

GENERAL ASSEMBLY OF NORTH CAROLINA



Session 2009

Legislative Fiscal Note

BILL NUMBER: House Bill 335 (First Edition)

SHORT TITLE: Tax Fairness in Education.

SPONSOR(S): Representatives Stam, McComas, Killian, and Barnhart

FISCAL IMPACT (\$ in millions)					
	Yes (X)	No ()	No Estimate Available ()		
	<u>FY 2009-10</u>	<u>FY 2010-11</u>	<u>FY 2011-12</u>	<u>FY 2012-13</u>	<u>FY 2013-14</u>
<u>STATE IMPACT</u>					
Revenue (tax credits):	(\$6.1) to (\$16.3)	(\$12.0) to (\$32.7)	(\$11.8) to (\$32.7)	(\$11.4) to (\$32.7)	(\$11.1) to (\$32.7)
<u>Operational Savings:</u>	<u>\$0</u>	<u>\$25.5 to \$67.9</u>	<u>\$25.2 to \$68.4</u>	<u>\$24.6 to \$68.4</u>	<u>\$23.9 to \$68.3</u>
Net State Impact:	(\$6.1) to (\$16.3)	\$13.4 to \$35.2	\$13.4 to \$35.6	\$13.1 to \$35.7	\$12.8 to \$35.6
<u>LEA IMPACT</u>					
Revenue:	N/A	N/A	N/A	N/A	N/A
<u>Operational Savings:</u>	<u>\$0</u>	<u>\$9.4 to \$25.2</u>	<u>\$9.3 to \$25.3</u>	<u>\$9.1 to \$25.3</u>	<u>\$8.8 to \$25.3</u>
Net LEA Impact:	\$0	\$9.4 to \$25.2	\$9.3 to \$25.3	\$9.1 to \$25.3	\$8.8 to \$25.3
<u>POSITIONS</u>					
(cumulative):	N/A	N/A	N/A	N/A	N/A
PRINCIPAL DEPARTMENT(S) & PROGRAM(S) AFFECTED: North Carolina Department of Revenue, North Carolina Department of Public Instruction, Local Public Schools					
EFFECTIVE DATE: This bill is effective for taxable years beginning January 1, 2009, and applies to semesters beginning on or after July 1, 2009.					

BILL SUMMARY: The legislation creates a new tax credit for parents of children who choose to educate those children in a nonpublic school (including home schools) or in a public school at which tuition is charged per G.S. 155C-366.1. The credit amount is set at \$1,250 per semester, up to two semesters a year (a maximum of \$2,500 for a full academic or taxable year). The credit is refundable, and is capped at the associated tuition cost if the child is educated in a public school at which tuition is charged. For initial eligibility, the child must have been enrolled in

and attended at least two semesters in a public school in the immediately preceding taxable year prior to first receiving the tax credit.

The taxpayer will not qualify for the tax credit for a given semester if the dependent child spends any time enrolled in a public school (other than one where tuition is charged), spends any time as a full-time student at a postsecondary educational institution, or is 18-years old or older for the entire semester. The taxpayer will also not qualify if his or her taxable income exceeds the limits established in the table below:

Filing Status	North Carolina Taxable Income
Married, filing jointly	\$100,000
Head of Household	\$80,000
Single	\$60,000
Married, filing separately	\$50,000

The legislation also amends G.S. 115C-429(b) to allow local boards of county commissioners the discretion to appropriate up to \$500 per child for the educational expenses of resident children educated in nonpublic schools.

ASSUMPTIONS AND METHODOLOGY:

Evaluating the fiscal impact of this bill requires separate analyses examining how this bill would potentially affect enrollment at private schools and home schools. Because there is existing data on how a change in the price of private schools affects enrollment, it is possible to provide a reasonable estimate of how this bill will affect private school enrollment. Unfortunately, no such data exists for home schools, making that estimate much more difficult.

It is important to note that the fiscal impact presented here is an estimate, and any number of factors could move the fiscal impact up or down significantly

Students Leaving Public Schools for Private Schools

Estimating the fiscal impact of this bill for children leaving public school to attend private school requires estimates of the following:

1. Elasticity of demand for private education;
2. Estimated State and local taxes paid per eligible parent;
3. Projected average private school tuition costs in North Carolina;
4. Projected enrollment at North Carolina's private schools, absent the tax credit;
5. Projected expenditures (State and local) per student in North Carolina's public schools; and
6. Estimate of the number of public school children falling under the income thresholds.

