POLICY OPTIONS FOR RURAL NORTH CAROLINA SCHOOL DISTRICTS WITH DECLINING STUDENT ENROLLMENT

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EXECUTIVE SUMMARY

This Report examines the question: "What policies should the Center for Civil Rights promote in order to assist rural North Carolina school districts with declining student enrollment?" North Carolina has several school districts experiencing declining enrollment, and these districts are predominately low-wealth, rural districts concentrated in the northeastern part of the state. Since 1980, 24 North Carolina school districts have had enrollment declines greater than 20%. Three districts—Halifax County, Northampton County, and Hyde County—have had declines greater than 40%. These trends have direct policy implications for affected school districts. Reliance on per-pupil state funding leads to necessary budget cuts and difficult decisions regarding district resources. There are more specific impacts on school size, transportation demands, and curriculum—due to the funding losses and related factors (such as possible school consolidation).

This Report utilizes the available state-level education data and census data to describe the effects of declining enrollment. These data define the scope of the problem and help determine correlations between declining enrollment and other issues, such as low student achievement outcomes and system-wide economic difficulties. The Report also performs a case study of eights specific school districts: four with declining enrollment, two constant districts, and two growing districts.

With this descriptive framework in place, the Report examines seven policy options that may help address the problems associated with declining student enrollment in rural North Carolina school districts:

1. Alter state funding formulas to delay the effects of year-to-year drops in funding.
2. Provide supplemental state funding for districts experiencing significant declines in student enrollment.
3. Provide for greater use of technology in affected districts.
4. Promote partnerships between affected school districts and other community institutions, including local businesses and community colleges.
5. Establish inter-district resource partnerships.
6. Establish inter-district enrollment arrangements.
7. Consolidate districts where multiple school districts exist in one county.

These options are weighed against the criteria of (1) impact on student achievement, (2) cost, and (3) political feasibility. Information from the available education literature, budget information, and practices employed in other states aid this analysis. The Report also uses interview data, particularly from education officials in the four rural school districts of Halifax County, Northampton County, Weldon City, and Hertford County. In the end, this Report recommends that the Center for Civil Rights should advocate for greater use of technology, community partnerships, inter-district resource partnerships, and consolidation of the three Halifax County school districts. Once the state budget situation improves, the Center should promote adoption of a state supplemental fund for districts facing severe declines in enrollment. This fund should be administered in a "grant-like" fashion, providing incentive-based funding as needed for particular policies and programs.

INTRODUCTION

This Report examines the following policy question: "What policies should the Center for Civil Rights promote in order to assist rural North Carolina school districts with declining student enrollment?" The Center for Civil Rights ("Center") does substantial work in the northeastern counties of North Carolina, and several of these rural counties have declining student populations. The Center requested more information about this issue as well as analysis of possible policy options to assist school districts coping with the results of enrollment changes. The ultimate goal is ensuring that students living in such areas are receiving a quality education despite any negative effects of declining population trends.

Since 1980, 24 North Carolina school districts have experienced declines in student enrollment greater than 20%.[1] Three districts—Halifax County, Northampton County, and Hyde County—had declines greater than 40%.[2] This problem has been particularly evident in recent years. In fact, between the 2006–07 and 2009–10 school years, six districts experienced enrollment decline over 10%; thirty-one districts had decline over 5% during the period.[3] Districts with declining enrollment are more likely to be rural.[4] In fact, the districts with the largest decline in enrollment between 2006–07 and 2009–10 were Hertford County (-12.9%), Northampton County (-15.4%), and Halifax County (-17.1%)[5]—each rural districts in the northeastern part of the state.

Consider the Halifax County school district. It is one of three school districts present in Halifax County proper (in addition to Roanoke Rapids City Schools and Weldon City Schools). From 2000 to 2009, the Halifax countywide population of individuals under 18 years-of-age dropped by 12.87%.[6] In just the last three years, the county school district has seen a 17.1% drop in its K-12 enrollment (from 4,760 students to 3,948 students).[7] The long-term trends further reveal these demographic shifts: the county school district served 10,355 students in 1968,[8] compared to approximately 4,000 today. Declining student populations have direct policy consequences for affected school districts such as Halifax County. For instance, reliance on per-pupil state funding leads to necessary budget cuts and difficult decisions impacting district resources. Funding losses can have more specific impacts on school size, transportation demands, and curriculum and related education resources. The Halifax County school district has consolidated its schools over the years, including closing two elementary schools and two

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[1] Historical attendance figures for each North Carolina school district are available from the *North Carolina Public Schools Statistical Profile*. *See* N.C. STATE BOARD OF EDUCATION & DEP'T OF PUBLIC INSTRUCTION, NORTH CAROLINA PUBLIC SCHOOLS STATISTICAL PROFILE (various years). (Note that recent editions can be found at http://www.ncpublicschools.org/fbs/accounting/data/.) All calculations needed for this Report were performed in Microsoft Excel.

[2] *Id*.

[3] In addition to the *North Carolina Public Schools Statistical Profile*, the more recent data on average daily attendance is available at *Data and Reports—Student Accounting*, N.C. DEP'T OF PUBLIC INSTRUCTION, http://www.ncpublicschools.org/fbs/accounting/data/ (last visited Mar. 25, 2011). This database includes the final attendance figures for the 2006–07 and 2009–10 school years for each district.

[4] *See infra* Part III.

[5] *Id*.

[6] County population data is provided by the North Carolina Office of State Budget and Management. *See Socioeconomic Data*, OFFICE OF STATE BUDGET AND MANAGEMENT, http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic-data.shtm (last visited Mar. 26, 2011).

[7] *Data and Reports—Student Accounting*, *supra* note 3.

[8] U.S. DEPT. OF EDUCATION, DIRECTORY OF PUBLIC ELEMENTARY AND SECONDARY SCHOOLS IN SELECTED DISTRICTS: ENROLLMENT BY RACIAL/ETHNIC GROUP 1051–52 (1968).

middle schools since 2005.[9] In 1968, there were 18 schools,[10] compared to 11 in 2010–11. These are the types of issues examined in the remainder of the Report.

Before continuing, it is helpful to further define the scope of this Report. The policy question examined here focuses on the problem of declining enrollment. Thus, the process of enrollment change that leads to smaller and smaller student totals is the subject—not poverty or rural schools themselves. As discussed later in the Report, however, these problems are highly interrelated. Districts with declining enrollment tend to be rural and low-wealth, and many of the problems associated with decline result from the effects of small scale common to such districts—fewer schools, less curriculum choices, etc. Thus, it is impossible to completely disaggregate the policy issues of decline, poverty, and rural schools.[11] To the extent the Center wishes to address the overarching issues impacting many of these communities, however, it should focus on the broader educational picture and the abundant literature on rural schools and low-wealth schools. This Report seeks to analyze the problems declining enrollment presents in addition to these other issues—as districts have to manage the transition of enrollment change and face the reality of operating a system characterized by decreased scale and fewer resources.

I. LITERATURE REVIEW

A. Declining Student Enrollment

Several sources have acknowledged the issue of declining student populations in rural communities. It is well-established that rural communities often have declining populations as a result of out-migration and job loss.[12] Combining migration trends with aging population characteristics[13] means that many rural school districts face declining student enrollment. In-depth policy analysis of the issues associated with declining student populations appears somewhat lacking, with only a few studies available. One report, entitled *Breaking the Fall: Cushioning the Impact of Rural Declining Enrollment*, was published by the Rural School and Community Trust in 2006.[14] *Breaking the Fall* provides an overview of the causes of declining student populations, and it outlines the impact such trends can have on rural school districts:

> Persistent declining enrollment can cause significant challenges for schools and districts. When the enrollment decline is chronic, it generates serious financial distress because of the loss of per-pupil state revenue. This financial hemorrhage usually results in deep cuts in programs, staff, and resources. Small rural schools are especially vulnerable to these problems, since they have proportionally less leeway in finding cost-saving areas. Eventually, declining enrollment can lead to their closure in spite of their value to rural communities and students.[15]

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[9] Interview with Keith Hoggard, Public Relations Coordinator, Halifax County Schools (Mar. 9, 2011).
[10] U.S. DEPT. OF EDUCATION, *supra* note 8, at 1051-52.
[11] Indeed, one interviewee indicated that the issue declining enrollment presents is that it accelerates the problems already present due to rural and low-wealth status. Interview with Greg Hogue, Principal, Hertford County High School (Mar. 17, 2011).
[12] David H. Monk, *Recruiting and Retaining High-Quality Teachers in Rural Areas*, THE FUTURE OF CHILDREN, Spring 2007, at 155, 156–57.
[13] *See id.*
[14] LORNA JIMERSON, THE RURAL SCHOOL AND COMMUNITY TRUST, BREAKING THE FALL: CUSHIONING THE IMPACT OF RURAL DECLINING ENROLLMENT, *available at* http://www.ruraledu.org/user_uploads/file/docs/breaking_the_fall.pdf.
[15] *Id.* at 3.

The report also provides a series of policy recommendations aimed at the state, district, and school levels.[16] Specific recommendations include using funding formulas to "smooth out" the impact of decline, providing supplemental aid, not mandating or incentivizing school consolidation, increasing use of instructional technology, and increasing local collaborative relationships.[17]

A few state and local governments have examined the problem of declining student enrollment in greater detail. Michigan, for instance, has commissioned reports examining enrollment declines in the state's Upper Peninsula and offering possible policy solutions. One 2002 report made several recommendations for both the short- and long-term. Among these recommendations were continuing to use a three-year enrollment average for per-pupil funding, providing supplemental funding for declining districts, incentivizing service consolidation, and exploring a four-day school week.[18] California has also examined the issue of declining student populations, including a report by the California Superintendents Educational Services Association.[19] Almost half of California districts are experiencing declining enrollment, and districts have been forced to cut costs and close schools.[20] Officials have also discussed broader solutions, such as softening year-to-year funding changes and possibly consolidating local education governance.[21] School districts in Colorado seem to rely on cost-cutting and certain informal, collaborative relationships. For instance, some districts are sharing busing for extracurricular activities, and two districts are even sharing a superintendent.[22] Thus, North Carolina school districts are not alone in confronting issues associated with declining student populations.

B. Specific Problems Resulting from Declining Student Enrollment

Declining student populations and the subsequent drop in funding produce specific results that deserve additional analysis. This Report will examine the related issues of school size, transportation, and curriculum and related educational programming. The following subsections discuss these topics in greater detail.

School Size. In the short term, declining student populations lead to decreased enrollment per school (i.e., smaller school sizes). Continued enrollment decline can result in tough decisions about possibly closing facilities and thus consolidating schools.[23] Closing small

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[16] *Id.* at 3–4.
[17] *Id.*
[18] Upper Peninsula Education Challenge, A White Paper Submitted to: Tom Watkins, State Superintendent of Public Instruction ii (2002), *available at* http://www.michiganedusource.org/Pupil%20Accounting/Challenge.pdf.
[19] See *ETV05 Regionalize K-12 Educational Infrastructure*, CALIFORNIA PERFORMANCE REVIEW, http://cpr.ca.gov/CPR_Report/Issues_and_Recommendations/Chapter_3_Education_Training_and_Volunteerism/ETV05.html (last visited Mar. 5, 2011) (citing the California Superintendents Educational Services Association report).
[20] Scott Lafee, *Coping with Declining Enrollment*, CALIFORNIA SCHOOLS MAGAZINE. *available at* http://www.theccbe.org/sitecore/content/Home/NewsAndMedia/Publications/CASchoolsMagazine/2006/Fall/InThisIssue/Coping_declining.aspx.
[21] *ETV05 Regionalize K-12 Educational Infrastructure*, *supra* note 19.
[22] Glenn Cook, *Dealing with Decline*, AMERICAN SCHOOL BOARD JOURNAL, Sept. 2004, at 22, 26. For state-level analysis in Colorado, see PACEY ECONOMICS GROUP, THE DECLINING ENROLLMENT STUDY: A COMPREHENSIVE REVIEW OF FUNDING FOR COLORADO PUBLIC SCHOOL EDUCATION (prepared for the Colorado Department of Education) (2010), *available at* http://www.cde.state.co.us/Finance_Text/DecEnrollStudy/ReportDeclining Enrollment3-15-10.pdf.
[23] JIMERSON, *supra* note 14, at 4.

schools in a district can result in fewer total schools, and the remaining schools are typically larger in size than those that previously existed. Reports examining declining student enrollment often cite school consolidation as something to be avoided. The concern with larger schools is that students may not receive individualized attention as they become anonymous figures to school administration and much of the faculty.[24] Studies have also pointed to the benefits of smaller schools,[25] and this research has encouraged various policy initiatives, including efforts by the Bill and Melinda Gates Foundation.

While the majority of the education research seems to support the benefits of smaller schools, these claims ought not be overstated. Some studies have found that significant educational benefits are not associated with smaller school size.[26] Interestingly, the Gates Foundation itself has backed away from its strong focus on smaller schools.[27] Particularly small schools also present their own problems; the concern in many rural districts is that schools may be too small to provide an appropriately wide range of course choices. In reality, both sides of the analysis likely raise legitimate points. The resource disparities present in many small, rural schools can harm student achievement,[28] and overly large schools present the anonymity issues. Some studies reflect this analysis, finding that there may be an optimal range for school size.[29] In sum, the literature suggests that education officials need to be aware of the impact of declining student populations—and resulting policy responses, such as consolidation—on school size.

Transportation. Declining funding makes it more difficult for districts with decreasing student populations to provide adequate transportation services. One report lists "curtailment of transportation services" and "higher transportation costs as students are transported ever-longer distances" as particular problems associated with declining enrollment.[30] School consolidation can also mean increased transportation demands on students and families. This is particularly true in rural counties that already tend to have fewer schools per land area than more urban settings. Although there seemingly has been little sophisticated study of the impact long

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[24] *See* Kenneth A. Strike, *Small Schools: Size or Community?*, AMERICAN JOURNAL OF EDUCATION, May 2008.

[25] *See, e.g.*, Mary Anne Raywid, *Current Literature on Small Schools*, Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools, Appalachia Educational Laboratory (ERIC Digest no. ED 425049) (1999) (referencing studies finding several benefits associated with smaller schools, including student achievement and satisfaction); Jacob Werblow & Luke Duesbery, *The Impact of High School Size on Math Achievement and Dropout Rate*, THE HIGH SCHOOL JOURNAL, Feb./Mar. 2009 (finding that students attending smaller schools tend to have lower dropout rates); Valerie E. Lee & Julia B. Smith, *Effects of High School Restructuring and Size on Early Gains in Achievement and Engagement*, SOCIOLOGY OF EDUCATION, Oct. 1995, at 241 (finding that smaller school size is associated with higher student achievement and stating that "collegiality among teachers, personalized relationships, and less differentiation of instruction by ability (to name a few organizational features of schools) are more common and easier to implement in small schools").

[26] *See, e.g.*, Adam E. Wyse et al., *Assessing the Effects of Small School Size on Mathematics Achievement: A Propensity Score-Matching Approach*, 110 TEACHERS COLLEGE RECORD 1879 (2010) (concluding that, based on analysis of educational longitudinal data, switching students to small schools is not a particularly effective method to improve academic achievement).

[27] *See* Thomas Toch, *Special Report: Small is Still Beautiful*, WASHINGTON MONTHLY, July/Aug. 2010.

[28] *See, e.g.*, the discussion of curriculum availability *infra*.

[29] *See, e.g.*, Melvin V. Borland & Roy M. Howsen, *An Examination of the Effect of Elementary School Size on Student Academic Achievement*, INTERNATIONAL REVIEW OF EDUCATION, Sept. 2003, at 463 (concluding that achievement starts to improve as school size increases and then begins to decrease; there is consequently an "optimal" size for schools that tends to best promote student outcomes).

