# GENERAL ASSEMBLY OF NORTH CAROLINA

# Session 2009

# **Legislative Fiscal Note**

**BILL NUMBER**: House Bill 1988 (First Edition)

**SHORT TITLE**: Tax Fairness in Education.

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

FISCAL IMPACT (\$ in millions)										
	Yes (X)	No()	No Estimate Available ( )							
	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15					
STATE IMPACT										
Revenue (tax credits):	(\$10.3) to (\$18.5)	(\$20.5) to (\$37.1)	(\$20.3) to (\$37.0)	(\$20.2) to (\$37.0)	(\$20.1) to (\$37.1)					
Operational Savings:	<u>\$0</u>	\$41.2 to \$74.0	\$41.0 to \$74.1	\$40.7 to \$74.1	\$40.5 to \$74.1					
Net State Impact:	(\$10.3) to (\$18.5)	\$20.7 to \$37.0	\$20.6 to \$37.1	\$20.5 to \$37.0	\$20.3 to \$37.0					
LEA IMPACT										
Revenue:	N/A	N/A	N/A	N/A	N/A					
Operational Savings:	<u>\$0</u>	\$15.9 to \$28.6	\$15.9 to \$28.7	\$15.7 to \$28.6	\$15.7 to \$28.7					
Net LEA Impact:	\$0	\$15.9 to \$28.6	\$15.9 to \$28.7	\$15.7 to \$28.6	\$15.7 to \$28.7					
POSITIONS (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, 2011, and applies to semesters beginning on or after July 1, 2011.

#### **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 <u>not</u> 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 an educated estimate of how this bill will affect private school enrollment. Unfortunately, no such data exists for home schools, making that estimate much more difficult.

### **Students Leaving Public Schools for Private Schools**

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

- 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  $0.32^1$  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 the 2008-09 fiscal year, the average household paid \$10,770 in State and local taxes. Approximately 36.5% of General Fund revenues go towards public education. Therefore this analysis assumes that the average household pays \$3,931 (\$10,770 times 36.5%) for public schools. This figure is forecasted to increase at a rate of 1% per year 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 comprehensively 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.<sup>3</sup> Their most recent data from the 2007-08 school year indicates that private school tuitions across the country averaged \$8,549 per year.

This analysis estimates that average private school tuition is \$7,694 for the 2009-10 school year. The average tuition charged in private schools in the 2007-08 school year was \$8,549. Given the economic downturn, it is unlikely that private school tuitions have risen significantly since the 2007-08 school year. This number is then adjusted to account for North Carolina's below average cost of living. Analysis from the South Carolina Department of Commerce indicates that North Carolina's cost of living is approximately 90% of the national average. Therefore, to estimate the private school tuition in North Carolina for the 2009-10 school year, this analysis multiplies \$8,549 by 90%. To estimate how tuitions will increase in future years,

House Bill 1988 (First Edition)

<sup>&</sup>lt;sup>1</sup> 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.

<sup>&</sup>lt;sup>2</sup> Barry Chiswick and Stella Koutroumanes, "An Econometric Analysis of the Demand for Private Schooling," *Research in Labor Economics*, 15, pp. 209-237, 1996.

<sup>&</sup>lt;sup>3</sup> National Center for Education Statistics, *Digest of Education Statistics*: 2009, Table 59, March 2010. The appropriate table was found at: <a href="http://nces.ed.gov/programs/digest/d09/tables/dt09\_059.asp">http://nces.ed.gov/programs/digest/d09/tables/dt09\_059.asp</a>.

<sup>&</sup>lt;sup>4</sup> Wang, Masoudie, and Gunnlaugsson, "Annual Cost of Living Index Applied to South Carolina Sub-State Areas," South Carolina Department of Commerce – Division of Research, p. 3, January 2009. As found at: <a href="http://greenwoodpartnershipalliance.com/site/wp-content/themes/golden">http://greenwoodpartnershipalliance.com/site/wp-content/themes/golden</a> essence 261/images/pdf/Cost% 20of% 20Living% 20SCDOC 2009.pdf.

this analysis utilizes forecasted inflation numbers for Salaries & Wages from Moody's economy.com.<sup>5</sup>

### 4. Projected Enrollment at North Carolina's Private Schools

This analysis projects private school enrollments based on the actual enrollments over the last 5 years for which data exists. 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 2003-04 to 2008-09. Over this period, private school enrollment in North Carolina has grown at an average rate of 1.62% per year.<sup>6</sup>

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

For 2009-10, North Carolina appropriated \$5,001 per public school student, a number that has increased at an average annual rate of 3.5% since 1997-98. However, given the current budget outlook, it is unlikely that the State will experience such increases in 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:

% change in private school costs

% increase in private school enrollment = **times** elasticity

times % of children eligible for the tax credit

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

<sup>&</sup>lt;sup>5</sup> October 2008 projections found at: http://www.economy.com/default.asp.