1. Elasticity of Demand for Private Education

The elasticity of demand for private education versus public education answers the question: as the price for private schools goes down, how many students would be expected to leave public schools and enter private schools?

A review of the relevant economic literature indicates a range of 0.32¹ to 0.48.² An elasticity of 0.10 means that for every 10% decrease in the cost of private education, one would expect a 1% increase in the number of children attending private schools. Because there is a debate as to the proper elasticity, this analysis presents a range of results.

It is important to note that, in the calculation described above, “cost of private education” includes tuition as well as the taxes a parent pays for public education. These taxes get paid whether the parent uses public school or not, and are therefore part of the “cost of private education.”

2. *Estimated State and Local Education Taxes Paid Per Eligible Parent*

The estimated average State and local taxes for public education per household is \$3,931. This number is derived from estimates from the US Census Bureau using data from the 2001-02 fiscal year. During this year, the average household paid \$10,770 in State and local taxes. 36.5% of General Fund revenues go towards public education. Therefore this analysis assumes that the average household pays approximately \$3,931 (\$10,770 times 36.5%) for public schools. This figure is forecasted to remain constant over the time period of this analysis.

This amount is added to the tuition costs when determining the size of the discount for private school enrollment created by the tax credit.

3. *Estimating Average Private School Tuition Costs in North Carolina*

There are no organizations that track current tuition prices in North Carolina. The most comprehensive source for national data appears to be the US Department of Education’s National Center for Education Statistics.³ Unfortunately, their most recent data is from the 2003-04 school year when average private school tuition was reported to be \$6,600 per year.

This analysis estimates that average private school tuition is \$9,698 for the 2008-09 school year. This number is derived as follows. The average tuition charged in private schools in the 2003-04 school year was \$6,600. This compares to an average tuition of \$4,689 in the 1999-00 school year, indicating that, over the four-year period, private school tuition rose at an annual average rate of 8.9% per year. Meanwhile, the Consumer Price Index increased at an annual average rate of 2.5% per year over this same period.⁴ Since inflation has increased at a slightly higher rate since the 2003-04 school year, one would assume that private school tuitions have continued to increase at a rate of at least 8.9% per year. While no central repository of private school tuition in North Carolina exists, communications with various organizations representing private schools indicate that tuitions likely increased at a slightly

¹ David M. Brasington, “School Choice and the Flight to Private Schools: To What Extent Are Public and Private Schools Substitutes?” *Departmental Working Papers* 2006-04, Department of Economics, Louisiana State University.

² Barry Chiswick and Stella Koutroumanis, “An Econometric Analysis of the Demand for Private Schooling,” *Research in Labor Economics*, 15, pp. 209-237.

³ National Center for Education Statistics, *Digest of Education Statistics: 2007*, March 2008. The appropriate table was found at: http://nces.ed.gov/programs/digest/d07/tables/dt07_056.asp?referrer=list

⁴ Bureau of Labor Statistics, CPI Inflation Calculator, as found at: <http://data.bls.gov/cgi-bin/cpicalc.pl>.

lower rate. This analysis assumes a rate of 8.0%.⁵ Applying a compound annual growth rate of 8.0% to the average tuition price of \$6,600 over a five-year period results in an estimated average private school tuition of \$9,698 for the 2008-09 school year. Given the economic downturn, it is unlikely that private school tuitions will continue increasing at a similar rate in future years. For future years, this analysis utilizes forecasted inflation numbers for Salaries & Wages from Moody's economy.com.⁶

4. Projected Enrollment at North Carolina's Private Schools

The North Carolina Division of Non-Public Education does not project enrollment at North Carolina's private schools. This analysis projects private school enrollment based on the historic growth rate in private school enrollment from 2002-03 to 2007-08. Over this period, private school enrollment in North Carolina has grown at an average rate of 1.13% per year.

5. Projected Expenditures per Student in North Carolina's Public Schools

For 2008-09, North Carolina appropriated \$5,224 per public school student. Given the current budget outlook, it is unlikely that the State will increase per student funding over the time period covered by this fiscal analysis. During the prior recession (beginning with the 2001-02 school year), per student appropriations decreased. Per student appropriations did not return to the 2000-01 level until the 2005-06 school year. As such, this analysis assumes that expenditures per student in North Carolina public schools will remain flat.

State average local expenditure per child for operational expenses is \$1,934. Per the reasons above, this number is also anticipated to remain flat over the period covered in this fiscal analysis.

