations, there is already great

pressure to replace existing portables and old, dilapidated buildings. CSR capital funds may provide an opportunity to meet that demand.

This creates a dilemma in the estimation of costs. New construction will not be necessary, strictly speaking, to meet the requirements of CSR. However, the overall quality of classrooms would likely deteriorate if capital is funded at the levels in the lower estimates. Such deterioration seems clearly at odds with the will of the voters, especially the 71 percent who voted in favor of "a high quality system of free public schools." Therefore, the higher estimates for capital costs appear more appropriate.

The appropriate assumption with regard to salary is no less complicated. It would be impossible for schools to fill existing slots with experienced teachers who receive salaries equivalent to the overall average; there is simply not a large pool of such teachers waiting in the wings right now. Therefore, the overwhelming majority of new hires will be less experienced. On the other hand, there is already a shortage of teachers in certain subjects and locations, which will make it difficult to fill these positions at existing salaries without reducing the quality of teachers. This may force schools to raise salaries even for inexperienced teachers, driving the salary cost back up. Moreover, the cost for each new teacher will increase over time as teachers gain more experience and demand higher salaries.

Based on the above discussion, the most reasonable assumptions would appear to be: (a) teacher salary for an average teacher with a BA degree and no experience (used in the low EDR estimate); and (b) 88 percent new construction and 12 percent portables (used in the high REC estimate). Using these two assumptions, the cumulative cost through 2010-2011 therefore appears to be approximately $22 billion through 2020-

2011.[7] To estimate the recurring costs, it is necessary to change the teacher salary assumption to the current state average, consistent with the high REC estimate of $2.6 billion per year. This is necessary because teacher salaries will also be relatively low early on, but will grow over time as teacher experience levels rise.[8]

Costs of Pre-Kindergarten

As with class size reduction, the main costs of pre-kindergarten involve hiring more teachers and finding more classroom space. The costs of pre-kindergarten appear to be more predictable than estimates of CSR, although the pre-K estimates made by the REC in this case still leave some uncertainties.

The REC estimates of the pre-K costs are derived directly from existing pre-K programs that now serve nearly 60,000 four-year-olds throughout the state. The cost of the existing program is $24 per pupil per day in full-time pre-K programs certified by the National Association for the Education of Young Children (NAEYC) or similar standard-setting agencies. This is somewhat higher than existing pre-K programs in Georgia and Oklahoma, where costs are approximately $20 per student per day. The higher number is used in the estimates by EDR.

The Florida pre-K program is voluntary, and many parents may choose not to take part. Experiences in Georgia suggest that a 70 percent participation rate is expected, which is the assumption used in the EDR estimates. Based on estimates of the number of four-year-olds, this implies that 92,000 additional children will take part in pre-K, in addition to the current 60,000. For a full school year of 180 days, the resulting cost estimate is 92,000 x 180 x $24 = $400 million per year. The expected costs per pupil are higher, because of the higher NAEYC standards; therefore, the pre-K amendment will

also increase costs for students who would have been in pre-K even without the amendment. This adds $27 million to the cost. The pre-existing costs of the pre-K amendment—estimated at $227 million per year—are not attributed to the amendment, because these would have occurred without the constitutional change.

Once again, the main uncertainty regarding these estimates has to do with capital costs. The cost estimates include the funds required to create classroom space for private providers. Capital costs using this approach are "smoothed out" over time on the basis of average rental prices incurred by existing pre-K providers. The Florida Council for Education Policy Research and Improvement (CEPRI) performed separate estimates of the pre-K amendment, using costs from a previous pre-K program, the Pre-kindergarten Early Intervention Program, which was eliminated in January 2002. The costs were nearly identical to estimates from REC.

An additional consideration for pre-K costs is whether federal welfare funds can be used to partially offset the costs to the state. There are two key criteria when determining the potential contribution of federal funds: first, does the federal government allow their welfare grants to states to be used for pre-K? One part of the federal welfare program explicitly precludes the use of funds for services, such as pre-K, that are widely available to other residents of the state.

Second, would pre-K bring additional federal funds to the state? If not, then any use of federal funds for pre-K amounts to a shell game in which funds from one program are used to pay for another. The shifting of funds in this way does not, in fact, represent a reduction in costs. Based on information for the Florida Department of Education

(FDOE), the state will receive an estimated $511 million in federal welfare funds in 2003-2004, but there is no evidence that any of these funds meet the two criteria.

