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WHAT DOES A SOUND, BASIC EDUCATION COST? IT IS TIME TO FIND OUT

WRITTEN BY STEPHEN JACKSON, POLICY ANALYST

Executive Summary

- The gap in achievement between white and minority children, the higher dropout rates of minorities, and the prevalence of poorer-quality teachers in high-poverty and high-minority schools are clear evidence that North Carolina is not providing all children with a sound and basic education, as required under the state's constitution.
- The state has undertaken a number of initiatives in recent years to address these problems, including lowering class sizes in early grades, increasing availability of high-quality preschool programs, and targeting a small amount of additional resources to schools in low-wealth counties and to those with higher concentrations of disadvantaged students.
- One important step that the state has not taken, however, is to review how resources are distributed to schools to determine if adequate resources are reaching the students most in need. This is a step that 39 states have used as a means of informing and guiding their education reform efforts.
- North Carolina distributes resources to schools based on an archaic and overly-complicated system of funding formulas. The state is now looking to overhaul these formulas, but to do so in the absence of a comprehensive review of what is required to provide a sound, basic education to all children involves too much guesswork.
- A comprehensive study that encourages widespread community and professional input should be conducted as soon as possible to establish what is required in terms of educational programs and methods, resources and staffing to provide every child in North Carolina with a sound, basic education.
- Other states' experiences with such studies suggest that a study is best initiated by the courts or a state entity, preferably the legislature, in order for the study's recommendations to be implemented.

Overview

In 2004, researchers at the North Carolina Justice Center made the case for a study to determine the cost of providing a sound basic education for all North Carolina children, which the courts have determined is the state's constitutional responsibility (Reid & Schofield 2004). Four years later, the necessity of such a costing-out study remains.

In 2007, the NC General Assembly established the Joint Legislative Study Committee on Public School Funding Formulas, a temporary committee charged with examining eight major funding sources for the state's schools. During the committee's deliberations in late 2007 and early 2008, the question of what funding levels should be arose early and often. Until a careful study using multiple methodologies and conducted by a respected and autonomous research team is conducted, policymakers will not have the information necessary to decide what funding levels should be for school districts around the state.

This issue of BTC Reports *looks at the data suggesting that not every child in the state is receiving an adequate education and discusses the best practices that should be followed if and when the state undertakes this type of comprehensive study.*

An adequate education is not being provided to many children in NC

By any measure or definition of adequacy, it is clear that many of North Carolina's children are not receiving an adequate education. It is equally clear that this denial is systemically biased at the expense of poor and minority children.

The state's system for providing a sound and basic education to every child and the finance structure designed to appropriately deliver the necessary resources must address an array of problems, not the least of which are the following:

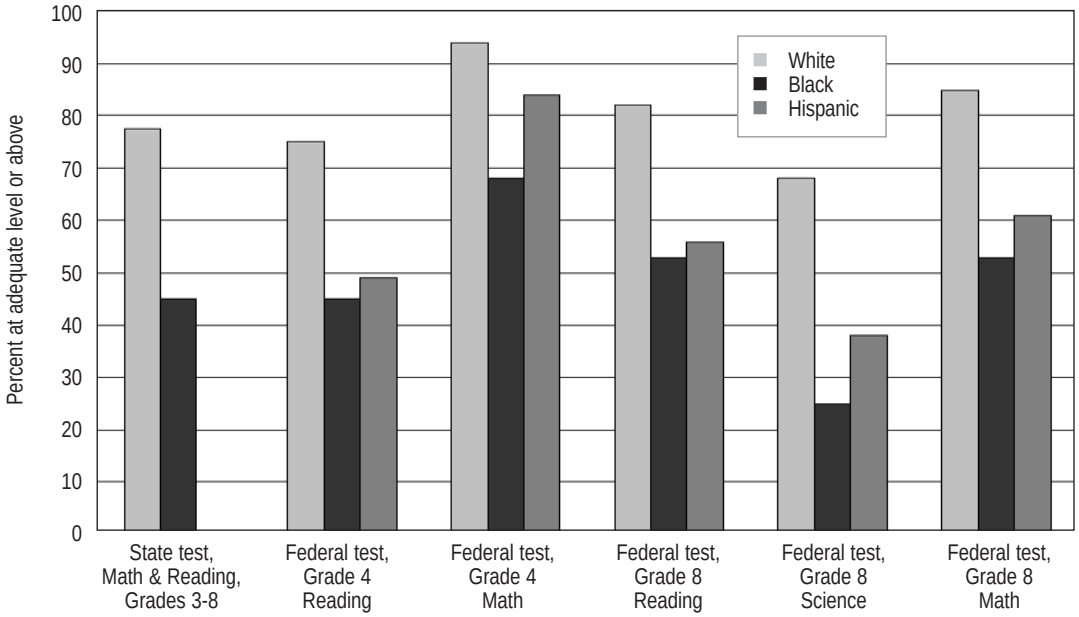
The Racial Achievement Gap – Black and Hispanic students perform poorly compared to white students on state and federal end-of-year tests (**see figure 1**).