<sup>&</sup>lt;sup>6</sup> Private School Statewide Statistical History as found at: <a href="http://www.ncdnpe.org/documents/aaa104a.pdf">http://www.ncdnpe.org/documents/aaa104a.pdf</a>.

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 costs/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 2011 is \$1,250, reflecting those students moving out of public schools during the Fall 2010 semester.<sup>7</sup> 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 2011-12 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 2010-11 school year will impact allotted ADM – and therefore State and local budgeting decisions – in the 2011-12 school year.

House Bill 1988 (First Edition)

5

<sup>&</sup>lt;sup>7</sup> 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**

	2010-11*		2011-12		2012-13		2013-14		2014-15		
Inflation Rate	3.26%		4.95%		5.56%		5.31%		5.31%		
Avg. Private School Tuition	\$7,945		\$8,338		\$8,802		\$9,269		\$9,761		
Avg. Education Taxes Paid	\$3,	\$3,970		\$4,010		\$4,050		\$4,091		\$4,132	
Total Cost of Private Education	\$11	,915	\$12,348		\$12,852		\$13,360		\$13,893		
Tax Credit	(\$2,	500)	(\$2,500)		(\$2,500)		(\$2,500)		(\$2,500)		
Net Avg. Private School Tuition	\$9,	415	\$9,	\$9,848		\$10,352		\$10,860		\$11,393	
Tuition Discount (percent)	20.	98%	20.2	25%	19.4	15%	18.7	71%	17.99%		
•											
Projected Private School Attendance	101	,764	103	,412	105.	,088	106	,790	108,520		
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	6.71%	10.07%	6.48%	9.72%	6.22%	9.34%	5.99%	8.98%	5.76%	8.64%	
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	5.68%	8.52%	5.48%	8.23%	5.27%	7.90%	5.07%	7.60%	4.87%	7.31%	
Revised Private School Enrollment	107,547	110,438	109,083	111,918	110,624	113,393	112,203	114,909	113,809	116,454	
Tax Credits Granted	5,783	8,675	5,671	8,506	5,537	8,305	5,413	8,119	5,289	7,934	
Value of Tax Credits Granted	(\$7,228,858)	(\$10,843,287)	(\$14,176,775)	(\$21,265,163)	(\$13,841,810)	(\$20,762,716)	(\$13,531,324)	(\$20,296,986)	(\$13,222,896)	(\$19,834,344)	
Avg. Public School Exp. Per Child	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	
Reduced Public School Expenditures***	N/A	N/A	\$28,921,214	\$43,381,822	\$28,359,221	\$42,538,832	\$27,689,158	\$41,533,737	\$27,068,060	\$40,602,091	
Net Fiscal Impact on State	(\$7,228,858)	(\$10,843,287)	\$14,744,439	\$22,116,659	\$14,517,411	\$21,776,116	\$14,157,834	\$21,236,751	\$13,845,164	\$20,767,747	
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	\$11,184,489	\$16,776,733	\$10,967,153	\$16,450,730	\$10,708,025	\$16,062,037	\$10,467,832	\$15,701,748	
Net Fiscal Impact on LEAs	\$0	\$0	\$11,184,489	\$16,776,733	\$10,967,153	\$16,450,730	\$10,708,025	\$16,062,037	\$10,467,832	\$15,701,748	

<sup>\*</sup>Maximum tax credit in FY10-11 is \$1,250. Maximum tax credit in all future years is \$2,500.

<sup>\*\*</sup>Because initial eligibility requires at least 2 semesters of public school attendance in the prior year, the tax credit would not apply to kindergarteners. Kindergarteners account for approximately 8% of the student population, hence the 92% discount applied here.

<sup>\*\*\*</sup>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 2011-12 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 3.0% to 7.5%.