[30] FINANCIAL SERVICES R&D COMMITTEE, SACRAMENTO SECTION OF CALIFORNIA SCHOOL DISTRICTS, DECLINING ENROLLMENT: DOWNSIZING OPERATIONS AND OTHER ALTERNATIVES, *available at* http://www.icoe.org/webfm_send/1212.

commuting times have on student achievement,[31] some analysis suggests a negative impact on both academic performance and other important indicators (such as time for family interaction).[32] Long bus routes can certainly be justified based on specific policy benefits (particularly diversity). If student time is assigned any nonzero economic value, however, longer commutes will impose costs on students that must be considered.

Curriculum and Related Educational Programming. Finally, curriculum and related educational programming may be cut as districts with declining enrollment face lower funding totals. Rural schools often "provide fewer opportunities to learn than schools in other communities, and they provide fewer course offerings and special programs."[33] This outcome is magnified when rural schools also face reduced funding as a result of declining student enrollment.[34] The result is fewer courses, fewer extracurricular activities, and fewer support services. Reduction in educational opportunities can negatively impact student achievement. There may be a positive correlation between diverse curriculum offerings and overall student outcomes, [35] and diverse curriculum offerings certainly provide more individualized education plans and improved college and technical preparation.[36] For instance, one report found that high-performing rural schools typically "hav[e] higher graduation requirements and teach[] more students in a rigorous academic curriculum"; "help[] more students find relevance and focus by completing a career/technical or an academic concentration"; "provid[e] more students access to high-quality career/technical studies and work-based learning experiences in high-demand fields"; and "provid[e] a system of catch-up classes" for students who fall behind.[37] Providing adequate curriculum options despite declining enrollment is therefore one issue that local and state education officials must confront.

Part III.B.3 provides greater detail on the effect declining enrollment has had on selected North Carolina school districts. It is helpful to note some of the information at this point, however. Just since 2001–02, districts with declining enrollment have dropped courses. Foreign

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[31] Belle Zars, *Long Rides, Tough Hides: Enduring Long School Bus Rides*, EDUCATION RESOURCES INFORMATION CENTER, http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED432419&ERICExtSearch_SearchType_0=no&accno=ED432419 (last visited Mar. 26, 2011); Craig B. Howley & Charles R. Smith, *An Agenda for Studying Rural School Busing*, EDUCATION RESOURCES INFORMATION CENTER, http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED444810&ERICExtSearch_SearchType_0=no&accno=ED444810 (last visited Mar. 26, 2011).

[32] Belle Zars, *supra* note 31; Aimee Howley & Craig Howley, *Rural School Busing, ERIC Digest*, EDUCATION RESOURCES INFORMATION CENTER, http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED459969&ERICExtSearch_SearchType_0=no&accno=ED459969 (last visited Mar. 26, 2011).

[33] Patricia A. Bauch, *School-Community Partnerships in Rural Schools: Leadership, Renewal, and a Sense of Place*, PEABODY JOURNAL OF EDUCATION, 76(2), at 204, 209.

[34] JIMERSON, *supra* note 14, at 6.

[35] *Cf.* Joseph G. Altonji, *The Effects of High School Curriculum on Education and Labor Market Outcomes*, THE JOURNAL OF HUMAN RESOURCES, Summer 1995, at 409 (finding only a small return to additional academic courses but recommending more complex analysis based on the belief that curriculum matters); Kevin J. Payne & Bruce J. Biddle, *Poor School Funding, Child Poverty, and Mathematics Achievement*, EDUCATIONAL RESEARCHER, Aug.–Sept. 1999, at 4 (finding that the level of curriculum affects student achievement).

[36] *Cf.* Vincent J. Roscigno et al., *Education and the Inequalities of Place*, 84 SOCIAL FORCES 2121, 2133 (2006) ("Educational expenditure decreases student-teacher ratios and increases the availability of more diverse, rigorous curriculum.").

[37] GENE BOTTOMS ET AL., SOUTHERN REGIONAL EDUCATION BOARD, RIGOR, RELEVANCE AND RELATIONSHIPS IMPROVE ACHIEVEMENT IN RURAL HIGH SCHOOLS: HIGH SCHOOL REFORM WORKS WHEN SCHOOLS DO THE RIGHT THING 15–16 (2004).

languages provide one example, with Halifax County dropping German, Northampton County dropping French and Latin, and Hertford County dropping Latin.[38] The two growing districts examined in greater detail later in this Report—Pender County and Chapel Hill-Carrboro—had no reductions. Growing districts also tend to have a greater number of total course offerings. Pender County offers French, Spanish, German, and Latin; Chapel-Hill Carrboro offers these courses plus Japanese.

There is a direct link between declining enrollment and limited course selection. Declining enrollment causes state ADM funding to disappear; teachers often have to be laid off and course offerings reduced.[39] Scale becomes the problem. As districts (and their schools) become smaller, there simply are not enough students to fill a broad array of courses. Filling the most essential core courses and a few electives is nearly all that is possible. These effects are evident in the data. Take Duplin County and Northampton County, both rural North Carolina school districts, as examples. Duplin County is a larger district, with public school enrollment of 8,865 in 2007–08 compared to 2,701 for Northampton County.[40] According to the most recent course membership data from DPI, in 2009–10 Duplin County provided a total of 176 course offerings across all its public schools while Northampton County only offered 96 courses.[41] Courses offered in Duplin County but not Northampton County include: Anatomy, AP Calculus, Bible History, Biology II, Earth Science, Economics, Geography, Graphic Design, Horticulture, Integrated Mathematics, Keyboarding, Photography, Physics, Psychology, and Sociology. Given that Northampton County only has 30% as many students as Duplin, it simply cannot fill the extra courses (or afford the additional instructors to teach them).

In sum, declining student enrollment has the potential to negatively impact school districts and their students. Declining enrollment reduces available funding, particularly state ADM dollars. The combination of reduced funding and fewer students shrinks school size or forces schools to consolidate, thereby raising student transportation times. Curriculum choices become more limited. Importantly, the education literature identifies some connection between student academic achievement and school size, transportation, and curriculum. Declining enrollment is a particularly relevant issue in North Carolina, which has several counties exhibiting this trend.

II. DATA AND METHODS

This Report is divided into six total parts. Part III utilizes the available state-level education data and census data to thoroughly describe the effects of declining enrollment in North Carolina school districts. This data defines the scope of the problem, and it helps determine correlations between declining enrollment and other issues—such as low student achievement outcomes and system-wide economic difficulties. Such correlations assist in determining the soundness of specific policy options. Part III also performs a case study of eight

[38] Course enrollment information is available through the DPI website at EDUCATION STATISTICS ACCESS SYSTEM, http://beyond2020.dpi.state.nc.us/wds80_1/ReportFolders/reportFolders.aspx?sCS_referer=&sCS_ChosenLang=en (last visited Mar. 25, 2011).

[39] *See, e.g.*, Interview with Keith Hoggard, Public Relations Coordinator, Halifax County Schools (Mar. 9, 2011); Interview with Greg Hogue, Principal, Hertford County High School (Mar. 17, 2011).

[40] *Data and Reports—Student Accounting*, *supra* note 3.

[41] Data on the total number of courses available in select districts over time were provided by DPI in response to a data request submitted by the author. The dataset is on file with the author, and some of the information is also available in Appendix 2 (2009–10 course availability for Weldon City, Halifax County, and Roanoke Rapids Schools).

specific school districts: four with declining enrollment, two constant districts, and two growing districts. These comparisons further demonstrate the problems facing rural school systems with falling enrollment totals.

With this descriptive framework in place, the Report then turns to the policy analysis. Part IV introduces the policy options and the applicable criteria. Part V performs the analysis, examining seven policy options that may help address the problems associated with declining student enrollment in rural North Carolina school districts:

1. Alter state funding formulas to delay the effects of year-to-year drops in funding.
2. Provide supplemental state funding for districts experiencing significant declines in student enrollment.
3. Provide for greater use of technology in affected districts.
4. Promote partnerships between affected school districts and other community institutions, including local businesses and community colleges.
5. Establish inter-district resource partnerships.
6. Establish inter-district enrollment arrangements.
7. Consolidate districts where multiple school districts exist in one county.

These options are weighed against the criteria of (1) impact on student achievement, (2) cost, and (3) political feasibility. The data used in this analysis vary based on the particular characteristics of an individual policy option, but information from the available education literature, budget information, and details of practices employed in other states each receive attention. The analysis also uses interview data, particularly from the four rural school districts examined in Part III.B: Halifax County, Northampton County, Weldon City, and Hertford County. Discussions with education officials in these districts help determine the likely effect of the potential policy options as well as the feasibility of their implementation. Following analysis of the policy options, each is scored according to its ability to meet the established criteria, and these scores are used to determine specific recommendations. Part VI concludes by presenting the specific policies that the Center should promote in order to assist rural North Carolina school districts with declining student enrollment.

III. DECLINING STUDENT ENROLLMENT IN NORTH CAROLINA

Although the United States population is increasing overall, certain localities have declining population totals.[42] There are various reasons for these population trends, including changes in employment opportunities.[43] Between 2000 and 2009, 13 North Carolina counties experienced a decline in total population.[44] Over the same period, the population of persons under 18 years-of-age declined in 41 counties.[45] These population changes can seriously impact

[42] *See, e.g.*, David A. McGranahan & Calvin L. Baele, *Understanding Rural Population Loss*, RURAL AMERICA, Winter 2002.

[43] *See* Mark Mather & Kelvin Pollard, *U.S. Regional Population Losses Linked to High Unemployment*, POPULATION REFERENCE BUREAU, http://www.prb.org/Articles/2009/uspopulationloss.aspx (last visited Mar. 26, 2011).

[44] County population data is provided by the North Carolina Office of State Budget and Management. *See supra* note 6. The 13 counties are: Hyde (-7.5%), Edgecombe (-7.3%), Martin (-6.4%), Washington (-5.0%), Northampton (-4.7%), Lenoir (-3.8%), Halifax (-3.6%), Jones (-2.2%), Pamlico (-0.8%), Bladen (-0.6%), Anson (-0.5%), Warren (-0.3%), and Rockingham (-0.1%).

[45] Again, the data is from the North Carolina Office of State Budget and Management. *See supra* note 6. The 41 counties are: Jones (-23.35%), Pamlico (-19.65%), Warren (-17.42%), Northampton (-17.29%), Caswell (-15.42%), Hyde (-15.24%), Halifax (-12.87%), Edgecombe (-12.59%), Washington (-12.37%), Martin (-11.92%), Tyrrell

student enrollment, and such an impact has been evident in North Carolina. Twenty-four North Carolina school districts have experienced declines in student enrollment greater than 20% since 1990.[46] Further, 31 districts experienced a decline in public school enrollment over 5% between the 2006-07 and 2009-10 school years.[47] Declining districts are more likely to be rural, and the districts with the most severe declines are highly concentrated in the northeastern part of the state. The following subparts further analyze the available information on declining enrollment in North Carolina school districts. Part III.A examines the available enrollment numbers and census data in order to further understand the reasons for decline and its impact. Part III.B focuses in greater detail on eight individual school districts: four with declining enrollment, two constant districts, and two growing districts.

A. Analysis of Statewide Data on Decline and Census Data

The following discussion makes use of a dataset compiled by the author using DPI enrollment data between the 1979–80 and 2007–08 school years. Publicly available on DPI's website[48] and in the *North Carolina Public Schools Statistical Profile*,[49] this dataset provides final average daily membership ("ADM") counts for each school district over the specified time period.[50] Interestingly, calculating the enrollment change for each school district between 1979–80 and 2007–08 reveals that about half the districts had increasing enrollment and half saw a decline. Fifty-eight districts had enrollment declines ranging from -0.12% (Stanly County) to -46.9% (Hyde County). Fifty-seven districts had increases ranging from 0.07% (Surry County) to 145.2% (Wake County). Table 1 lists the figures for the ten districts with the greatest enrollment increases, and the ten districts with the most significant declines.

Table 1: Changes in N.C. School District Enrollment, 1979–80 to 2007–08

District Rank (out of 115)	School District	Percent Change	Rural (*R*)/ Non-rural (N)
1	Wake County	145.2%	N
2	Union County	133.9%	*R*
3	Dare County	128.0%	N
4	Mooresville City	125.2%	N
5	Chapel Hill-Carrboro	110.0%	N
6	Cabarrus County	108.8%	*R*
7	Johnston County	100.0%	*R*
8	Currituck County	82.5%	*R*
9	Charlotte-Mecklenburg	73.0%	N
10	Pender County	62.3%	*R*

(-11.03%), Bertie (-10.04%), Burke (-8.79%), Lenoir (-8.77%), Hertford (-7.38%), Mitchell (-7.30%), Gates (-7.21%), Stokes (-7.09%), Anson (-6.89%), Transylvania (-6.69%), Carteret (-6.55%), Stanly (-6.23%), Scotland (-5.37%), Polk (-5.11%), Rockingham (-5.00%), Cleveland (-4.63%), Yancey (-4.57%), Avery (-4.45%), Chowan (-3.62%), Watauga (-3.42%), Rutherford (-3.14%), Richmond (-2.97%), Perquimans (-2.69%), Caldwell (-2.57%), Bladen (-2.12%), Cherokee (-1.02%), Vance (-0.83%), Madison (-0.64%), Haywood (-0.37%), Alleghany (-0.24%), and Person (-0.15%).

[46] NORTH CAROLINA PUBLIC SCHOOLS STATISTICAL PROFILE, *supra* note 1.

[47] *Data and Reports—Student Accounting*, *supra* note 3.

[48] *Id.*

[49] *See* NORTH CAROLINA PUBLIC SCHOOLS STATISTICAL PROFILE, *supra* note 1.

[50] Note that some districts merged between 1979–80 and 2007–08. The dataset combines their enrollment totals for the years prior to merger so that they could be treated as one district over the entire period.

106	Asheville City	-32.1%	N
107	Hertford County	-33.5%	*R*
108	Jones County	-36.2%	*R*
109	Martin County	-37.5%	*R*
110	Bertie County	-37.8%	*R*
111	Weldon City	-37.9%	*R*
112	Washington County	-39.9%	*R*
113	Halifax County	-41.9%	*R*
114	Northampton County	-46.0%	*R*
115	Hyde County	-46.9%	*R*

The geographic characteristics of the districts experiencing the most significant declines are striking. Eight of the ten districts are located in northeastern North Carolina, a predominately rural region that is the poorest area of the state. Table 1 designates each district as either rural or non-rural, according to the classifications utilized by the National Center for Education Statistics ("NCES"), a division of the U.S. Department of Education Institute of Education Sciences.[51] Nine of the ten districts with extreme decline are rural, compared to five of the ten with significant enrollment growth. Overall, 76 of North Carolina's 115 school districts (66%) are designated as rural by the NCES classification system. So on average, school districts with severe declines in enrollment are disproportionately rural, and districts with significant growth are disproportionately non-rural. These figures confirm the Center's desire to focus on the impact of declining enrollment on North Carolina's rural school districts.

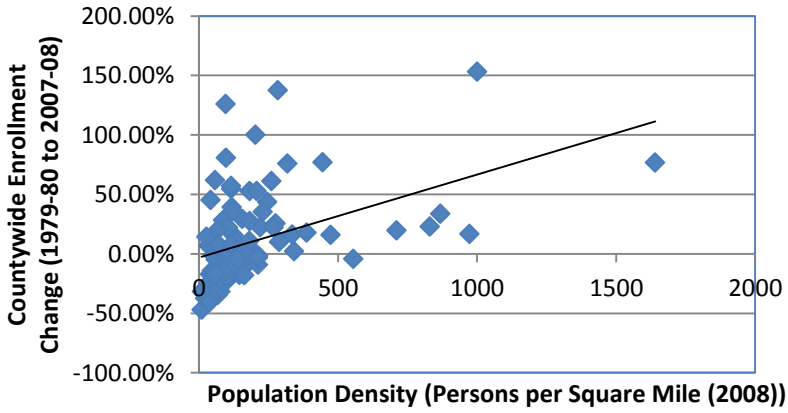
Figure 1 reveals a positive correlation between population density and enrollment growth, further indicating the concentration of declining student enrollment in North Carolina's most rural districts. Note that because census data is available at the county level (and not the school district level), Figure 1 and several subsequent graphs utilize *county*wide public school enrollment totals, combining school districts where multiple districts exist in one county. Because the vast majority of North Carolina school districts are countywide, however, the data is still helpful.