6. Number of School-Aged Children Meeting Income Threshold

Under normal circumstances, an elasticity of 0.10 would mean that for every 10% decrease in the cost of private education, you would expect a 1% increase in the number of children attending private schools. This relationship, however, assumes that the lower cost of private schools would be available to all public school students. Because of the income thresholds set forth in this bill, only a certain subset of public school students will be able to take advantage of the tax credit.

As a result of the income thresholds, it is necessary to discount the expected increase in private school enrollment. Consider the above example, where elasticity is still 0.10, but now only 50% of public school children are eligible for the tax credit. Under this situation, a 10% decrease in the cost of private education would be associated with a 0.5% increase. The new equation is as follows:

$$\% \text{ increase in private school enrollment} = \frac{\% \text{ change in private school costs}}{\text{times elasticity}} \times \text{times \% of children eligible for the tax credit}$$

⁵ Personal correspondence with representatives from North Carolina Christian School Association, Diocese of Raleigh Catholic Schools, and NC Association of Independent Schools

⁶ October 2008 projections found at: <http://www.economy.com/default.asp>.

Analysis using the Fiscal Research Division's North Carolina Individual Income Tax Model indicates that approximately 92% of school-aged children would be eligible for the tax credit established by this bill. As such, the elasticity is discounted by 8% when estimating increases in private school enrollment. The model uses 2009 estimates grown by North Carolina-specific Economy.com forecast factors. By comparing the total number of tax returns claiming a dependent child versus the subset whose North Carolina Taxable Income fell below the income thresholds set forth in this bill, it was determined that 92% of children claimed as dependents reside in families meeting the income thresholds set forth in this bill.

Estimating the Fiscal Impact of Increased Private School Enrollment

Applying all of the above figures related to potential transfers from public schools produces the following estimate of potential annualized savings to State and local governments. The State experiences a loss in revenue for each tax credit granted. However, with a smaller public school population, State expenditures on public schools decrease.

Note that a timing issue makes savings larger in the first year. The maximum tax credit granted in April 2010 is \$1,250, reflecting those students moving out of public schools during the Fall 2009 semester.⁷ In future years, the full tax credit of \$2,500 per year is used.

Also note that State and local governments do not realize savings from reduced expenditures until the 2010-11 school year. This delay is because allotted average daily membership (ADM) is based off of the higher of projected ADM or prior year actual ADM. Therefore, the reduced enrollment experienced in the 2009-10 school year will impact allotted ADM – and therefore State and local budgeting decisions – in the 2010-11 school year.

⁷ For simplicity's sake, this analysis assumes that all taxes are filed, and credits granted, in April.

Estimated Fiscal Impact on State and LEAs - Increased Private School Enrollment

	2009-10*		2010-11		2011-12		2012-13		2013-14	
Inflation Rate	2.53%		3.26%		4.95%		5.56%		5.31%	
Avg. Private School Tuition	\$9,943		\$10,267		\$10,775		\$11,374		\$11,978	
Avg. Education Taxes Paid	\$3,931		\$3,931		\$3,931		\$3,931		\$3,931	
Total Cost of Private Education	\$13,874		\$14,198		\$14,706		\$15,305		\$15,909	
Tax Credit	(\$2,500)		(\$2,500)		(\$2,500)		(\$2,500)		(\$2,500)	
Net Avg. Private School Tuition	\$11,374		\$11,698		\$12,206		\$12,805		\$13,409	
Tuition Discount (percent)	18.02%		17.61%		17.00%		16.33%		15.71%	
Projected Private School Attendance	99,875		101,004		102,145		103,300		104,467	
Elasticity	0.32	0.48	0.32	0.48	0.32	0.48	0.32	0.48	0.32	0.48
Predicted % Change in Pvt. School Attendance	5.77%	8.65%	5.63%	8.45%	5.44%	8.16%	5.23%	7.84%	5.03%	7.54%
Discount for Income Eligibility	92.00%	92.00%	92.00%	92.00%	92.00%	92.00%	92.00%	92.00%	92.00%	92.00%
Discount for Initial Eligibility Requirement	92.00%	92.00%	92.00%	92.00%	92.00%	92.00%	92.00%	92.00%	92.00%	92.00%
Net % Change in Pvt. School Attendance	4.88%	7.32%	4.77%	7.15%	4.60%	6.91%	4.42%	6.64%	4.26%	6.38%
Revised Private School Enrollment	104,750	107,187	105,821	108,230	106,849	109,200	107,870	110,155	108,913	111,136
Tax Credits Granted	4,874	7,312	4,817	7,225	4,703	7,055	4,570	6,855	4,446	6,669
Value of Tax Credits Granted	(\$6,093,062)	(\$9,139,593)	(\$12,042,477)	(\$18,063,715)	(\$11,757,690)	(\$17,636,536)	(\$11,425,115)	(\$17,137,673)	(\$11,115,577)	(\$16,673,366)
Avg. Public School Exp. Per Child	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224
Reduced Public School Expenditures**	N/A	N/A	\$25,464,126	\$38,196,188	\$25,163,960	\$37,745,939	\$24,568,870	\$36,853,305	\$23,873,921	\$35,810,881
Net Fiscal Impact on State	(\$6,093,062)	(\$9,139,593)	\$13,421,649	\$20,132,473	\$13,406,269	\$20,109,404	\$13,143,755	\$19,715,632	\$12,758,344	\$19,137,515
LEA Exp. Per Eligible Student	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934
LEA Operational Savings**	N/A	N/A	\$9,427,186	\$14,140,779	\$9,316,060	\$13,974,090	\$9,095,749	\$13,643,624	\$8,838,469	\$13,257,704
Net Fiscal Impact on LEAs	\$0	\$0	\$9,427,186	\$14,140,779	\$9,316,060	\$13,974,090	\$9,095,749	\$13,643,624	\$8,838,469	\$13,257,704