- In 2006-2007, 45% of black students attained Level III or above in both math and reading on state end-of-grade tests for grades three through eight, compared to 77.5% of white students (DPI 2007a).
- Results from the Federal 2005 and 2007 National Assessment of Education Progress (NAEP) tests show a similar pattern between black and white students but also illustrates the gap between Hispanic and white children achievement. For instance, among eighth grade students, 68% of white students received a Basic grade or above in the Science test – at or above passing level – compared to just 25% of black and 38% of Hispanic students (NCES 2006). In the eighth grade reading test, 56% of Hispanics and 53% of blacks attained a Basic or passing level or above, compared to 82% of whites (NCES 2007a).

Dropout Rates of Minorities – The provision of a sound basic education would probably reduce dropout rates, boosting the numbers of those leaving school ready for further study or vocational training. In 2006-2007, minority children dropped out at higher rates than white children (6.2% versus 4.5%). There is evidence that the difference in dropout rates between white and black children is widening. The number of black children dropping out between 2003 and 2007 increased by just over 8%, compared to 6.6% for white children (**see figure 2**).

FIGURE 1

THE ACHIEVEMENT GAP 2006-07, NORTH CAROLINA

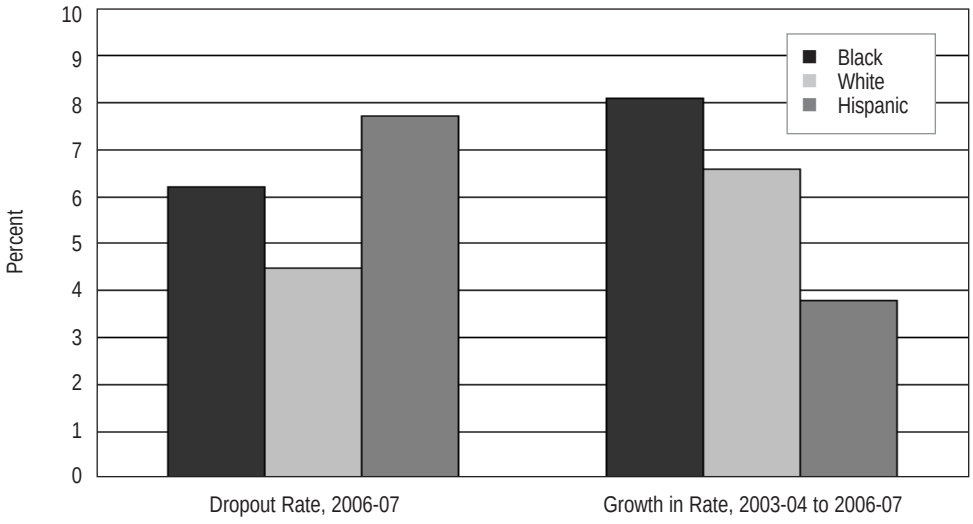


SOURCE: DPI 2007a; NCES 2006; NCES 2007a; NCES 2007b; NCES 2007c; NCES 2007d

Teacher Competence and Experience – Schools with higher percentages of students eligible for free lunches are more likely, compared to schools with lower percentages of such students, to have teachers who have less than three years experience, who received their degrees from less-competitive programs, and who scored lower on certification exams.