[51] *See Rural Education in America—Definitions*, NATIONAL CTR. FOR EDUCATION STATISTICS, http://nces.ed.gov/surveys/ruraled/page2.asp (last visited Mar. 25, 2011). There are three sub-classifications included under "rural":

> Fringe Census-defined rural territory that is less than or equal to 5 miles from an urbanized area, as well as rural territory that is less than or equal to 2.5 miles from an urban cluster
>
> Distant Census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an urbanized area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an urban cluster
>
> Remote Census-defined rural territory that is more than 25 miles from an urbanized area and is also more than 10 miles from an urban cluster

Id.; *see also Changes in School District Rural Locale Status: North Carolina*, NATIONAL CTR. FOR EDUCATION STATISTICS, http://nces.ed.gov/ccd/PDF/states/NC.pdf (last visited Mar. 26, 2011).

Figure 1: Population Density—Persons per Square Mile (2008)[52] vs. Enrollment Change (1979–80 to 2007–08)



This correlation between enrollment declines and a district's rural status is particularly important given the prevalence of rural schools in North Carolina and the challenges often associated with rural schools. In North Carolina, more than 788,000 students are enrolled in rural schools, a number that comprises over 50% of total public school enrollment in the state, and the second largest total of any state in the country.[53] Rural communities often have disproportionately low-income populations. On average, rural students display lower educational achievement levels and higher school dropout rates than students living in suburban communities.[54] Such trends are evident in North Carolina. Compared to North Carolina students in thirty low-poverty school districts, students attending one of the thirty "highest poverty rural districts" are twice as likely to be impoverished, twice as likely to be African American, 40% less likely to finish high school, 16% more likely to receive instruction from a new teacher, and 66% more likely not to be taught by a certified teacher.[55] And, as discussed above, another issue confronting many rural school districts is declining student enrollment.

The map included below presents the regional concentration of declining enrollment—largely rural counties in the eastern part of the state. It also reveals (unsurprisingly) that certain high-growth urban areas have had the largest gains in student enrollment. For the purposes of the map, districts with greater than 20% decline are classified as "Significant Decline in Enrollment," and districts with greater than 20% growth are "Significant Growth in Enrollment." There are 24 districts with "Significant Decline" and 31 with "Significant Growth." Note that a full-page version of the map is included as Appendix 1 to this Report.

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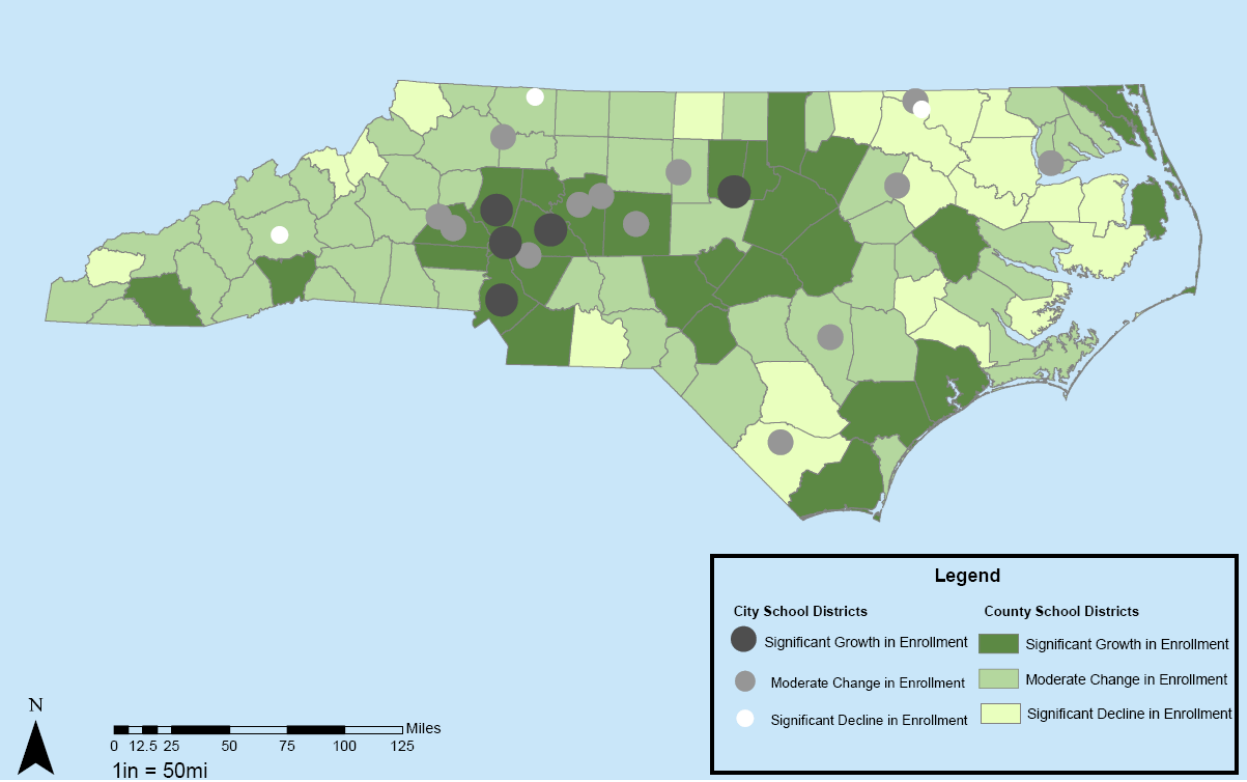
[52] County population density data is provided by the North Carolina Office of State Budget and Management. *See Socioeconomic Data*, OFFICE OF STATE BUDGET AND MANAGEMENT, http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic-data.shtm (last visited Mar. 26, 2011). The numbers are also available through the "Log Into North Carolina" (LINC) website provided by the State of North Carolina: http://linc.state.nc.us/.

[53] PAGE MCCULLOUGH & JERRY JOHNSON, THE RURAL SCHOOL AND COMMUNITY TRUST, QUALITY TEACHERS: ISSUES, CHALLENGES, AND SOLUTIONS FOR NORTH CAROLINA'S MOST OVERLOOKED RURAL COMMUNITIES 5 (2010), *available at* http://www.ruraledu.org/articles.php?id=1946. Note, however, that a recent report published by the National Center for Education Statistics puts this figure at 45%. *See* NATIONAL CENTER FOR EDUCATION STATISTICS, STATUS OF EDUCATION IN RURAL AMERICA 18 (2007), *available at* http://nces.ed.gov/pubs2007/2007040.pdf.

[54] Vincent J. Roscigno et al., *supra* note 36, at 2121.

[55] MCCULLOUGH & JOHNSON, *supra* note 53, at 7.

Enrollment Change Across N.C. Districts: 1979–80 to 2007–08 School Years[56]



Other statistics further describe the North Carolina school districts facing significant declines in student enrollment. First, areas with declining enrollment tend also to be areas with either negative or minimally positive overall population growth (see Figure 2). For instance, Hyde County saw an 8.2% decline in its total population between 1980 and 2008 to go along with its 46.9% drop in student enrollment.[57] Because North Carolina's total population has aged over the past decades—28.2% persons under-18 in 1980 compared to 24.4% of persons under-18 in 2000[58]—smaller percentage declines in total population compared to student enrollment make sense.[59]

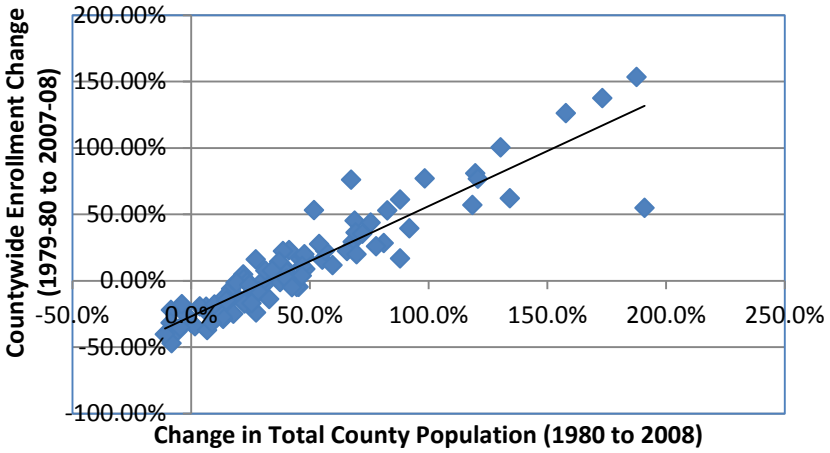
[56] This map was created in collaboration with Bethany Windle, Master of City and Regional Planning candidate at UNC-Chapel Hill.

[57] U.S. Census Data, *available at* http://www.census.gov/. The numbers are also available through the "Log Into North Carolina" website provided by the State of North Carolina: http://linc.state.nc.us/.

[58] *Id.*

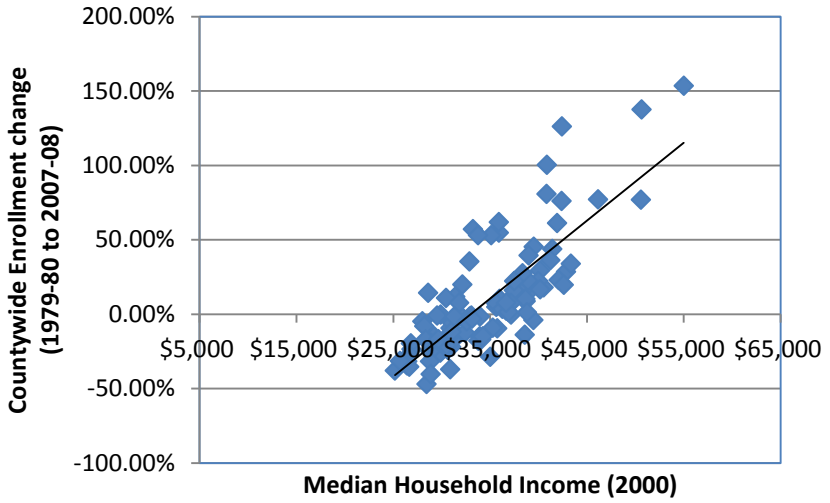
[59] Of course, the presence of charter schools and spread of private schooling also impact public school enrollment while having no impact on overall population totals. *See infra* Part V.

Figure 2: Change in Total County Population (1980–2008)[60] vs. Enrollment Change (1979–80 to 2007–08)



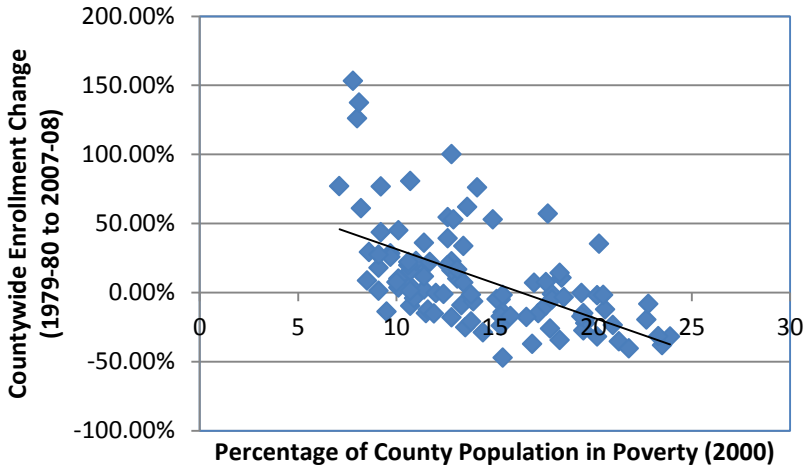
There is a strong correlation between declining student enrollment and data on economic hardship. Figure 3 reveals the relationship between median household income and enrollment change, and Figure 4 depicts the relationship between the percent of individuals living in poverty and enrollment change.

Figure 3: Median Household Income (2000)[61] vs. Enrollment Change (1979–80 to 2007–08)



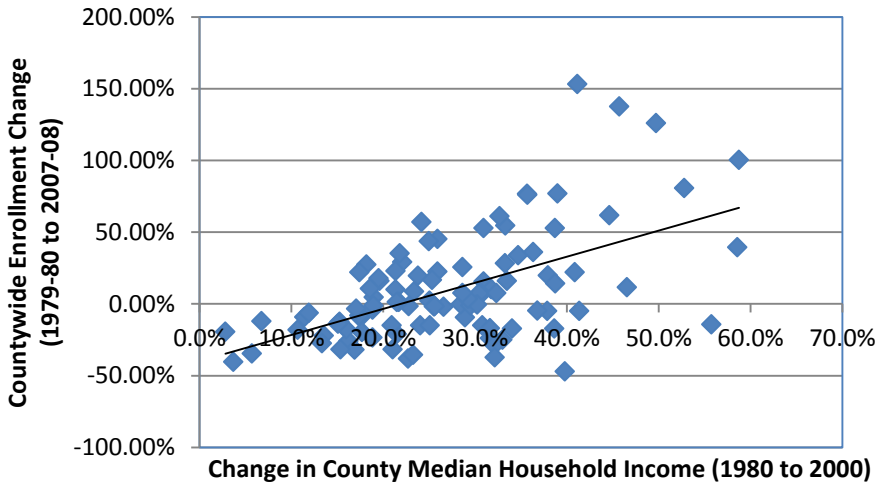
[60] U.S. Census Data, *available at* http://www.census.gov/. The numbers are also available through the "Log Into North Carolina" website provided by the State of North Carolina: http://linc.state.nc.us/.
[61] *Id.*

Figure 4: Percent in Poverty (2000)[62] vs. Enrollment Change (1979–80 to 2007–08)



In addition to the annual economic data, *changes* in the economic indicators correlate with changes in enrollment totals (see, e.g., Figure 5).

Figure 5: Change in Median Household Income (1980–2000)[63] vs. Enrollment Change (1979-80 to 2007-08)



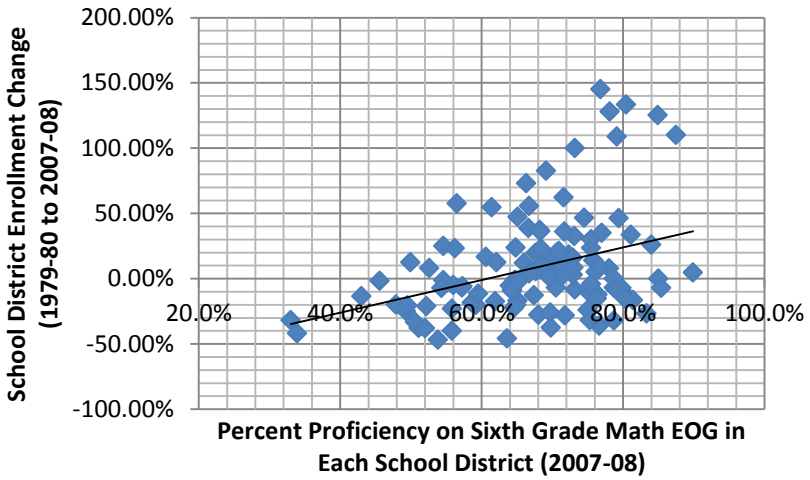
The dual issues of declining populations and economic difficulties present serious concerns for affected localities. Due to lower population totals, local governments in localities with decreasing student enrollment have a smaller tax base from which to draw. And the commonly observed correlation between population decline and economic hardship[64] means that expected tax revenues are likely limited to begin with. The fact that Northampton and Halifax counties—two areas with significant enrollment decline—currently each have unemployment

[62] *Id.*
[63] *Id.*
[64] Mather & Pollard, *supra* note 43.

rates above the state average is noteworthy,[65] and census data also speak to the relative economic hardship impacting parts of northeastern North Carolina.[66]

Given the focus of this Report on local education systems, the relationship between declining enrollment and student achievement outcomes is particularly relevant. Figures 6 and 7 depict the correlation between declining student enrollment and student achievement (percent proficiency) on sixth-grade End of Grade ("EOG") tests in each North Carolina school district.[67] The correlation between the two variables is striking. Districts with significant declines in enrollment are typically the same districts where improving student achievement is a priority.