### 2. Projected Enrollment at North Carolina's Home Schools

Enrollment in home schools has grown substantially over the last decade, increasing from 46,909 students in 2001-02 to 77,065 students in 2008-09. Over this same period, the rate of increase has been falling. The annual increase from 2000-01 to 2001-02 was 39%. 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 \$5,001 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 costs/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**

	2010-11*		2011-12		2012-13		2013-14		2014-15	
Projected Home School Attendance	81,758		84,211		86,737		89,339		92,020	
Range of Enrollment Increases	<u>3.0%</u>	<u>7.5%</u>	<u>3.0%</u>	<u>7.5%</u>	<u>3.0%</u>	<u>7.5%</u>	<u>3.0%</u>	<u>7.5%</u>	<u>3.0%</u>	<u>7.5%</u>
Revised Home School Enrollment	84,211	87,890	86,737	90,527	89,339	93,243	92,020	96,040	94,780	98,921
Tax Credits Granted	2,453	6,132	2,526	6,316	2,602	6,505	2,680	6,700	2,761	6,901
Value of Tax Credits Granted	(\$3,065,935)	(\$7,664,837)	(\$6,315,825)	(\$15,789,564)	(\$6,505,300)	(\$16,263,251)	(\$6,700,459)	(\$16,751,148)	(\$6,901,473)	(\$17,253,683)
Avg. Public School Exp. Per Child	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001
Reduced Public School Expenditures**	N/A	N/A	\$12,266,192	\$30,665,479	\$12,634,177	\$31,585,443	\$13,013,203	\$32,533,006	\$13,403,599	\$33,508,997
Net Fiscal Impact on State	(\$3,065,935)	(\$7,664,837)	\$5,950,366	\$14,875,915	\$6,128,877	\$15,322,193	\$6,312,743	\$15,781,858	\$6,502,126	\$16,255,314
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	\$4,743,614	\$11,859,035	\$4,885,923	\$12,214,806	\$5,032,500	\$12,581,251	\$5,183,475	\$12,958,688
Net Fiscal Impact on LEAs	\$0	\$0	\$4,743,614	\$11,859,035	\$4,885,923	\$12,214,806	\$5,032,500	\$12,581,251	\$5,183,475	\$12,958,688

<sup>\*</sup>Maximum tax credit in FY10-11 is \$1,250. Maximum tax credit in all future years is \$2,500.

# **Estimated Fiscal Impact on State and LEAs - Total Estimated Impact**

	2010-11*		2011-12		2012-13		2013-14		2014-15	
Range of Enrollment Increases	Low	<u>High</u>								
Tax Credits Granted	8,236	14,806	8,197	14,822	8,139	14,810	8,093	14,819	8,050	14,835
Value of Tax Credits Granted	(\$10,294,793)	(\$18,508,123)	(\$20,492,601)	(\$37,054,727)	(\$20,347,111)	(\$37,025,966)	(\$20,231,783)	(\$37,048,134)	(\$20,124,369)	(\$37,088,027)
Avg. Public School Exp. Per Child	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001	\$5,001
Reduced Public School Expenditures**	N/A	N/A	\$41,187,406	\$74,047,300	\$40,993,399	\$74,124,275	\$40,702,360	\$74,066,743	\$40,471,659	\$74,111,087
Net Fiscal Impact on State	(\$10,294,793)	(\$18,508,123)	\$20,694,805	\$36,992,574	\$20,646,288	\$37,098,309	\$20,470,577	\$37,018,609	\$20,347,290	\$37,023,061
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	\$15,928,103	\$28,635,769	\$15,853,076	\$28,665,537	\$15,740,525	\$28,643,288	\$15,651,307	\$28,660,437
Net Fiscal Impact on LEAs	N/A	N/A	\$15,928,103	\$28,635,769	\$15,853,076	\$28,665,537	\$15,740,525	\$28,643,288	\$15,651,307	\$28,660,437

<sup>\*</sup>Maximum tax credit in FY10-11 is \$1,250. Maximum tax credit in all future years is \$2,500.

<sup>\*\*</sup>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 2011-12 school year.

<sup>\*\*</sup>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 2011-12 school year.

# **TECHNICAL CONSIDERATIONS:**

There are many technical considerations that should be considered as 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.

#### **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.

### **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.

### **Enrollment Shifts to Attain Eligibility**

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.

#### **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: 2008, March 2009
- Wang, Masoudie, and Gunnlaugsson, "Annual Cost of Living Index Applied to South Carolina Sub-State Areas," South Carolina Department of Commerce – Division of Research, p. 3, January 2009.
- Economy.com, October 2008
- North Carolina Division of Non-Public Education
- The Fiscal Research Division's North Carolina Individual Income Tax Model

FISCAL RESEARCH DIVISION: (919) 733-4910

#### PREPARED BY:

# Kristopher Nordstrom

**APPROVED BY** Marilyn Chism, Director Fiscal Research Division

**DATE**: May 27, 2010



Signed Copy Located in the NCGA Principal Clerk's Offices