Uncertainties remain about how the cost estimates were developed, especially with regard to capital costs. It is reasonable to assume that federal funds will make no meaningful contribution to pre-K costs. Therefore, the annual figure of $400 million appears to be a reasonable estimate of the recurring pre-K costs. Combined with estimates for CSR, this amounts to a total recurring cost of $3 billion per year. This represents a 20 percent increase over existing funds and would raise the state's spending ranking from 38th to almost exactly the national average.[9]

Education and the State Fiscal Picture

All of the amendments place the responsibility of meeting the requirements in the hands of the state government, which means the state will have to find revenue from some source in order to comply, either by reducing spending in other areas or by raising additional revenue.

The affordability of the constitutional amendments can be measured by the state's "effort" in funding existing government programs. This idea is commonly used by economists to refer to the ratio of total tax revenues or expenditures to the total income of all citizens. If this ratio is low compared with other states, it means the state receives a relatively small portion of the total resources available in the state—in other words, the state is giving "low effort." This would also mean that there is room to raise revenues without placing the state at a competitive disadvantage compared with other states.[10]

The state's effort in raising resources can be measured in either expenditures or revenues, which differ from each other only because of accounting methods and deficit

spending. Florida has the lowest rate of expenditure effort in the nation, according to Table 1. The state also has the 7th lowest rate of revenue effort.[11] (Note that these calculations are unrelated to the *sources* of taxation in any given state. Income is simply a common measure of the overall tax base and does not reflect the use of actual income taxes.)

Table 2: Expenditure Effort

State	(1) State and Local Expenditure/ Person	(2) Income/ Person	(3) Expenditure Effort (1)/(2)	(4) Effort National Rank
Alabama	$3,741	$18,189	20.6	26
Georgia	3,314	21,154	15.7	42
Mississippi	4,101	15,853	25.9	6
South Carolina	4,451	18,795	23.7	11
National Average	4,159	21,587	19.3	n.a.
Florida	*3,069*	*21,557*	*14.2*	*50*

To understand the size of the costs of the amendments, it is worth considering how high expenditures would be in Florida if the level of effort in the state equaled the national average. These calculations are made in Figure 1.

Figure 1

Florida Income/Person		$21,557
National Expend. Effort	x	19.3%
New Expend. Level	=	$4,161
Existing Expend. Level	—	$3,069
Additional Expend/Person	=	$1,092
Population	x	16,713,000
Total Additional Expend.	=	**$18,233,883,000**

The calculations in Figure 1 suggest that an additional $18 billion would be spent if Florida's expenditure effort were the same as the average state's. This does not mean that the state should raise taxes by an amount sufficient to create $18 billion in revenue. Indeed, it is unlikely that, in the current political climate, Florida would spend as much as the average state. The recent votes on the constitutional amendments do, however, suggest that Florida voters are willing to increase expenditures to improve education. Moreover, the calculations here imply that Florida can easily afford such improvements while maintaining its status as a low-tax state. Even with the $3 billion annual costs of the class size and pre-K amendments, *the state would still be ranked 49th in the nation in expenditure effort*.[12]

There also appear to be ample options for raising the necessary revenue without raising tax rates. The state has recently reduced enforcement of tax laws, allowing some delinquent taxpayers to avoid contributing to state functions, reducing revenue by $2.5 billion through 2010-2011 (cumulative). Required local effort for some state services is being reduced by $7.2 billion over the same period. The intangibles tax is being phased out, reducing revenue by an additional $6.6 billion. All of these provide options for raising revenue that are consistent with economists' recommendations to have a broad tax base with low tax rates.

Section 5: Conclusions and Recommendations

It is clear that the class size and pre-K amendments can be funded without changing Florida's status as a low-tax state. The two amendments are affordable, in part, because the actual costs will be lower than even the lowest estimates being considered by the Legislature. The high estimates reflect ambiguity about what costs will be incurred.

These uncertainties have been exploited for political purposes, allowing people on both sides of the debate to use numbers that fit their positions. Overall, it appears that the costs have been overstated.

One of the biggest uncertainties remains the constitutional requirements for educational adequacy. Estimating these costs is quite difficult compared with pre-K and class size reductions, which are much more explicit about the requirements. The interpretation of the adequacy language may ultimately be decided in the courts. The state should not wait until this occurs to look for revenue to fund any of the amendments, however. The Legislature is already relying on non-recurring funding to provide resources for the initial phases of implementing the amendment. Replacing those sources with a solid funding base will put the state in a better position to deal with adequacy requirements in the future.