Figure 6: Sixth Grade Math EOG Scores (2007–08) vs. School District Enrollment Change (1979–80 to 2007–08)

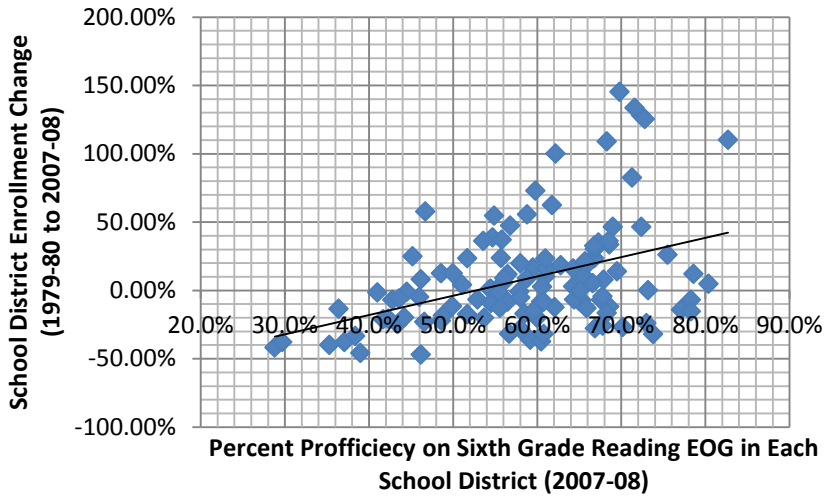


[65] According to the North Carolina Department of Commerce, the July 2010 unemployment rates were: 11.5% in Northampton County and 12.4% in Halifax County. The July 2010 state unemployment rate was 9.9%. The unemployment rate in Hertford County was 9.2%.

[66] The state poverty rate in 2000 was 12.3%. The poverty rates in Hyde, Northampton, and Halifax counties were: 15.4% in Hyde, 21.3% in Northampton, and 23.9% in Halifax. The state median household income in 2000 was $39,184. The median household incomes in Hyde, Northampton, and Halifax counties were: $28,444 in Hyde, $26,652 in Northampton, and $26,459 in Halifax. *See* U.S. Census Data, *available at* http://www.census.gov/. The numbers are also available through the "Log Into North Carolina" website provided by the State of North Carolina: http://linc.state.nc.us/.

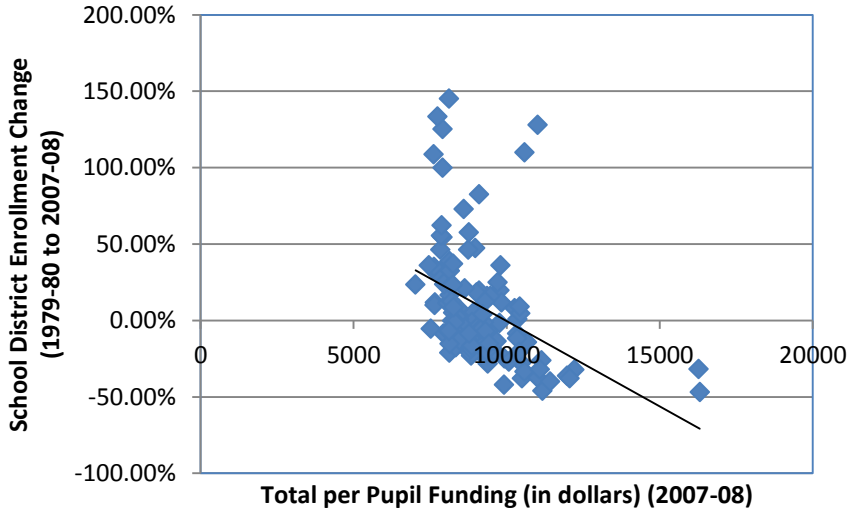
[67] DPI provides student achievement data on its website. *See Testing and Accountability Results*, N.C. DEP'T OF PUBLIC INSTRUCTION, http://www.ncpublicschools.org/accountability/reporting/ (last visited Mar. 25, 2011).

Figure 7: Sixth Grade Reading EOG Scores (2007-08) vs. School District Enrollment Change (1979–80 to 2007–08)



Finally, Figure 8 displays the relationship between total education spending and declining student enrollment. The spending figure combines total local, state, and federal expenditures in 2008, and divides by the total level of public school enrollment to arrive at a per capita estimate. The relationship is essentially nonlinear, but there is a weak negative relationship between enrollment changes and total education funding.[68] Counties with the most severe declines in enrollment are slightly more likely to receive more total per pupil funds than counties that have experienced enrollment increases.

Figure 8: Total per Pupil Expenditures for Each N.C. School District (2007–08)[69] vs. Enrollment Change (1979–80 to 2007–08)



[68] Note that the two outliers at the bottom right of the graph are Hyde County and Tyrell County.

[69] *See* DIVISION OF SCHOOL BUSINESS, FINANCIAL AND BUSINESS SERVICES, N.C. DEPT. OF PUBLIC INSTRUCTION, 2007–08 SELECTED FINANCIAL DATA, *available at* http://www.ncpublicschools.org/docs/fbs/resources/data/financialdata/2007-08data.pdf.

Still, education funding in the context of declining student enrollment is a particularly tricky subject. Again, much state education funding is distributed to districts on a per-pupil basis.[70] For funding purposes, North Carolina uses the higher of "(a) Actual ADM from the prior year, or (b) Projected ADM of the current year."[71] Rapid changes in student population can consequently have serious funding implications for local districts. Decreased funding can result in difficult choices, including the need to layoff educators and other personnel, eliminate programming, or consolidate facilities.[72] The resource losses resulting from declines in education funding potentially have serious implications for student education outcomes. The education policy literature has expressed differing conclusions on the causal relationship between higher funding levels and increased student performance.[73] However, recent evidence suggests that differing levels in school funding can have a direct impact on student achievement.[74] It also seems intuitive that sharp changes in district funding levels could potentially harm student achievement by decreasing available educational resources.

Of course, it is important to note that certain funding sources provide additional assistance to school districts that also have declining student populations. These additional funding totals likely explain the general increase in funding that is sometimes available to districts with declining enrollment. There is the Disadvantaged Student Supplemental Fund, Low-Wealth Supplemental Funding, and Small County Supplemental Funding.[75] In 2010, there was also a $5.2 million federal grant (NCLB) for "rural and low-income schools."[76] However, these totals are often spread across many districts (68 counties were eligible for low-wealth funding in 2010, for instance).[77] Districts with declining student populations also are not always eligible under some of these funding categories; for example, Halifax County does not qualify for small-county funding.[78] In contrast to the state of Michigan, there is no specific funding source targeted at districts with declining enrollment.[79]

In sum, this section has described what enrollment decline has looked like in North Carolina over the last thirty years. Declining districts tend to be rural, and those with the most significant decline are located in the northeastern part of the state. These locales are significantly more likely to be facing economic hardship, and they typically have lower student achievement. While the funding relationship is not highly correlative, districts with significant declines in enrollment may actually have greater per-pupil funding than other districts.

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[70] *See generally* INFORMATION ANALYSIS DIVISION OF SCHOOL BUSINESS, N.C. DEPT. OF PUBLIC INSTRUCTION, HIGHLIGHTS OF THE NORTH CAROLINA PUBLIC SCHOOL BUDGET (Feb. 2010), *available at* http://www.dpi.state.nc.us/docs/fbs/ resources/data/highlights/2010highlights.pdf (referencing the reliance on ADM (Average Daily Membership) in various funding decisions).

[71] *Id*. at 4.

[72] For a description of some of these issues, see JIMERSON, *supra* note 14.

[73] *Compare* Eric A. Hanushek, *The Impact of Differential Expenditures on School Performance*, EDUCATIONAL RESEARCHER, May 1989, at 45, 45 ("Two decades of research into educational production functions have produced startlingly consistent results: Variations in school expenditures are not systematically related to variations in student performance.") *with* William Sander, *Expenditures and Student Achievement in Illinois: New Evidence*, JOURNAL OF PUBLIC ECONOMICS, Oct. 1993, at 403 (finding that increasing teacher salaries increased ACT scores).

[74] *See, e.g.*, Payne & Biddle, *supra* note 35.

[75] *Id.*

[76] *Id.* at 44.

[77] *See id.* at 21.

[78] *See id.* at 23.

[79] *See* Upper Peninsula Education Challenge, *supra* note 7.

B. Specific School District Comparisons

This section looks further behind the statewide statistics to determine what decline means for particular districts. This more detailed analysis proceeds as a case study of eight school districts: four with significant enrollment declines (Halifax County, Northampton County, Weldon City, and Hertford County); two with fairly constant enrollment totals (Duplin County and Roanoke Rapids); and two with significant enrollment growth (Pender County and Chapel Hill-Carrboro City). These counties were picked based on rate of enrollment change since the 1979–80 school year;[80] additional data from 1969–70 is included as well, however, where appropriate.[81]

1. Changes in Enrollment Totals

Table 2 summarizes the changes in enrollment for each district between the 1969–70 and 2008–09 school years. The average enrollment for the declining districts fell by 52.8% over the period, while the growing districts had an average enrollment increase of 99.1%. Note that in 1979–80, Northampton County and Hertford County districts were about the same size as Pender County and Chapel Hill-Carrboro. Today, Pender County and Chapel Hill-Carrboro are much larger; in fact, Chapel Hill-Carrboro is over four times as large as the Northampton County district. Halifax County school district was noticeably larger than both Pender County and Chapel Hill-Carrboro in 1969–70. Today, Pender County has over 3,000 more students than Halifax County, and Chapel Hill-Carrboro is 2.5 times its size.

Table 2: Total District Enrollment per District

	1969–70	1979–80	1989–90	1999–2000	2008–09
Halifax County	9,434	7,917	6,493	6,084	4,472
Northampton County	6,437	5,160	3,991	3,774	2,701
Weldon City	2,080	1,633	1,249	1,134	1,011
Hertford County	6,223	4,971	4,171	4,079	3,231
Avg.—Declining LEAs	*6,044*	*4,920*	*3976*	*3,7688*	*2,854 (-52.8%)*
Duplin County	10,273	9,023	7,828	8,389	8,865
Roanoke Rapids City	3,179	2,913	2,825	3,114	2,910
Avg.—Constant LEAs	*6,726*	*5,968*	*5,327*	*5,752*	*5,888 (-12.5%)*
Pender County	4,685	5,035	4,810	6,309	7,901
Chapel Hill-Carrboro	5,008	5,525	5,562	8,516	11,395
Avg.—Growing LEAs	*4,847*	*5,280*	*5,186*	*7,413*	*9,648 (+99.1%)*

Table 3 reveals enrollment change since 1979–80, this time broken down into the total class size for the fourth grade.[82] There has been a fairly dramatic change in the number of students per class.

[80] This section utilizes the same dataset described *supra* notes 48–49 and accompanying text.

[81] These numbers come from U.S. DEPT. OF EDUCATION, DIRECTORY OF PUBLIC ELEMENTARY AND SECONDARY SCHOOLS IN SELECTED DISTRICTS: ENROLLMENT BY RACIAL/ETHNIC GROUP (1970).

[82] The annual *North Carolina Public Schools Statistical Profile* provides the number of students per grade. *See supra* note 1.

Table 3: 4th Grade Total Class Size per District

	1979–80	1989–90	1999–2000	2008–09
Halifax County	537	506	513	331
Northampton County	335	309	310	208
Weldon City	117	93	87	83
Hertford County	344	308	294	226
Avg.—Declining LEAs	*333*	*304*	*301*	*212 (-36.4%)*
Duplin County	588	619	677	755
Roanoke Rapids City	221	208	262	234
Avg.—Constant LEAs	*405*	*414*	*470*	*495 (+22.2%)*
Pender County	329	384	486	611
Chapel Hill-Carrboro	443	447	710	882
Avg.—Growing LEAs	*386*	*416*	*598*	*747 (+93.4%)*

2. Number of Schools and Grade per School

Number of Schools.[83] As one might expect, the changes in student enrollment have been at least partially reflected in changes in the total number of schools in the districts. The number of schools in declining districts has fallen, while the number of schools in growing districts has increased. However, there seems to have been less of a willingness to close schools in declining districts, as opposed to building schools in growing districts. The average change in the number of schools in declining districts (-10%) is nearly the same as the change in the constant districts (-9.1%). Recent debates in Halifax County and Northampton County reflect the backlash school closings can create, and the consequent reluctance to close local schools.[84] At one Halifax County School Board meeting, "town leaders and students [opposed to school consolidation] overflowed into the corridor and down the hall."[85] A local mayor who opposed school closings stated, " 'Congratulations, you have succeeded where others have failed. You have united us on this issue and we will not forget it.' "[86]

Table 4: Number of Schools in Each District

	1979–80	1989–90	1999–2000	2008–09
Halifax County	18	17	16	14
Northampton County	11	11	10	11
Weldon City	3	3	4	4
Hertford County	8	6	6	7
Avg.—Declining LEAs	*10*	*9.3*	*9*	*9 (-10.0%)*

[83] The annual *North Carolina Public Schools Statistical Profile* provides the number of schools in each district. *See supra* note 1.
[84] Della Batts, *Halifax County Schools' Consolidation Plan Under Fire*, ROANOKE RAPIDS DAILY HERALD, May 6, 2009, http://www.rrdailyherald.com/articles/2009/05/06/news/doc4a01da34aba00065073128.txt.
[85] *Id.*
[86] *Id.* (quoting Scotland Neck mayor James Mills).

Duplin County	17	16	15	16
Roanoke Rapids City	5	5	4	4
Avg.—Constant LEAs	*11*	*10.5*	*9.5*	*10 (-9.1%)*
Pender County	13	12	13	16
Chapel Hill-Carrboro	10	10	14	18
Avg.—Growing LEAs	*11.5*	*11*	*13.5*	*17 (+47.8%)*

Interestingly, there was more action with school closings and openings between the 1969–70 and 1979–80 school years than over other periods, particularly for Northampton County and Weldon City. Table 5 displays the data. It is likely that such changes were partially a result of desegregation efforts.

Table 5: Number of Schools in Each District, 1969–70[87] to 1979–80

	1969–70	1979–80
Halifax County	16	18
Northampton County	16	11
Weldon City	6	3
Hertford County	7	8
Avg.—Declining LEAs	*11.25*	*10*
Duplin County	21	17
Roanoke Rapids City	6	5
Avg.—Constant LEAs	*13.5*	*11*
Pender County	11	13
Chapel Hill-Carrboro	10	10
Avg.—Growing LEAs	*10.5*	*11.5*

The reluctance to close schools over recent years further reveals itself in the students per school data (see Table 6, which simply divides total district enrollment by the number of schools). The average number of students per school in declining districts fell by 41.6%. In contrast, the number of students per school in growing districts increased by only 21.6%, despite the significant enrollment growth (99.1%) over the period.

Table 6: Students per School in Each District

	1969–70	1979–80	1989–90	1999–2000	2008–09
Halifax County	560	440	382	380	319
Northampton County	402	469	363	377	246
Weldon City	347	544	416	284	253
Hertford County	889	621	695	680	462
Avg.—Declining LEAs	*557*	*519*	*464*	*430*	*320 (-42.6%)*

[87] U.S. DEPT. OF EDUCATION, DIRECTORY OF PUBLIC ELEMENTARY AND SECONDARY SCHOOLS IN SELECTED DISTRICTS: ENROLLMENT BY RACIAL/ETHNIC GROUP (1970).