*Maximum tax credit in FY09-10 is \$1,250. Maximum tax credit in all future years is \$3,000.

**Because allotted ADM is based off of the higher of projected ADM or prior year actual ADM, savings from reduced expenditures are not realized until the 2010-11 school year.

Students Leaving Public School for Home School

It is much more difficult to estimate how these tax credits would impact the number of children who would transfer out of public school to become home schooled. Most notably, there are no estimates of the elasticity of demand for home schooling. As such, this analysis presents a wide range for the estimated fiscal impact resulting from children transferring from public school to home school.

Because there is no elasticity, estimating the fiscal impact for home school students requires estimates of the following variables:

1. Estimated increase in home school enrollment;
2. Projected home school enrollment, absent the tax credit; and
3. Projected expenditures (State and local) per student in North Carolina's public schools

1. Estimated Increase in Home School Enrollment

As mentioned above, there are no estimates for the elasticity of demand for home schools. Therefore, it is difficult to make an educated guess as to how this bill would impact home school enrollment. This analysis therefore presents a wide range of results, assessing the fiscal impact of increases in home school enrollment from 0% to 7.5%.

2. Projected Enrollment at North Carolina's Home Schools

Enrollment in home schools has grown substantially over the last decade, but the rate of increase has been consistently falling. The annual increase from 2006-07 to 2007-08 was 4%. While the rate of increase in home school enrollment is clearly trending downwards, it is difficult to project home school enrollment in future years. This analysis assumes that, absent the tax credit created by this bill, home school enrollment would increase at a rate of 3% per year.

3. Projected Expenditures per Student in Public Schools

For the reasons explained in the prior section this analysis estimates that State expenditures per student at \$5,224 and local expenditures at \$1,934.

Estimating the Fiscal Impact of Increased Home School Enrollment

Applying the above figures related to potential transfers from public schools into home schools produces the following estimate of potential annualized savings to State and local governments. As with the analysis for private schools, the State experiences a loss in revenue for each tax credit granted. However, with a smaller public school population, State expenditures on public schools decrease. Timing issues affecting 2009-10 tax credit size and realization of savings remain.

Estimated Fiscal Impact on State and LEAs - Increased Home School Enrollment

	2009-10*		2010-11		2011-12		2012-13		2013-14	
Projected Home School Attendance	75,924		78,202		80,548		82,965		85,454	
Range of Enrollment Increases	0.0%	7.5%	0.0%	7.5%	0.0%	7.5%	0.0%	7.5%	0.0%	7.5%
Revised Home School Enrollment	75,924	81,619	78,202	84,067	80,548	86,589	82,965	89,187	85,454	91,863
Tax Credits Granted	0	5,694	0	5,865	0	6,041	0	6,222	0	6,409
Value of Tax Credits Granted	\$0	(\$7,117,910)	\$0	(\$14,662,894)	\$0	(\$15,102,781)	\$0	(\$15,555,864)	\$0	(\$16,022,540)
Avg. Public School Exp. Per Child	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224
Reduced Public School Expenditures**	N/A	N/A	\$0	\$29,747,168	\$0	\$30,639,583	\$0	\$31,558,770	\$0	\$32,505,534
Net Fiscal Impact on State	\$0	(\$7,117,910)	\$0	\$15,084,274	\$0	\$15,536,802	\$0	\$16,002,906	\$0	\$16,482,994
LEA Exp. Per Eligible Student	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934
LEA Operational Savings**	N/A	N/A	\$0	\$11,012,830	\$0	\$11,343,215	\$0	\$11,683,511	\$0	\$12,034,016
Net Fiscal Impact on LEAs	\$0	\$0	\$0	\$11,012,830	\$0	\$11,343,215	\$0	\$11,683,511	\$0	\$12,034,016

*Maximum tax credit in FY09-10 is \$1,250. Maximum tax credit in all future years is \$3,000.