FIGURE 2

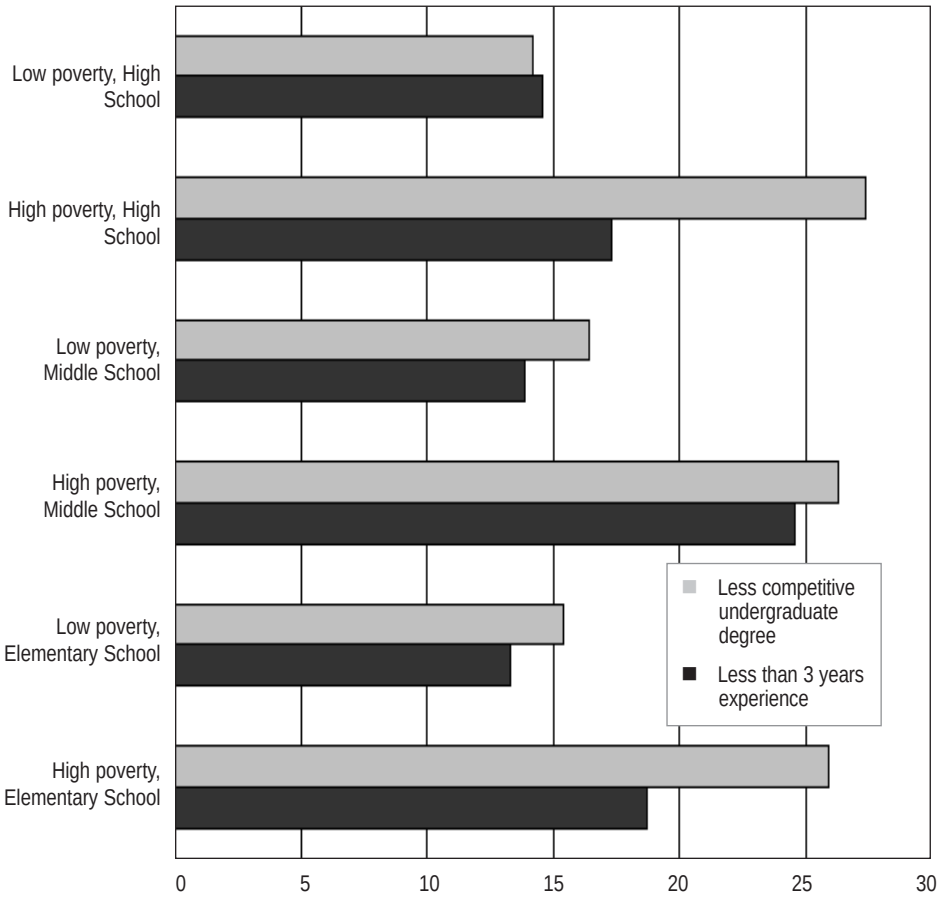
DROPOUT RATES, GRADES 9-12, NORTH CAROLINA



SOURCE: DPI 2007b

FIGURE 4

INCIDENCE OF INEXPERIENCED & LESS QUALIFIED TEACHERS



SOURCE: Clotfelter et al 2006

What Does a Costing-Out Study Look Like?

The North Carolina judiciary has offered no details on the programs and resources necessary to deliver a sound, basic education. A new definition of adequacy – of a sound and basic education – and the programs and resources necessary to deliver it are critical policy issues that need addressing now.

As outlined above, North Carolina is clearly not investing enough resources in public education. However, providing additional resources in the absence of a fresh plan for how best to allocate them would result in wasted resources and a reinforcement of the status quo with regards to education strategies. In short, new resources must accompany a new plan.

What is the Scope of the Study?

A costing-out study would address funding issues in a comprehensive way, by:

- Defining what an adequate or sound and basic education should be
- Identifying what is required to deliver that education to all children
- Costing out that delivery

Most costing-out studies exclude transportation and construction costs (calculated in separate studies) and focus on the operating costs necessary to provide a defined minimum of education.

What Research Method Should Be Used?

As with any research, the method by which it is conducted matters a great deal. There are two broad approaches to deciding what the measure of adequacy is to be and how much providing it will cost.

Quantitative or Statistical-Based Approaches

One approach is empirical, quantitative (i.e. statistical) and has two variants. The first, known as the "successful schools" approach, identifies existing 'successful' school districts, usually defined by their high average test scores across all racial and income groups, and uses these districts as a benchmark. The cost of providing an education similar to that in the benchmarked 'successful' school districts for all the other school districts in the state is then calculated. This statistical approach to cost estimation requires extensive and uniform district-level data.

The second variant, also statistical, uses individual or student-level data. Most recently used in a Texas study and known as the "production function" approach, this variant identifies the various factors – including student demographic, financial, programmatic and teaching and support personnel – that account for the differences in student test scores. Based on that identification, estimation is made of the cost to closing the differences between low-achieving students and a pre-determined minimum or adequate standard.