Duplin County	489	531	489	559	554
Roanoke Rapids City	530	582	565	779	728
Avg.—Constant LEAs	*510*	*557*	*527*	*669*	*641 (+25.8%)*
Pender County	426	387	400	485	494
Chapel Hill-Carrboro	501	553	556	608	633
Avg.—Growing LEAs	*463*	*470*	*479*	*547*	*564 (+21.6%)*

Despite the reluctance to close schools over the past several years, it seems that some districts have recently reached the "breaking point," perhaps because the economic downturn and corresponding budget shortfalls have exacerbated the effects of declining enrollment. Halifax County has closed two elementary schools and two middle schools over the last six years.[88] Northampton County closed two elementary schools following the 2009 recommendations of a Local Community Task Force, and it is currently considering consolidating its two high schools (Northampton East H.S. and Northampton West H.S.).[89] Proposals to consolidate the two high schools have been somewhat contentious. Northampton County has a total geographic area of 551 square miles,[90] so having only one high school will lead to long transportation times for many students, up to ninety minutes in some cases. And the most centrally located high school, Northampton East, is nearly fifty years old. If Northampton were to consolidate into one high school, the best solution would be to build a brand new school building in the central part of the county.[91] Unfortunately, Northampton does not have the funds to do so. It is a low-wealth, rural county, and declining enrollment is already straining fiscal resources.

While consolidation is a difficult decision, one cannot avoid the data. According to a public presentation presented by Northampton County Schools in January 2011, there are currently 650 public high school students in the system.[92] DPI projects this number will fall to 497 by 2015–16 and 417 by 2020–21.[93] With such low numbers, having two high schools seems unsustainable, and doing so would require such small school sizes that providing a wide array of course offerings might be impossible. Northampton County already struggles to provide varied course options.[94] There also would be a fiscal benefit to consolidation. For instance, the system would require five high school English teachers if it operated only one high school, compared to the nine English teachers currently employed.[95] The central office projects $1.36 million in cost savings from just professional staffing reductions if it were to operate one high school in Northampton County instead of two.[96] These funds might be used for other investments, such as hiring more elective teachers or increasing utilization of technology (including distance

[88] Interview with Keith Hoggard, Public Relations Coordinator, Halifax County Schools (Mar. 9, 2011).
[89] Interview with Phil Matthews, Assistant Superintendent, Northampton County Schools (Mar. 11, 2011).
[90] U.S. Census Data, http://www.census.gov/.
[91] Interview with Phil Matthews, Assistant Superintendent, Northampton County Schools (Mar. 11, 2011).
[92] "Decisions/ Decisions/ Decisions," Northampton County Schools Presentation on Enrollment, Financial Resources, and Transportation [hereinafter Northampton County Schools Presentation] (powerpoint slides on file with author).
[93] *Id.*
[94] See curriculum discussion, *supra*.
[95] Northampton County Schools Presentation, *supra* note 92.
[96] *Id.*

learning). The school district could clearly capture the benefits of economies of scale through school consolidation.

On the other hand, opponents to consolidation point to the increased transportation times resulting from having only one high school, as well as the negative effects such long commutes can have on students and families. Schools also serve as community centers, and their loss can diminish community involvement. Both arguments have been made in Halifax and Northampton counties, and the education literature indicates that both are valid concerns.[97] Given these concerns, it is no surprise that districts often resist closing schools, despite the clear benefits provided by economies of scale.

Grades per School.[98] One might expect that declining enrollment could also impact the number of grades per school. North Carolina schools are typically broken down into K–5 elementary, 6–8 middle, and 9–12 high schools. Perhaps districts would create a greater number of combined schools with extra grades (e.g., K–8 or 6–12) to prevent total enrollment in any individual school from becoming too small. Alternatively, perhaps a district would create schools with fewer grades (e.g., K–3 and 4–6) in order to avoid having to close schools. For example, if there are only enough students for one K–5 elementary school, perhaps a district would choose to have one K–3 and one 4–6 institution instead, in order to avoid closing down an elementary school.

Neither of these hypotheses is reflected in the data. While the declining districts have experienced a noticeable drop in the number of grades per school, this is likely because the districts have been at least somewhat more likely to close schools. When they do so, it seems that elementary schools—which tend to have a greater number of grades—are more likely to be the schools picked for consolidation. The loss of one or two elementary schools has a noticeable impact on the number of grades per school. Additionally, there are only small numbers of schools with extra grades or fewer grades across the eight districts.

Table 7: Grades per School

	1986–87	1997–98	2008–09
Halifax County	4.8	4.5	4.7
Northampton County	5.6	5.0	4.6
Weldon City	6.7	4.8	4.8
Hertford County	4.0	4.2	3.7
Avg.—Declining LEAs	*5.3*	*4.6*	*4.4 (-15.6%)*
Duplin County	5.4	5.7	5.4
Roanoke Rapids City	3.8	3.8	5.0
Avg.—Constant LEAs	*4.6*	*4.8*	*5.2 (+13.0%)*
Pender County	4.9	4.9	4.6
Chapel Hill-Carrboro	5.3	4.9	5.1
Avg.—Growing LEAs	*5.1*	*4.9*	*4.8 (-6.2%)*

[97] *See, e.g.*, *Research Raises Doubts About Benefits of Consolidation*, THE RURAL SCHOOL AND COMMUNITY TRUST, http://www.ruraledu.org/articles.php?id=1946 (last visited Mar. 25, 2011); Zars, *supra* note 31.

[98] The annual *North Carolina Public Schools Statistical Profile* provides the number of grades for each school in the district. *See supra* note 1. Averaging these school-specific numbers provides the district-wide figures.

Table 8: Schools with Extra Grades[99]

	1986–87	1997–98	2008–09
Halifax County	0	0	0
Northampton County	0	0	*1
Weldon City	2	0	*1
Hertford County	0	0	0
Avg.—Declining LEAs	*0.5*	*0*	*0.5*
Duplin County	3	4	4
Roanoke Rapids City	0	0	0
Avg.—Constant LEAs	*1.5*	*2*	*2*
Pender County	1	1	2 (*1)
Chapel Hill-Carrboro	*1	*1	*1
Avg.—Growing LEAs	*2*	*2*	*1.5*

Table 9: Schools with Fewer Grades

	1986–87	1997–98	2008–09
Halifax County	2	2	1
Northampton County	0	0	0
Weldon City	0	0	0
Hertford County	2	2	3 (*1)
Avg.—Declining LEAs	*1*	*1*	*1*
Duplin County	4	1	*1
Roanoke Rapids City	2	2	0
Avg.—Constant LEAs	*3*	*1.5*	*0.5*
Pender County	4	0	3
Chapel Hill-Carrboro	0	0	0
Avg.—Growing LEAs	*2*	*0*	*1.5*

3. Curriculum Effects

The literature suggests that declining student enrollment leads to fewer curricular opportunities in affected school districts. This outcome has played out to at least some degree in the sampled North Carolina districts. For instance, there has been a much sharper loss in foreign language course offerings in declining districts than the constant or growing groups (see Table 10).[100]

Table 10: High School Foreign Language Courses Offered in Each District

	2001–02	2007–08	*Change*
Halifax County	French, Spanish, German	French, Spanish	*Dropped German*
Northampton County	French, Spanish, Latin	Spanish	*Dropped French and Latin*
Weldon City	Spanish	Spanish	----------
Hertford County	French, Spanish, Latin	French, Spanish	*Dropped Latin*

[99] A (*) denotes an alternative school.

[100] Course enrollment information is available through the DPI website at EDUCATION STATISTICS ACCESS SYSTEM, http://beyond2020.dpi.state.nc.us/wds80_1/ReportFolders/reportFolders.aspx?sCS_referer=&sCS_ChosenLang=en (last visited Mar. 25, 2011).

Duplin County	Spanish, Latin	Spanish	*Dropped Latin*
Roanoke Rapids City	French, Spanish	French, Spanish	----------
Pender County	French, Spanish, German, Latin	French, Spanish, German, Latin	----------
Chapel Hill-Carrboro	French, Spanish, German, Latin, Japanese	French, Spanish, German, Latin, Japanese	----------

Table 11 provides further information regarding the effect of declining enrollment on course offerings. The table includes course enrollment data for 1994–95 and 2009–10 for each of the representative districts.[101] The data sums all courses offered in K-12 public schools (elementary, middle, and high schools). School districts with declining enrollment have seen a decrease in the number of courses available to their students. In contrast, both the constant and growing school districts have had a fairly significant increase in number of courses since 1994–95.

Table 11: Total K-12 Courses Offered in Each District, 1994–95 to 2009–10

	1994–95	2009–10	% Change
Halifax County	127	111	-12.6%
Northampton County	109	96	-11.9%
Weldon City	69	66	-4.3%
Hertford County	118	116	-1.7%
Avg.—Declining LEAs	*106*	*97*	*-8.3%*
Duplin County	134	176	+23.9%
Roanoke Rapids City	103	123	+19.4%
Avg.—Constant LEAs	*119*	*150*	*+26.1%*
Pender County	119	204	+71.4%
Chapel Hill-Carrboro	143	189	+32.3%
Avg.—Growing LEAs	*131*	*197*	*+50.4%*

As discussed in Part I.B, scale is the issue. Declining districts (and their schools) have fewer students, and there simply are not enough students to fill a broad array of courses. Further, if the county government does not significantly increase local funding, teachers are laid off as state ADM dollars fall.[102] Certain courses have to be cut, and there is no room for a diverse set of electives.[103] The case of Weldon City Schools reinforces the issues of scale. It is the smallest district in the group (1,011 students in 2008–09), enrolling less than half as many students as the next smallest district (Northampton County: 2,701 students). It currently offers the fewest K-12 courses at 66, compared to the 189 courses offered by the group's largest district, Chapel Hill-Carrboro Schools. Weldon City Schools offers far fewer elective courses than other districts—only one level of band, no journalism, no drafting/architecture, and no psychology, for example. Weldon City's only foreign language is Spanish; it offers only a few computer courses, and it

[101] Data on the total number of courses available in select districts over time were provided by DPI in response to a data request submitted by the author. Any course in which students were actually enrolled during the 1994–95 or 2009–10 school year is included in the totals. Courses which a district might have offered but for insufficient interest are not counted. Thus, Table 11 depicts *actual* course offerings.
[102] *See, e.g.*, Interview with Greg Hogue, Principal, Hertford County High School (Mar. 17, 2011).
[103] *Id*.

does not have calculus. While some such courses may be available from the community college, the difference in curricular opportunities is striking nonetheless.

Comparing Weldon City to Halifax County and Roanoke Rapids Schools proves quite interesting. Each is a separate school district, despite the fact that all three are present in Halifax County proper. While Weldon City only offers 66 K-12 courses, Halifax County offers 111 and Roanoke Rapids 123. However, even the Roanoke Rapids total is considerably smaller than the course offerings available at the other constant and growing school districts. One cannot help but consider the benefits school district consolidation would have on the course offerings in these three systems. Note that Appendix 2 lists all the K-12 courses offered by Weldon City, Halifax County, and Roanoke Rapids Schools.

4. Additional Indicators: Student Achievement, Economic Data, and Median Age

Additional data describing the eight school districts confirm many of the problems associated with decline that were previously discussed in Part III.A. As displayed in Table 11, the four declining districts have worse student achievement outcomes than constant or growing districts.

Table 12: Sixth Grade Reading and Math EOG Scores 2007–08[104]

	Sixth Grade Reading EOG Scores—Overall Percent Proficiency	Sixth Grade Math EOG Scores—Overall Percent Proficiency
Halifax County	28.8%	33.9%
Northampton County	39.0%	63.6%
Weldon City	29.7%	52.0%
Hertford County	38.4%	50.6%
Avg.—Declining LEAs	*34.0%*	*50.0%*
Duplin County	54.4%	69.9%
Roanoke Rapids City	51.1%	66.7%
Avg.—Constant LEAs	*52.8%*	*68.3%*
Pender County	61.8%	71.6%
Chapel Hill-Carrboro	82.7%	87.5%
Avg.—Growing LEAs	*72.3%*	*79.6%*

Further, the declining locales seem to have older populations, suggesting that decline is partially caused by younger residents leaving the community. For instance, Northampton County and Hertford County had median ages of 40.0 and 39.2, respectively, in 2000 while Duplin County had a median age of 34.9.[105] The economic data further confirm the hardships facing these communities. In 2000, Halifax, Northampton, and Hertford counties each had a

[104] *See Testing and Accountability Results*, *supra* note 67.

[105] U.S. Census Data, http://www.census.gov/. The numbers are also available through the "Log Into North Carolina" (LINC) website provided by the State of North Carolina: http://linc.state.nc.us/. Pender County has a median age of 38.8, but this is likely due to a sizeable retirement community.

median household income of approximately $26,500.[106] In contrast, Duplin County had a median household income of $29,890, while Pender County was at $35,902.[107]

In sum, declining enrollment has clear effects on North Carolina school districts. There are fewer courses for students to take in these districts, and there has been at least some degree of school closings. The communities facing significant decline are often those already facing problems of low student achievement and weak local economies. With this in mind, the remaining Parts of this Report analyze the policies that the state and local governments should implement in order to address the issues associated with declining student enrollment.

IV. POLICY OPTIONS[108] AND CRITERIA

The remainder of this Report examines the following policy options:

1. *Alter state funding formulas to delay the effects of year-to-year drops in funding*. This option would essentially "smooth out" the annual reductions in state funding. Currently, North Carolina uses the higher of either the prior year's average daily membership or the projected average for the coming year.[109] An approach more like Michigan, which has used a three-year average, may be more appropriate.
2. *Provide supplemental state funding for districts experiencing significant declines in student enrollment*. North Carolina provides numerous types of supplemental funding, including the Disadvantaged Student Supplemental Fund, Low-Wealth Supplemental Funding, and Small County Supplemental Funding. This option would create a new type of supplemental funding for districts with substantial enrollment declines.
3. *Provide for greater use of technology in affected districts*. Technology can provide curriculum and learning opportunities that are otherwise unavailable.[110] Internet and other technological resources are often recommended in order to assist rural districts,[111] and this recommendation may be even more appropriate when declining enrollment is a concern.
4. *Promote partnerships between affected school districts and other community institutions, including local businesses and community colleges*. Much like increased use of technology, this option may help offset the losses in curriculum and other learning opportunities. Various sources have described the importance of community engagement to school systems, particularly in rural communities.[112]
5. *Establish inter-district resource partnerships*. Districts would cooperate in providing certain student services, central offices services, and some curriculum offerings.

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[106] *Id*.
[107] *Id*.
[108] Note that several of these policy options are similar to those recommended in JIMERSON, *supra* note 14. The policy options are also based on strategies employed by other school districts across the country that are facing the problems associated with declining enrollment. *See supra* Part I.
[109] INFORMATION ANALYSIS DIVISION OF SCHOOL BUSINESS, *supra* note 70.
[110] *See* Monk, supra note 12, at 155, 168 (describing how rural districts are "expanding their use of computing and telecommunication technologies, particularly in areas like advanced placement and college course offerings").
[111] MCCULLOUGH & JOHNSON, *supra* note 53, at 19.
[112] *Id*.; Bauch, *supra* note 33, at 204, 216-18 (2001) (describing "community as a curricular resource" for rural school districts).

Such relationships have emerged both formally and informally in other states where districts face declining student populations.[113]

6. *Establish inter-district enrollment arrangements*. This option would enable some students who live in County X to attend school in County Y if there is a County Y school closer to them. The Center for Civil Rights recommended this option as a possible means for alleviating increased transportation demands on students and families that can result from school consolidation.
7. *Consolidate districts where multiple school districts exist in one county*. One of the rural counties examined in this study, Halifax, has three separate school systems (Halifax County, Roanoke Rapids City Schools, and Weldon City Schools). If declining student enrollment is placing a strain on district resources, then an obvious solution may be to consolidate and thus capture benefits from economies of scale. Analysis commissioned by the State of California has cited declining student enrollment as a reason to consolidate local school governing regimes into regional systems.[114] "Consolidation is thought to bring about more effective schools by increasing the tax base, quality of professional personnel, breadth of educational programs, special services, and transportation facilities and by reducing overall educational costs per student."[115]

The following criteria are used to evaluate the proposed policy options:

a. Impact on student academic achievement
b. Cost
c. Political feasibility

V. ANALYSIS

This Part is divided into seven sections—one for each policy option outlined above. Each policy option is analyzed in terms of its general effectiveness, and it is weighed against the three criteria of (1) impact on student academic achievement, (2) cost, and (3) political feasibility. This process is informed by the relevant education literature, best practices in other states, interviews with local education officials, and other relevant data.