It is therefore recommended that the Legislature:

1. Fund an independent, external review of CSR costs and benefits to minimize the use of misleading estimates.
2. Perform a cost study for educational adequacy to provide preliminary estimates of potential additional funding requirements.
3. Create a bipartisan tax and expenditure commission in advance of the constitutionally mandated commission of 2007 to make sure that the amendments can be implemented by means of a stable funding source.

Notes and References

[1] Actual spending in Florida, according to the National Center for Education Statistics (NCES) was $6.5 billion in 1981 and $15.6 billion in 2001. The number of pupils increased from 1.4 million to 2.5 million over the same period.

[2] Total operating funds in Florida were $5,831 per pupil during the 1999-2000 school year, according to the National Center for Education Statistics (NCES), a non-partisan federal agency. More recent data for valid cross-state comparisons was unavailable.

[3] The idea is often attributed to:

Baumol, W. J. (1967). Macroeconomics of Unbalanced Growth: The Anatomy of the Urban Crisis. *American Economic Review*, *62*, 415-26. It is now a standard topic in public finance textbooks. See, for example:

Fisher, R. C. (1996). *State and local public finance*, 2nd ed. Chicago: Irwin.

[4] Rothstein, R. (1997). *Where's the money going?* Washington, DC: Economic Policy Institute.

[5] The Florida Office of Economic and Demographic Research (EDR) played a key role in the cost estimates made by the REC. The author especially wishes to thank Carolyn Dubard of the EDR for her detailed explanations of these estimates.

[6] These assumptions include the following: "class is defined as 1/6 of the school day"; "all costs are CPI adjusted"; "teacher cost equals salary plus benefits"; "teacher salary equals 2001-02 average teacher salary [for] all degree levels"; "other costs include costs for other support staff at school and additional utilities and maintenance"; "other costs average either 24 percent of teacher salaries and benefits for non-new sites or 57 percent for new sites"; "CO [capital outlay] needs are met by new school sites and relocatables, 25 percent and 75 percent of facilities, respectively"; "land costs average $736 per student station"; "relocatable costs equal $75,000"; "building costs are adjusted by a utilization factor, 100 percent, 90 percent, and 94 percent for K-5, Middle, and High schools, respectively"; and "cost per student station for new facilities are statewide standards."

[7] The capital costs are $9.4 billion in the high REC estimate. The operating costs are $12.5 billion in the low EDR estimate. The sum is $21.9 billion. This does not reflect small differences in operating costs that occur in new buildings versus add-on classrooms.

[8] There is an additional issue that deserves attention. Recall that the constitutional amendment sets class size maximums. The question remains, how will these translate into actual class sizes? The REC estimates assume that average class sizes will be 16, 20, and 23 for the respective grade levels. While this seems reasonable, it is a rough estimate at best. Elementary schools will probably have an easier time adapting than middle and high schools because they have more flexibility to combine different groups of students in their general-studies courses. In high school, it is difficult to imagine a geometry class being combined with an algebra class.

[9] The previously mentioned total spending of $15.6 billion was extrapolated to the current year, assuming a 4 percent nominal growth rate, yielding $17.6 billion ($3/$17.6=0.20). The national average expenditure in 19990-2000 was $6,991, while Florida's was $5,831. A 20 percent increase in Florida's spending from this level equals $6,997.

[10] A state's overall competitive position depends not just on the taxation levels, but also on the quality of government service, rules and regulations, and amenities such as weather. Therefore, a state with low taxation might still be at a competitive disadvantage with other states if it has other offsetting disadvantages. This does not appear to be the case in Florida where rules and regulations are lower than in other (especially Northern) states. The state's weather is also a strong attraction.

[11] These revenue results are confirmed by a report by the National Tax Foundation. This report shows that Florida ranked 45th in revenues per $1,000 of income.

[12] This calculation is made as follows: $3 billion was added to the state's current expenditures of $50.2 billion per year. This was divided by the state's total personal income ($21,557 per person multiplied by the population of 16,713,000). The result is 14.8 percent, which is slightly higher than Nevada's expenditure effort; Nevada is currently the 49th ranked state.