Both these strategies are only as accurate and valid as the quality of the district or individual data available. There are some additional challenges common to both of these approaches:

- The answers to the thorny questions of "What is adequacy?" and "How should it be measured?" are critical research decisions. These decisions will significantly influence the results of the study.
- Studies to date in both variants have tended toward a definition of adequacy based around test scores. Non-testable education goals are beyond the scope of these kinds of studies.
- Both approaches suffer from what is known as "omitted variable bias." Only those things that can be easily measured are included in the statistical models. Variables many experts consider important to building good schools – such as strong leadership, community involvement, and teacher quality (as opposed to formal teacher qualifications) – are ignored.

In addition to being limited by the kind and quality of available data, results can be manipulated by placing parameters on the values of variables that predict success. For example, some studies have limited the budget parameters in order to find the best mix of spending to maximize desirable education outcomes; these are not true costing-out studies. Other studies do not consider the extremes – the very best or the worst school districts or students – and therefore lose valuable, potentially useful or even critical information.

Finally, the "successful schools" approach is problematic because diversity within school districts is ignored. In a state where school districts are relatively large such as

North Carolina, this inability to capture diversity is doubly problematic. A district deemed to be successful may and probably will have schools that are performing poorly, despite receiving similar resource allocations to the rest of the district. From a policy perspective, the approach obscures what are potentially the most informative differences: those between good and poor schools within the same 'successful' school district.

Qualitative Approaches

The second broad approach relies upon professional and expert judgment, is largely qualitative in its methodology (i.e. is not statistics-based), and has two variants.

- The "professional judgment" approach use panels of education professionals (including teachers, superintendents, academics, advocates and administrative staff) to design program and curricula components of an adequate education.
- The "expert" model is similar but has a research panel that is more heavily populated by academic researchers. Such a panel tends to prefer educational programs proven by social scientific studies as effective or successful when designing the programs and curricula needed to deliver an adequate education.

For both approaches, ensuring that diverse views are represented on the research panels is critical to avoid charges of bias from those who do not find the results satisfactory or politically convenient. This charge is not uncommon because the professional judgment approach, in particular, tends to yield higher estimates of what an adequate education costs than statistical approaches. This is primarily because statistical approaches have difficulty capturing individual student differences as well as the diversity within school districts, and therefore underestimate the amount of money needed to adequately educate students with special needs.

As a rule of thumb, a research panel should aim to have 1) no observable specific institutional identity, 2) members from many different institutions and organizations from both within and outside the state, and 3) a diversity of views on education.

Finally, the "expert" model suffers from a comparative lack of data on tried, tested and proven programs. There is much anecdotal evidence on "what works" – be it examples of a struggling school using new approaches with startling positive results, or of programs that failed to achieve much. However, this anecdotal evidence usually falls short of what could be termed social scientific proof because other factors that may contribute to a program's or initiative's success or failure are usually not taken into account. In addition, many social science studies of programs vary in their definition of adequacy or 'success,' and therefore may differ from the definition used by the costing-out panel of researchers, making the relevance of those studies questionable.

The great advantage of the qualitative approaches is the emphasis they place on consultation and discussion, allowing for a potentially more transparent research process. Both qualitative approaches allow for the possibility of testimony and presentations to the research group from parents, educators, researchers and interest groups and for that testimony to be made available to the public. The "professional judgment" and "expert" models can be usefully and, in practice, quite easily combined.

Some consultants have used the "professional judgment" approach in conjunction

with a "successful schools" approach in their studies. The "successful school" approach yields the cost of educating an average student at an average school to an adequate level, while the "professional judgment" approach examines the costs of adequately educating student populations who have special needs or face additional obstacles to learning, such as a disability, a broken home, English not being the first language at home, parents who are poorly educated themselves and so on. The two costs are combined to provide a final figure.

The Need for Multiple Methodologies

Any study should aim to use multiple methodologies. This has several advantages, including:

- The results are more defensible because critics cannot charge that they are solely due to the choice of a particular methodological approach.
- Deficiencies in one approach are covered by strengths in another.
- Differing results will lead to discussion of those differences – a discussion that will highlight the important, the controversial and the mutually agreed elements of an adequate education.

How Should the Process Be Monitored to Ensure Effectiveness?