Interviews with local education officials in declining districts have proven particularly helpful. Through these interviews, I sought to get a better sense of the problems stemming from declining enrollment and the effectiveness of the various policy options. I was able to conduct interviews with the following individuals:

- Norris Keith Hoggard, Public Relations Coordinator, Halifax County Schools
- Frances Bazemore, Director for Student Services, Hertford County Schools
- Pamela Chamblee, Principal, Northampton East High School
- Phil Matthews, Assistant Superintendent, Northampton County Schools
- Kelvin Edwards, Board Member, Northampton County Board of Education, and Principal, Belmont Elementary (Roanoke Rapids)
- Greg Hogue, Principal, Hertford County High School
- Ellen Burnett, RTI Director, Roanoke Rapids Schools

[113] Eastern Colorado school districts provide one example of such collaboration. *See* Cook, *supra* note 22, at 22, 26.
[114] *See ETV05 Regionalize K-12 Educational Infrastructure*, *supra* note 19.
[115] Allan C. Ornstein, *School District and School Size: Overview and Outlook*, THE HIGH SCHOOL JOURNAL, Apr.–May 1993.

In attempting to schedule interviews, I reached out to several education officials in the declining school districts of Halifax County, Weldon City, Northampton County, and Hertford County. I sent an initial email when I could locate an email address; otherwise I made a phone call. In addition to my initial communication, I followed up at least once. I had hoped to speak with central office personnel, principals, and school board members. Email addresses and direct phone numbers were unavailable for several of these people (particularly school board members), which made the process more difficult. Overall, I contacted a total of 21 individuals. Table 13 lists those whom I contacted and the outcome of the communication. Appendix 3 provides the Interview Protocol.

Table 13: Local Education Officials Contacted for Interviews

Education Official	**Outcome of Communication**
Norris Keith Hoggard, Public Relations Coordinator (Halifax)	*Successful interview*
Phillip Rountree, Principal (Halifax)	Short email response to initial communication, but did not respond to attempts to schedule interview
John Rollack, Principal (Halifax)	No response
Linda Bullock, Principal (Halifax)	No response
Donna Hunter, School Board Member (Halifax)	No response
James Pierce, Chairman of County Commissioners (Halifax)	No response
Representative Angela Bryant (Halifax County)	Responded, but then cancelled four interviews
David Jones, Personnel Director (Weldon)	No response
Terence Wyche, Assistant Superintendent (Weldon)	No response
Lucy Edwards, Principal (Weldon)	No response
Cynthia Byrd, Principal (Weldon)	No response
Phil Matthews, Assistant Superintendent (Northampton)	*Successful interview*
Kelvin Edwards, School Board Member (Northampton)	*Successful interview*
Pamela Chamblee, Principal (Northampton)	*Successful interview*
Barbara Drummond, Principal (Northampton)	No response
Felisha Wyche, Principal (Northampton)	No response
John Fahey, Superintendent (Hertford)	Put me in contact with Frances Bazemore, Director for Student Services—*successful interview*
Greg Hogue, Principal (Hertford)	*Successful interview*
Debbie Rollins, Assistant Superintendent (Hertford)	No response
Carson Watford, Principal (Hertford)	No response
Ellen Burnett, RTI Director (Roanoke Rapids)[116]	*Successful interview*

The subsequent analysis groups the policy options into three categories: (A) Funding, (B) Intra-district Solutions, and (C) Inter-district Solutions. The funding category discusses ways the state could effectively supplement education budgets in declining districts. The intra-district

[116] Ms. Burnett has significant experience with the countywide education system in Halifax County, so it was recommended that I speak with her as well.

solutions focus on strategies that districts can adopt independently in order to help mitigate the negative effects of declining enrollment and maximize student achievement. The inter-district solutions focus on collaborative relationships between similarly situated school districts.

A. Funding

The most immediate result from declining enrollment is decreased funding. The reliance on per-pupil funding means that districts lose state money as their enrollment totals fall. Funding decline leads to other problems, such as laying off teachers, having to reduce course offerings, and even consolidating schools. The interviewees quickly identified reductions in state ADM funding as the most immediate problem resulting from declining enrollment.

1. Alter State Funding Formulas to Delay the Effects of Year-to-Year Drops in Funding

This option first considers adopting an approach much like Michigan, which uses a three-year average for ADM calculations, to help smooth out funding changes.[117] Unfortunately, this option would prove minimally effective. Take Hertford County as an example, comparing the ADM funding numbers under the North Carolina and Michigan approaches. (Recall that North Carolina simply picks the larger of a district's current ADM or previous year's ADM.)

Table 14: Hertford County ADM Figures—North Carolina and Michigan Models

2005–06 Enrollment	2006–07 Enrollment	2007–08 Enrollment	NC ADM for State Funding	MI ADM for State Funding
3,469	3,371	3,231	3,371	3,357

In this scenario, Hertford County would actually receive less funding under the Michigan model than under the status quo. If a multi-year average for ADM were to help Hertford County, one would need to look back at additional years, using a greater number of annual enrollment totals. Under a five-year average, for instance, Hertford would have an ADM total of 3,422. More years added to the analysis, however, leads to a greater distortion from actual enrollment. And a multi-year average based on a large annual range may not fully capture a district's needs, particularly if there are sizeable swings from one recent year to another.

There are other ways to alter state funding formulas to delay the effects of year-to-year drops in funding. For instance, a modified-North Carolina approach might be employed where the state would simply choose the highest ADM number from the previous three or four years (instead of the previous two). This option avoids the Michigan model's initial problem by ensuring that only higher ADM totals are possible. For instance, Hertford would have an ADM total of 3,469 under the prior example. While funding would continue to drop over time, this would delay the full consequence of enrollment decline on state funding, perhaps allowing more time for districts to manage the transition. Still, there are problems with any generalized approach to "smoothing out" funding totals. It seems somewhat common for districts to sometimes reach a "breaking point" and need to make dramatic change, such as closing schools or cutting specific courses. Northampton County provides an example of this scenario.[118] The

[117] *See* Upper Peninsula Education Challenge, *supra* note 18.

[118] Interview with Phil Matthews, Assistant Superintendent, Northampton County Schools (Mar. 11, 2011); Interview with Kelvin Edwards, School Board Member, Northampton County Schools (Mar. 11, 2011); Interview with Pamela Chamblee, Principal, Northampton East High School (Mar. 11, 2011).

system maintained a constant number of schools for many years, and has resisted reductions in curriculum offerings. However, the district recently had to consolidate two elementary schools, and it is currently discussing consolidating its high schools. Because the most centrally located high school is nearly fifty years old, the best option for Northampton would be to build a new, centrally located school building to serve as the sole high school. But, Northampton County lacks the requisite funds. This scenario illustrates the point that the effects of declining enrollment are not necessarily linear, as this policy option would seem to suggest.

Given the problems with utilizing a multi-year ADM average, this policy option should be avoided. Any attempt to "smooth out" the general ADM funding formula should occur under a modified-North Carolina approach. There would likely be a moderate impact on student achievement with this policy. Districts would receive additional funds to keep teachers, invest in technology, and even construct new facilities. But these extra funds would usually be a fairly minimal increase over the status quo, and they would not be targeted based on times when districts really needed to address the major consequences of enrollment decline. Regarding costs, state budget expenses would increase somewhat in order to cover the additional funding. Given the workability problems and the current state budget shortfall, the political feasibility of this option is low.

2. Provide Supplemental State Funding for Districts Experiencing Significant Declines in Student Enrollment

If the state were to provide additional funding to assist districts with declining enrollment, the most effective mechanism would be a separate fund. The local education officials interviewed were very aware of the current budgetary situation impacting the state and local governments. However, each interviewee who provided in-depth discussion of this option recognized that current education funding is inadequate to properly address problems resulting from declining enrollment. There are, of course, additional funding sources that benefit rural North Carolina school districts, such as the Disadvantaged Student Supplemental Fund, Low-Wealth Supplemental Funding, and Small County Supplemental Funding.[119] Many districts with declining enrollment receive this type of funding. However, these funds were not created for the purpose of addressing declining enrollment, and such funding is not provided in proportion to the degree of enrollment decline facing a district. For instance, Halifax County does not qualify for small-county funding.[120] And the funds that these districts do receive are increasingly divided up across numerous counties, a point which one interviewee made in the context of *Leandro* (low-wealth) funding. (Indeed, 68 of North Carolina's 100 counties were eligible for low-wealth funding in 2010.[121])

The logic of providing a separate fund for districts facing declining enrollment is undeniable. These districts face clear challenges that—despite the correlation between decline and rural/low-wealth status—are unique to declining school systems managing this transition. These issues can present themselves in a nonlinear fashion, with course enrollment and school consolidation decisions requiring action when enrollment reaches a critical mass of students. Thus, the state could administer a separate fund in a need-based fashion, perhaps similar to grant funding.[122] Those districts facing severe enrollment decline could apply for the funding, after

[119] *See generally* INFORMATION ANALYSIS DIVISION OF SCHOOL BUSINESS, *supra* note 70.
[120] *See id.*
[121] *See id.*
[122] Two interviewees discussed the benefits of grant funding, which allow declining districts to secure additional funds to help adopt educational technology and other coping strategies.

communicating a clear purpose for these funds to the state. The state could also use the funds as an incentive, requiring certain action in exchange for the dollars. Problems with districts delaying school consolidation or failing to make full use of technology, for example, could be alleviated by attaching conditions to supplemental funds.

The ability for this policy option to benefit student achievement is high. The three primary academic problems stemming from declining enrollment—school size, transportation, and curriculum—could each be mitigated by targeted funding. A district like Northampton could secure financial assistance for building a new, central high school, and districts with students facing long commutes could receive money for additional buses and personnel. Targeted funding could also be used to retain teachers for specialized courses or to promote distance learning. Still, this policy option performs poorly against the cost criterion. And the cost issues impact political feasibility. Public K-12 education accounts for 40% of state funds,[123] and the legislature is currently trying to cover a $2.4 billion shortfall.[124] Overall, a supplemental funding source would help districts facing declining enrollment to mitigate the harmful effects. It will not be feasible, however, until there is substantial improvement in the state's budgetary condition.

B. Intra-district Solutions

3. Provide for Greater use of Technology in Affected Districts

The rate of technological improvement is astounding, both with instruction and otherwise. And, these changes have already had a dramatic impact on education. For example, there has been a steady increase in home-schooling over the last ten years, with some education officials pointing to online classes and other technological resources as the primary instigator of the growth.[125] Home-schooled students can receive online instruction from high-quality teachers located across the country and around the world, even from university-level instructors.

Simply put, technology can provide learning opportunities that are otherwise unavailable.[126] Education scholars often point to online courses and other technological resources as a promising means to help small, rural school districts provide high-quality instruction and varied course offerings,[127] and this recommendation may be even more appropriate when declining enrollment is a concern. The interviewees I spoke with recognized the benefit of technology in assisting districts that have to cut teachers and offer fewer specialized courses due to declining enrollment. One interviewee, Kelvin Edwards, was particularly enthusiastic about the benefits that distance learning could provide students in Northampton County. He pointed to the inability of the district (due to its size and funding issues) to provide several types of courses, including AP and other types of college or career preparation training. And, he saw technology as a means to provide these opportunities. Both the education literature and common sense support his reasoning. While many affected districts already make some use of online courses, there is more to be done. Full-fledged distance

[123] Northampton County Schools Presentation, *supra* note 92.
[124] *Id.*
[125] Interview with Phil Matthews, Assistant Superintendent, Northampton County Schools (Mar. 11, 2011); Interview with Kelvin Edwards, School Board Member, Northampton County Schools (Mar. 11, 2011).
[126] *See* Monk, *supra* note 12, at 155, 168 (describing how rural districts are "expanding their use of computing and telecommunication technologies, particularly in areas like advanced placement and college course offerings").
[127] MCCULLOUGH & JOHNSON, supra note 53, at 19; *cf.* John W. Sipple & Bryan O. Brent, *Challenges and Strategies Associated with Rural School Settings*, *in* HANDBOOK OF RESEARCH IN EDUCATION FINANCE AND POLICY 612, 614–15 (Helen F. Ladd & Edwards B. Fiske, eds. 2008).

learning opportunities provided for targeted courses would help provide a full range of curricular opportunities.

The ability for this policy option to help provide a full curriculum to students depends on whether it performs highly on the student achievement criterion. Education studies find some degree of positive relationship between diverse curriculum offerings and overall student outcomes,[128] and diverse curriculum offerings can certainly provide more individualized education plans and improved college and technical preparation.[129] Greater use of technology performs moderately well in terms of cost. One interviewee discussed the relative cost savings of distance education compared to a full-time instructor: Paying for a licensing fee and a part-time facilitator is less expensive than a full-time teacher, particularly when only a handful of students will take the course and the full ADM funding is unavailable. Some analysis suggests that educational technology can actually be quite expensive for rural districts.[130] However, it is likely that already-existing technological resources would help minimize the cost of fuller utilization in declining districts. Finally, the continuing commitment of state and federal legislators to fund technology projects in K-12 schools suggests that political feasibility is high.

4. Promote Partnerships Between Affected School Districts and Other Community Institutions, Including Local Businesses and Community Colleges

Partnerships between school districts and other community institutions may help offset losses in curriculum and other learning opportunities. Community colleges can provide high school students access to their course offerings, and local businesses can provide additional opportunities in terms of vocational education. It is noteworthy that community engagement is one factor common to successful schools, particularly in rural communities.[131]

The education officials interviewed recognized the role of other community institutions in mitigating the results of declining enrollment. They also pointed to numerous examples of these opportunities already provided to their students. For instance, high school students are able to take classes at area community colleges, and some districts have early college programs whereby students can earn both a high school degree and associates degree over a five-year period.[132] It consequently seems that affected districts are already making use of many community partnerships available to them. Of course, education officials should continue to focus on these possibilities if enrollment totals keep declining, placing increased strain on curriculum options. Additional partnerships with local businesses and civic organizations may provide other opportunities.

This policy option performs moderately well in promoting student achievement. While the overall benefits are present—again, diverse curricular opportunities can promote engagement and overall achievement—districts are already utilizing such partnerships. The expected impact on student achievement is consequently less than other policy options characterized by greater

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[128] *Cf.* Altonji, *supra* note 35, at 409 (finding only a small return to additional academic courses but recommending more complex analysis based on the belief that curriculum matters); Payne & Biddle, *supra* note 35, at 4 (finding that the level of curriculum affects student achievement).

[129] *Cf.* Vincent J. Roscigno et al., *supra* note 36, at 2121, 2133 (2006) ("Educational expenditure decreases student-teacher ratios and increases the availability of more diverse, rigorous curriculum.").

[130] Sipple & Brent, *supra* note 127, at 612, 614–15.

[131] MCCULLOUGH & JOHNSON, *supra* note 53, at 19; Bauch, *supra* note 33, at 204, 216-18 (2001) (describing "community as a curricular resource" for rural school districts).

[132] Interview with Ellen Burnett, RTI Director, Roanoke Rapids School (Nov. 5, 2011); Interview with Phil Matthews, Assistant Superintendent, Northampton County Schools (Mar. 11, 2011); Interview with Kelvin Edwards, School Board Member, Northampton County Schools (Mar. 11, 2011).

"room for growth." Community partnerships perform well on the cost criteria, given the ability to rely on other sources (e.g., community colleges) for assistance. Political feasibility is also high, based on the current success of these partnerships.