**Because allotted ADM is based off of the higher of projected ADM or prior year actual ADM, savings from reduced expenditures are not realized until the 2010-11 school year.

Estimated Fiscal Impact on State and LEAs - Total Estimated Impact

	2009-10*		2010-11		2011-12		2012-13		2013-14	
Range of Enrollment Increases	Low	High	Low	High	Low	High	Low	High	Low	High
Tax Credits Granted	4,874	13,006	4,817	13,091	4,703	13,096	4,570	13,077	4,446	13,078
Value of Tax Credits Granted	(\$6,093,062)	(\$16,257,503)	(\$12,042,477)	(\$32,726,609)	(\$11,757,690)	(\$32,739,316)	(\$11,425,115)	(\$32,693,537)	(\$11,115,577)	(\$32,695,906)
Avg. Public School Exp. Per Child	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224	\$5,224
Reduced Public School Expenditures**	N/A	N/A	\$25,464,126	\$67,943,356	\$25,163,960	\$68,385,522	\$24,568,870	\$68,412,075	\$23,873,921	\$68,316,415
Net Fiscal Impact on State	(\$6,093,062)	(\$16,257,503)	\$13,421,649	\$35,216,747	\$13,406,269	\$35,646,206	\$13,143,755	\$35,718,539	\$12,758,344	\$35,620,509
LEA Exp. Per Eligible Student	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934	\$1,934
LEA Operational Savings**	N/A	N/A	\$9,427,186	\$25,153,609	\$9,316,060	\$25,317,305	\$9,095,749	\$25,327,135	\$8,838,469	\$25,291,720
Net Fiscal Impact on LEAs	\$0	\$0	\$9,427,186	\$25,153,609	\$9,316,060	\$25,317,305	\$9,095,749	\$25,327,135	\$8,838,469	\$25,291,720

*Maximum tax credit in FY09-10 is \$1,250. Maximum tax credit in all future years is \$3,000.

**Because allotted ADM is based off of the higher of projected ADM or prior year actual ADM, savings from reduced expenditures are not realized until the 2010-11 school year.

A Note on Assumptions

It is important to note that this fiscal note is based on a number of assumptions. The fiscal impact presented here is an estimate, and any number of factors could move the fiscal impact up or down significantly.

1. *Gaming the System*

It is possible, but unlikely, that some parents of potentially eligible children who have never attended public schools would enroll their children in public schools for the required two semesters in order to then be able to avail themselves of the credit in a subsequent year. It seems unlikely, however, that a significant number of parents who have already made a decision not to send their children to public schools would make this choice, even in the face of potential financial gain. The analysis therefore assumes that any costs associated with this group of children will be negligible. To the extent that this assumption is incorrect, the analysis will understate total cost and overstate total savings created by the bill.

2. *Estimated Elasticities*

The existing research on the elasticity of demand for private education is not terribly robust. To the extent that actual elasticity is lower or higher, one would expect savings to be lower or higher.

3. *Private School Capacity to Absorb Additional Students*

There is no data on the available capacity in private schools to absorb additional students. It is possible that capacity issues would prevent private school enrollment to rise in the manner predicted by this analysis. To the extent that capacity issues would constrain enrollment, the analysis will overstate the savings created by this bill.

SOURCES OF DATA:

- North Carolina Department of Public Instruction (DPI)
- David M. Brasington, “School Choice and the Flight to Private Schools: To What Extent Are Public and Private Schools Substitutes?” Departmental Working Papers 2006-04, Department of Economics, Louisiana State University
- Barry Chiswick and Stella Koutroumanes, “An Econometric Analysis of the Demand for Private Schooling,” *Research in Labor Economics*, 15, pp. 209-237
- National Center for Education Statistics, *Digest of Education Statistics: 2007*, March 2008
- Bureau of Labor Statistics, *CPI Inflation Calculator*
- *Economy.com*, October 2008
- North Carolina Division of Non-Public Education
- North Carolina Christian School Association
- Diocese of Raleigh Catholic Schools
- NC Association of Independent Schools

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DATE: March 4, 2009



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