Operating in a politically charged research environment, it is vital that those conducting the study have autonomy over key aspects of its scope and methods. In general:

- The arguments over which method is best should be resolved by researchers, not the people who appoint them to conduct the study.
- A firewall must be placed between the research team and the oversight committee that appoints the researchers. The committee should get periodic feedback on the study's progress, but the researchers should be protected from attempts to influence their evidence or conclusions.
- A clear and unambiguous mission is necessary for the research team, and it should be limited to adequacy cost research. Including other issues such as efficiency improvement and benchmarking research adds an extra dimension of difficulty in an already contentious research environment that may undermine the study's findings. Studies examining efficiency questions should be conducted separately.

Who Should Conduct the Study?

Studies initiated and completed by groups outside of government face enormous difficulty in gaining political traction. Experience from other states shows that while outside studies have some political value in influencing budget discussions and outcomes, they have shown little ability to shift wholesale the terms of the education finance debate (see table 1). State-initiated studies have had much more success, and court-ordered studies, as would be expected, have the best chance of being implemented.

That said, it is vital that any study encourage widespread community engagement and support. "Adequacy" and "sound and basic" are contested concepts, and consensus on these key issues must be reached; otherwise any study can be dismissed as promoting the wrong standard.

TABLE 1

SUMMARY RESULTS OF COSTING-OUT STUDIES

	SPENDING INCREASE RECOMMENDED					
INITIATED BY	AVERAGE	MEDIAN	LOW	HIGH	IMPLEMENTATION	WHERE AND WHEN
Court **	24% (6 studies)	17% WY '05	7% AK '05	48% AL '01	2 of 8 fully implemented 3 of 8 partially implemented	AK '06, WY '97 AK '05, NH '98, WY' 05
State	23% (19 studies)	15% MT '05 and NM '08	5.25% RI '07	62% CA '07	5 of 29 fully implemented 4 of 29 partially implemented 1 of 29 in discussion	HI '05, ME '99, MS '93, PA '07, TN '92 KY '03, MD '01, NH '00, OH '97 NM '08
Third Party	28% (23 studies)	24% MN '06	1.15% TX '04	94% SC '00	0 of 26 fully implemented 4 of 26 partially implemented	MA '91, MT '07 TN '03, TN '04

* Studies with multiple methodologies or a range in recommended increases are represented by the average of their recommendations. Studies where the increase could not be determined were excluded.

** A study focused on ELL funding in AZ was excluded.

In order to achieve the kind of consensus needed to build political momentum, the study should be conducted in multiple phases by potentially two or more research teams.

The first phase would focus on the question: What is an adequate education? The research team in this phase would gather community opinion and answers, including that of parents and other stakeholders, to this question. The research team could gather this input through town hall-type meetings, focus groups, surveys, and formal presentations to them by interest groups. The resulting community advice would inform the deliberations of the second phase group of researchers.

Researchers conducting the first community input phase could later obtain community feedback on the progress, deliberations and interim findings of the second-phase research, reporting that feedback to the second-phase research panel and the project's oversight body.

The second phase of the study could be conducted by a collection of research groups, overseen by a coordinating panel. Using the community advice from the first phase of research, this panel would first consider the question: What is an adequate education? Based on the answer to this question, the collection of research groups would then design the delivery of a sound, basic education for the average student as well as for students with varying degrees of special needs and disadvantages. These research groups would include experts on the education issues of each of the special-needs populations.

The actual costing-out could then be conducted in a third phase by a separate group of researchers who have public and education finance expertise.

Conclusion

Every year of inaction on education adequacy is another year of too many dropouts, of students failing and being failed by our education system, of too many low-income and minority teenagers starting their working lives ill-equipped to work in anything but low-wage jobs with little hope of advancement.

The type of study suggested in this report would not solve all of the state's education challenges overnight. However, it is difficult to imagine that without such a study the state will be able to design and implement an education funding plan necessary to achieve the common goal of providing every child with a sound, basic education. It is time for the General Assembly to act on its responsibility to ensure that a sound, basic education is provided to every child in North Carolina by sponsoring and supporting such a study.

This type of study is likely to find that North Carolina is not providing enough resources and is not sufficiently targeting current resources toward the types of students and instructional activities that would move North Carolina forward. Perhaps this is something that can already be concluded by the statistics on student achievement and on the state's low ranking nationally in per pupil funding. Nevertheless, a costing-out study would provide essential information to policymakers to guide future decisions. The current strategy of guessing about the resources needed and how best to target them will not move us toward our common goals.

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North Carolina Justice Center

P.O. Box 28068 ▪ Raleigh, NC 27611-8068
919/856-2176 ▪ elaine@ncjustice.org

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