C. Inter-district Solutions

5. Establish Inter-district Resource Partnerships

This policy options involves inter-district cooperation in providing certain student services, central office services, and some curriculum offerings. These relationships have emerged in other states, in the form of both formal and informal agreements, where districts are facing declining student enrollment. For example, some Colorado school districts share busing for extracurricular activities, and two districts are sharing a superintendent.[133] Collaborative relationships between North Carolina districts would serve similar purposes. One interviewee suggested that school districts could specialize in certain areas, with one district providing early college options and another providing more complex vocational training or AP courses. The districts would then ensure that the specialized opportunities are open to students in the neighboring districts. Another interviewee discussed the possibility of incorporating inter-district partnerships with distance learning to promote expansive course offerings.[134] For instance, neighboring districts could share a foreign language teacher. The teacher would be physically present in one district part of the year, relying on distance learning to reach the other district during the same period. The physical assignment would switch at some point, so that he was present in both districts during the year. The result would ensure that each district offered the foreign language, doing so at a reduced cost. Of course, physical distance would limit some degree of collaboration. One interviewee pointed out that the sizeable distance between some rural schools hurts the ability to coordinate programs where individuals must move between districts on a regular basis.

Another education official discussed the presence of the Roanoke River Valley Education Consortium, which works to pursue resources and education opportunities for students across six districts: Warren County, Halifax County, Weldon City, Northampton County, Hertford County, and Bertie County. The consortium primarily applies for grants on behalf of all six districts, increasing the odds of securing grants by maximizing their possible effect.[135] However, the interviewee implied that the consortium currently has a fairly limited role. Expanding the consortium's involvement would be a possibility, particularly if local or state officials were resistant to a new inter-district body. Regardless of the specific form, true collaboration between districts would be the goal. The consortium could coordinate inter-district staffing arrangements in order to help broaden course offerings, for example. With a broader focus on maximizing current resources, regular meetings between district superintendents and representatives from the school boards could promote cooperation. The state could also incentivize these arrangements

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[133] Cook, *supra* note 22, at 22, 26. For state-level analysis in Colorado, see PACEY ECONOMICS GROUP, *supra* note 22.

[134] Interview with Kelvin Edwards, School Board Member, Northampton County Schools (Mar. 11, 2011).

[135] *See, e.g.*, WARREN COUNTY SCHOOL BOARD, REGULAR SCHEDULED BOARD MEETING AGENDA PACKET 4 (Oct. 10, 2005), *available at* http://www.warrenk12nc.org/docs/agendas/101005.Agenda.pdf (referencing a Bill Gates high school grant being pursued by the consortium). The consortium has demonstrated a commitment to using technology to expand educational opportunities for area students. *See DLT Awards—North Carolina*, USDA RURAL DEVELOPMENT (2010), http://www.rurdev.usda.gov/SupportDocuments/dltawards-nc.pdf (describing a grant for classroom video conferencing secured by the consortium).

by conditioning additional funding (like that distributed under policy option #2) upon inter-district cooperation.

Because this policy option could provide additional curricular opportunities to students, it would likely be successful in promoting student academic achievement. Education policy research has also suggested that such arrangements can benefit rural school districts with limited resources.[136] Inter-district partnerships are successful against the cost criteria, given the opportunity to promote economies of scale. Additionally, the Roanoke River Valley Education Consortium may already provide the necessary framework. There is a moderate level of political feasibility. The fact that a regional consortium already exists is certainly a plus. However, one interviewee pointed to some level of competition present between districts—over outside funding, student achievement, etc. And, districts might be wary of any policy that could lead to students (and funding) leaving for another district. In order to overcome these issues of local political feasibility, some level of state intervention may be necessary to broker agreement on more complicated inter-district arrangements.

6. Establish Inter-district Enrollment Arrangements

This policy option would enable some students who live in County X to attend school in County Y if there is a County Y school closer to them. Students in rural counties often face sizeable commutes, and consolidation can exacerbate the situation. When a district has a few, centrally located schools, families on the edge of the district are often far away from their assigned schools. And there can be situations where students would have a shorter commute to a school across the border in another district.

Inter-district enrollment is already a reality in North Carolina. Students can attend a different district if the school boards of both the new and old districts agree.[137] This currently happens when a student is unable to attend school in one district for behavior problems, when one district offers a specialized program a student wants to participate in, or when parents work in a different district and want their children to attend school there.[138] However, this is not a widely used policy, perhaps due in part to the funding results. A district that loses a student also loses the state ADM allotment for that student. And in districts already struggling with declining enrollment, such losses can have significant repercussions. Of course, what is best for the student should be the ultimate consideration. The reality is inescapable, however, that losing students (and the associated ADM dollars) presents serious problems for districts already facing declining enrollment. As one interviewee put it, policies that threaten a district's survival are bound to receive resistance.

This policy option still has merit. Many schools in northeastern North Carolina are just across the border from other districts. For instance, Northampton West H.S., Roanoke Rapids H.S., Weldon H.S., and Northwest Halifax H.S. are all within 11 miles of one of the other listed high schools.[139] If Northampton West were to close, for instance, allowing students in western Northampton County to attend school in a neighboring district would help avoid the negative

[136] Sipple & Brent, *supra* note 127, 612, 614–15 (discussing the role of regional educational agencies in providing meaningful staff development opportunities).
[137] *See* N.C. GEN STAT. § 115-366 (2010).
[138] Interview with Phil Matthews, Assistant Superintendent, Northampton County Schools (Mar. 11, 2011); Interview with Frances Bazemore. Director of Student Services, Hertford County Schools (Mar. 9, 2011).
[139] *See* Letter from Mark Dorosin, Senior Managing Attorney, UNC Law Center for Civil Rights, to State and Local Education Officials, February 16, 2011 (on file with author).

consequences of significant transportation demands.[140] (The longest busing time from the western part of the county to Northampton East H.S. would be as high as 1 hour and 50 minutes otherwise.[141]) Nevertheless, implementation of greater inter-district assignments would require significant state intervention in order to promote agreement between districts, and to ensure that one district does not suffer unreasonably as a result of disproportionate losses of students and ADM funding. If significant numbers of students in northwest Northampton County transferred to Halifax or Weldon school districts, the impact on the rest of Northampton public school students would raise serious concerns.

This policy option performs moderately well on the criterion of student academic achievement. Some analysis suggests negative student effects resulting from high transportation demands,[142] and inter-district enrollment would help minimize transportation times. However, the possible impact on districts facing a net loss of students may reduce these benefits. The policy performs well on cost, since it simply requires moving students to closer schools, and could even help reduce transportation expenses in the aggregate. Political feasibility is low. Districts will be resistant to losing students and the consequent funding, particularly if they are already suffering from declining enrollment.

7. Consolidate Districts Where Multiple School Districts Exist in One County

This policy option applies specifically to Halifax County and its three school districts: Halifax County Schools, Roanoke Rapids Schools, and Weldon City Schools. Both Halifax and Weldon school systems have faced significant enrollment declines—41.9% and 37.9% decline since 1979–80, respectively. Decline has led to some degree of school consolidation, teacher layoffs, and fewer course offering between the two districts. The enrollment totals in Roanoke Rapids Schools have been steady, but it is a small district, currently enrolling about 3,100 students. From the perspective of mitigating the effects of declining enrollment, consolidation is a no-brainer. Declining student enrollment is straining district resources in Halifax County and Weldon City, and consolidation would help minimize these burdens by capturing economies of scale. As identified in the education literature, "consolidation is thought to bring about more effective schools by increasing the tax base, quality of professional personnel, breadth of educational programs, special services, and transportation facilities and by reducing overall educational costs per student."[143] Some groups have gone so far as to suggest some degree of regional consolidation. Analysis commissioned by the State of California, for instance, has cited declining student enrollment as a reason to establish regional systems for education governance.[144] Again, attempting to capture the economies of scale is the driving rationale.

This policy options performs well in terms of promoting student academic achievement. A larger school district in Halifax County would allow the community to maximize its resources by utilizing fewer school buildings and providing more curricular opportunities at fewer costs. This point was also made during the interviews, during which one education official stated that consolidation would allow the local education governance to "spread the money around" to the places where it would be "most effective." Consolidation performs well against the cost criterion in the long-term, as economies of scale allow for the same or greater educational opportunities provided at a lower relative cost. There would certainly be implementation costs in

[140] *See* Zars, *supra* note 31; Howley & Howley, *supra* note 32.
[141] Northampton County Schools Presentation, *supra* note 92.
[142] Zars, *supra* note 31; Howley & Howley, *supra* note 32.
[143] Ornstein, *supra* note 115.
[144] *See ETV05 Regionalize K-12 Educational Infrastructure*, *supra* note 19.

the short-term, as three schools districts merged into one. Political feasibility is moderate. Some local leaders support consolidation, but some in Roanoke Rapids and Weldon City oppose it.[145] Still, there is at least some support for consolidation at the state level, with a focus on conserving state education funding. Legislation has been introduced stating that the state would only fund one school district per county,[146] which would essentially force city districts to merge with county districts. While the legislation has stalled in past years, the current economic shortfall may mean a greater chance of success. Indeed, legislators have introduced a bill this session that would allow the state to fund only one superintendent per county (and thus not fund superintendents of city districts).[147]

VI. RECOMMENDATIONS

The following matrix summarizes the analysis presented in Part V, assigning each policy option a score based on the three criteria: impact on student academic achievement, cost, and political feasibility. The scale is as follows: (3)=good, (2)=moderate, and (1)=poor. The matrix calculation weights the student achievement criterion by a factor of two to account for its utmost importance in the context of education policy. The scores are summed in the bottom row.

Table 15: Policy Analysis Matrix

	(#1) Altered Funding Formula	(#2) Supplemental Fund	(#3) Technology	(#4) Community Partnerships	(#5) Inter-district Partnerships	(#6) Inter-district Enrollment	(#7) Consolidation
Student Achievement	2 (*2=4)	3 (*2=6)	3 (*2=6)	2 (*2=4)	3 (*2=6)	2 (*2=4)	3 (*2=6)
Cost	1	1	2	3	3	3	2
Political Feasibility	1	1	3	3	2	1	2
Total Score	**6**	**8**	**11**	**10**	**11**	**8**	**10**

Based on the foregoing analysis, the Center should advocate for adoption or expansion of the following policy options:

- Provide for greater use of technology in affected school districts.
- Promote partnerships between affected school districts and other community institutions, including local businesses and community colleges.
- Establish inter-district resource partnerships.
- Consolidate districts where multiple school districts exist in one county.

Policy option #2 ("Provide supplemental state funding for districts experiencing significant declines in student enrollment.") could provide the most meaningful benefits for affected

[145] *See* Roger Bell, *Stances Collide on Local School Consolidation*, ROANOKE RAPIDS DAILY HERALD, July 17, 2010, http://www.rrdailyherald.com/articles/2010/07/17/news/doc4c4246d6b0d3f598580363.txt.
[146] *See, e.g.*, An Act Directing the State Board of Education to Provide Funds for Only One Local Administrative Unit per County, Senate Bill 265, N.C. General Assembly 2009 Session, *available at* http://ncga.state.nc.us/sessions/2009/bills/senate/pdf/s265v1.pdf.
[147] *See* An Act Directing the State Board of Education to Provide Funds for Only One Local Superintendent per County, House Bill 131, N.C. General Assembly 2011 Session, available at http://www.ncga.state.nc.us/Sessions/2011/Bills/House/PDF/H131v1.pdf.

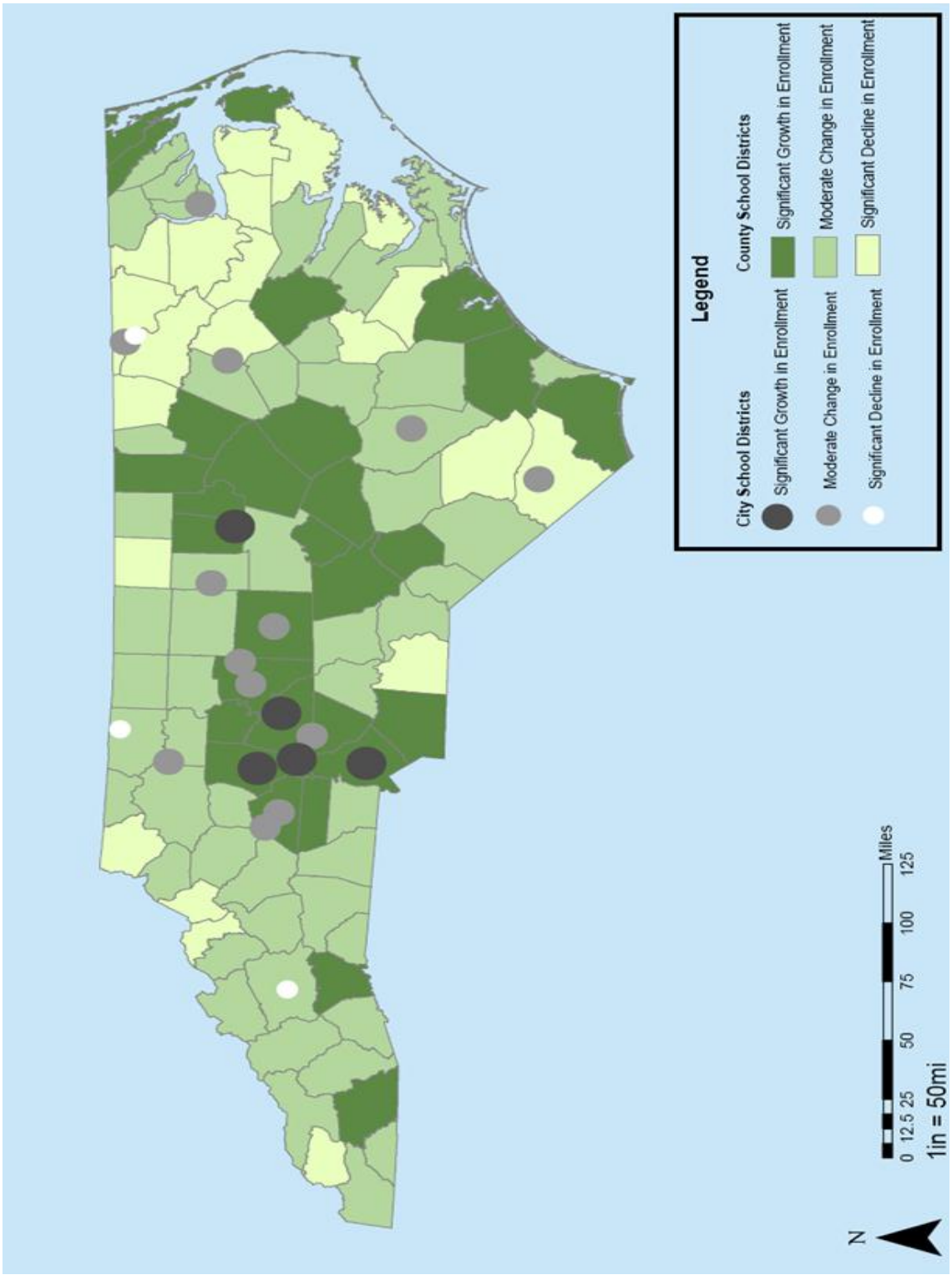
districts, particularly if an incentive-based funding strategy were adopted. The current fiscal and political climate makes the policy a nonstarter. However, this option ought to be immediately pursued once the state budget situation improves. Policy option #6 ("Establish inter-district enrollment arrangements.") suffers from implementation issues and political feasibility. However, some version of this policy could work with the appropriate level of state intervention. Thus, these enrollment arrangements might be appropriately pursued as part of incentive-based funding strategies under policy option #2. The proper state oversight could ensure that the long-term viability of any one district is not harmed, and additional funding could mitigate the ADM losses resulting from transferring students. Policy option #1 ("Alter state funding formulas to delay the effects of year-to-year drops in funding.") would be less effective, and the Center should not pursue it. Any changes in state funding meant to benefit declining districts should occur under policy option #2.

Finally, it is important to note the limitations of these recommendations. In many ways, declining enrollment is a symptom of a larger problem. There are low-wealth areas in North Carolina that lack jobs and other resources. People with the ability to leave are doing so, and others are left behind with even more limited resources and opportunities. It is a vicious cycle. While changes in demographics and economics are sometimes unavoidable, the long-term solution for these communities is to find new economic investment. The education officials interviewed as part of this Report made the point on several occasions: it all comes down to jobs. If an economic turnaround is unachievable, then school districts simply must manage the associated issues, including declining enrollment. It is also important to point out the role of alternative education opportunities—particularly charter schools, private schools, and home schooling. Several interviewees pointed to school choice as a factor accelerating enrollment decline. The role of school choice is beyond the scope of the Report, and it is also beyond the control of local school districts. In an era of education competition, however, adequately addressing the effects of declining enrollment and ensuring maximum opportunities for public school students would help public school systems advance their competitiveness relative to other education providers.

CONCLUSION

This Report has examined the question: "What policies should the Center for Civil Rights promote in order to assist rural North Carolina school districts with declining student enrollment?" Declining enrollment is a serious issue for several rural North Carolina school districts, and it is an issue that has not received the appropriate level of attention. The effect of declining enrollment on school size, transportation, and curriculum and related resources has been the primary focus of this Report. The policy analysis concludes that the Center should advocate for greater use of technology, community partnerships, inter-district resource partnerships, and consolidation of the three Halifax County school districts. Once the state budgetary situation improves, the Center should promote adoption of a state supplemental fund for districts facing severe declines in enrollment. This fund should be administered in a "grant-like" fashion, providing incentive-based funding as needed for particular policies and programs.

APPENDIX 1: ENROLLMENT CHANGE ACROSS N.C. SCHOOL DISTRICTS: 1979–80 TO 2007–08 SCHOOL YEARS[148]



[148] This map was created in collaboration with Bethany Windle, Master of City and Regional Planning candidate at UNC-Chapel Hill.

APPENDIX 2: K-12 COURSES AVAILABLE IN WELDON CITY, HALIFAX COUNTY, AND ROANOKE RAPIDS SCHOOLS, 2009–10[149]

DPI Course ID	Course Name	Weldon City Schools (66 total courses)	Halifax County Schools (111 total courses)	Roanoke Rapids Schools (123 total courses)
0	SELF-CONTAINED	X	X	X
1001	READING		X	
1010	LANGUAGE ARTS	X	X	X
1015	SPEECH II			X
1021	ENGLISH I	X	X	X
1022	ENGLISH II	X	X	X
1023	ENGLISH III	X	X	X
1024	ENGLISH IV	X	X	X
1025	SPECIAL INTEREST ENGLISH (COMPOSITION)		X	X
1026	SPECIAL INTEREST ENGLISH (LANGUAGE)		X	
1027	SPECIAL INTEREST ENGLISH (LITERATURE)		X	
1028	SPECIAL INTEREST ENGLISH (READING)		X	
1029	SPECIAL INTEREST ENGLISH (OTHER)		X	
1031	JOURNALISM I		X	X
1032	JOURNALISM II		X	X
1033	AMERICAN LITERATURE, LANGUAGE & COMPOSITION		X	X
1034	BRITISH LITERATURE, LANGUAGE & COMPOSITION			X
1038	ENGLISH AS A SECOND LANGUAGE			X
1041	FRENCH I			X
1042	FRENCH II		X	X
1043	FRENCH III			X
1044	FRENCH IV			X
1051	SPANISH I	X	X	X
1052	SPANISH II	X	X	X
1053	SPANISH III			X
1054	SPANISH IV			X
1055	SPANISH V			X
1080	LATIN I			X
1081	LATIN II			X
1250	MIDDLE SCHOOL SPANISH			X

[149] This table is based on course membership data provided by the N.C. Department of Public Instruction in response to a data request submitted by the author. The dataset is on file with the author. Any course in which students were actually enrolled during the 2009–10 school year is included in this table. Certain courses which a district might have offered but for insufficient interest are not listed. For instance, the information submitted by Weldon City Schools to DPI stated that the district originally offered Algebra I to its students during 2009–10, but no students were actually enrolled. Algebra I is consequently not listed as an available course for Weldon City in the table. While it is possible that some districts accidently misreported course membership in some cases, the table provides a strong sense of the disparate course offerings across districts.

2001	MATH (K-8)	X	X	X
2015	TECHNICAL MATHEMATICS I		X	X
2017	TECHNICAL MATHEMATICS II		X	X
2018	FOUNDATIONS OF ALGEBRA		X	
2020	INTRODUCTORY MATHEMATICS		X	X
2023	ALGEBRA I		X	X
2024	ALGEBRA II	X	X	X
2025	ADVANCED FUNCTIONS AND MODELING	X		X
2029	FOUNDATIONS OF GEOMETRY		X	
2030	GEOMETRY	X	X	X
2051	INTEGRATED MATHEMATICS I	X	X	
2053	INTEGRATED MATHEMATICS III			X
2063	SPECIAL TOPICS IN MATH	X	X	X
2070	PRE-CALCULUS	X	X	X
2073	FIFTH YEAR MATH	X	X	
2076	AP CALCULUS (AB)			X
3001	SCIENCE (K-8)	X	X	X
3010	PHYSICAL SCIENCE	X	X	X
3020	BIOLOGY	X	X	X
3021	BIOLOGY II (2ND YR)			X
3023	ANATOMY AND PHYSIOLOGY		X	X
3035	LIFE SCIENCE			X
3038	EARTH/ENVIRONMENTAL SCIENCE	X	X	X
3040	EARTH SCIENCE	X		
3042	ENVIRONMENTAL SCIENCE		X	
3050	CHEMISTRY	X	X	X
3051	CHEMISTRY II (2ND YR)			X
3060	PHYSICS	X	X	X
3080	SPECIAL INTEREST SCIENCE	X		
4001	SOCIAL STUDIES (K-8)	X	X	X
4004	GOVERNMENT & POLITICS: UNITED STATES		X	X
4010	SPECIAL INTEREST SOCIAL STUDIES	X	X	X
4010	SPECIAL INTEREST SOCIAL STUDIES			
4011	AFRICAN AMERICAN STUDIES	X	X	X
4021	U.S. HISTORY	X	X	X
4023	EUROPEAN HISTORY			X
4024	WORLD HISTORY	X	X	X
4052	CIVICS AND ECONOMICS	X	X	X
4055	ECONOMICS: MICRO		X	
4060	SOCIOLOGY		X	
4080	PSYCHOLOGY		X	X
4094	CONTEMPORARY ISSUES IN NC HISTORY		X	
4999	COMMUNITY COLLEGE SOCIAL STUDIES	X		
5125	SPECIAL TOPICS DANCE I (9-12)		X	
5126	SPECIAL TOPICS DANCE II (9-12)		X	
5210	GENERAL MUSIC (K-12)		X	X
5215	MUSIC THEORY (10-12)	X		

5220	MUSIC HISTORY/APPRECIATION (9-12)	X	X	X
5230	VOCAL MUSIC I	X	X	X
5231	VOCAL MUSIC II		X	X
5232	VOCAL MUSIC III			X
5233	VOCAL MUSIC IV			X
5255	BAND I	X	X	X
5256	BAND II		X	X
5257	BAND III		X	X
5258	BAND IV		X	X
5265	JAZZ ENSEMBLE (9-12)		X	X
5270	ELECTRONIC MUSIC			X
5275	PIANO			X
5314	INTRODUCTION TO THEATRE ARTS (9-12)			X
5315	THEATRE ARTS I (9-12)		X	X
5316	THEATRE ARTS II (9-12)		X	X
5317	THEATRE ARTS III (9-12)			X
5410	VISUAL ARTS (K-8)	X	X	X
5415	VISUAL ARTS I (9-12)	X	X	X
5416	VISUAL ARTS II (9-12)	X	X	X
5417	VISUAL ARTS III (9-12)	X	X	X
5418	VISUAL ARTS IV (9-12)		X	X
5448	ART HISTORY (9-12)			X
6145	CAREER MANAGEMENT		X	X
6158	EXPLORING CAREER DECISIONS	X		X
6200	PRINCIPLES OF BUSINESS & PERSONAL FINANCE - BE		X	X
6208	EXPLORING BUSINESS TECHNOLOGIES	X		X
6215	BUSINESS LAW	X	X	
6225	BUSINESS MANAGEMENT AND APPLICATIONS		X	
6311	COMPUTERIZED ACCOUNTING I		X	
6312	COMPUTERIZED ACCOUNTING II		X	
6400	BUSINESS COMPUTER TECHNOLOGY	X	X	
6411	COMPUTER APPLICATIONS I	X	X	X
6412	COMPUTER APPLICATIONS II	X	X	X
6421	COMPUTER PROGRAMMING I - VB NET			X
6511	KEYBOARDING	X	X	X
6514	DIGITAL COMMUNICATIONS SYSTEMS	X	X	X
6600	PRINCIPLES OF BUSINESS & PERSONAL FINANCE - ME	X		
6615	SMALL BUSINESS/ENTREPRENEURSHIP - ME		X	
6621	MARKETING	X		X
6622	MARKETING MANAGEMENT	X		
6645	TRAVEL/TOURISM & RECREATION			X
6671	SPORTS & ENTERTAINMENT			X

	MARKETING II			
6697	MARKETING COOPERATIVE PROGRAM			X
6699	MARKETING ADVANCED STUDIES			X
6810	AGRISCIENCE APPLICATIONS	X	X	
6821	ANIMAL SCIENCE I	X		
6822	ANIMAL SCIENCE II	X		
6828	EXPLORING BIOTECHNOLOGY	X		
6841	HORTICULTURE I	X	X	X
6842	HORTICULTURE II - GENERAL		X	X
6842	HORTICULTURE II - GENERAL		X	
7015	TEEN LIVING	X	X	
7018	EXPLORING LIFE SKILLS			X
7045	FOODS I - FUNDAMENTALS	X		X
7046	FOODS II - ADVANCED			X
7055	HOUSING & INTERIORS I	X		
7065	PARENTING AND CHILD DEVELOPMENT		X	X
7085	LIFE MANAGEMENT		X	
7111	EARLY CHILDHOOD EDUCATION I		X	X
7112	EARLY CHILDHOOD EDUCATION II		X	X
7199	FAMILY & CONSUMER SCIENCES ADVANCED STUDIES			X
7210	HEALTH TEAM RELATIONS		X	X
7211	ALLIED HEALTH SCIENCES I		X	X
7212	ALLIED HEALTH SCIENCES II		X	X
7621	FURNITURE/CABINET MAKING I			X
7622	FURNITURE/CABINET MAKING II			X
7631	ELECTRONICS I			X
7632	ELECTRONICS II			X
7721	CONSTRUCTION TECHNOLOGY I		X	
7722	CONSTRUCTION TECHNOLOGY II		X	
7741	ELECTRICAL TRADES I		X	
7742	ELECTRICAL TRADES II		X	
7921	DRAFTING I			X
7962	DRAFTING - ARCHITECTURAL II			X
7963	DRAFTING - ARCHITECTURAL III			X
7992	COMPUTER ENGINEERING TECHNOLOGY II			X
7999	TRADE & INDUSTRIAL ADVANCED STUDIES			X
8108	EXPLORING TECHNOLOGY SYSTEMS		X	X
9001	PHYSICAL EDUCATION (K-8)	X	X	X
9010	HEALTH EDUCATION (K-8)		X	
9011	HEALTH/PHYSICAL EDUCATION (REQUIRED 9-12)	X	X	X
9013	HEALTH EDUCATION (ELECTIVE 9-12)	X	X	
9015	PHYSICAL EDUCATION	X	X	X

	(ELECTIVE 9-12)			
9017	HEALTH/PHYSICAL EDUCATION (ELECTIVE 9-12)		X	
9501	JROTC I	X	X	
9502	JROTC II	X	X	
9503	JROTC III		X	
9504	JROTC IV		X	
9510	SAT PREPARATION			X
9515	LIBRARY/MEDIA ASSISTANCE		X	X
9520	SPECIAL INTEREST TOPICS (MINI-COURSES)	X	X	X
9565	VIRTUAL HIGH SCHOOL COURSES		X	
9947	TUTORING			X
9981	STUDY HALL			X
9982	ACTIVITY PERIOD/HOMEROOM		X	

APPENDIX 3: INTERVIEW PROTOCOL

February 17, 2011

Interviewees:

- I hope to interview school officials and other local leaders associated with the following school districts: Halifax County, Weldon City, Northampton County, and Hertford County. Each district has experienced significant declines in student enrollment, and each is in the northeastern portion of North Carolina.
- In total, I hope to speak to at least one official from each district, and at least six to seven total officials. I will likely spend one day traveling to the region to conduct some of the interviews, and those interviews will be in-person. I will conduct all other interviews over the phone.
- I will arrange each interview through email contact and a follow-up phone call. Those associated with my report have suggested contacting the following individuals: Donna Hunter (Chair of Halifax County School Board); Rep. Angela Bryant; James Pierce (Chair of Halifax County Commissioners); Ellen Burnett (Halifax County Schools administration); David Jones (Weldon City Schools personnel director); and Elie Bracy (Superintendent of Weldon City Schools). Other individuals I plan to reach out to include: Lucy Edwards (Weldon High School principal); Bill Little (Chair of Northampton County School Board); Eric Bracy (Superintendent of Northampton County Schools); John Fahey (Superintendent of Hertford County Schools); and David Shields (Chair of Hertford County School Board).

Interview Questions:

- I will ask each interviewee what degree of confidentiality he/she would like to have regarding my report.
- Outline of Questions:
    - Three central questions will guide the first part of the interview: (1) What has declining enrollment meant for your district? (2) How has your district responded to declining enrollment? (3) What else do you think needs to be done—on either a local or state level—to help deal with issues associated with declining enrollment? I am particularly interested in hearing how declining enrollment has impacted school size, transportation, and curriculum and related education programming. I would also like information regarding the overall impact on student achievement, and a comparison of the characteristics of the students who have left compared to those who are still there.
    - For the remaining portion of the interview, I will seek feedback based on the interviewee's views on the proposed policy options listed below. I am interested in their general reactions regarding the potential effectiveness of the policies, but I will ask the interviewees to focus particularly on the criteria of: (1) impact on student academic achievement, (2) cost, and (3) political feasibility.
        - Policy options: (1) Alter state funding formulas to minimize year-to-year drops in funding; (2) Provide supplemental state funding for districts experiencing significant declines in student enrollment; (3) Consolidate districts where multiple school districts exist in one county; (4) Establish inter-district enrollment arrangements; (5) Establish inter-district resource

partnerships; (6) Provide for greater use of technology in affected districts; (7) Promote partnerships between affected school districts and other community institutions, including local businesses and community colleges.

- Final question: Is there anything else you think I should know regarding the issue of declining enrollment?

Initial Email:
Dear _____,

I am a joint degree student currently completing my requirements for a Master of Public Policy from Duke University and a law degree from UNC-Chapel Hill. As part of these requirements, I am working on a project examining the effects of declining student enrollments in some North Carolina public school districts. Specifically, I am trying to determine how districts can best deal with the problems associated with declines in student enrollment—from decreased funding, to transportation issues and fewer curricular resources.

As part of my report, I am hoping to conduct a few short interviews with education officials in districts that have experienced declining enrollment over the past several years. I would greatly appreciate it if I could speak with you for 20-30 minutes either over the phone or in person. I would basically like to hear your thoughts on these three questions:

(1) What has declining enrollment meant for your district?
(2) How has your district responded to declining enrollment?
(3) What else do you think needs to be done--on either a local or state level--to help deal with issues associated with declining enrollment?

Of course, I would also be happy to speak with someone else at the central office. Any assistance you all are willing to offer would truly be appreciated. Please don't hesitate to call or email me with any questions. Thanks so much!

Sincerely,

Jeremy Wilson