Public Schools of North Carolina
State Board of Education
Department of Public Instruction

# Report to the North Carolina General Assembly

## Small Restructured High Schools

*SL 2007-323, Sec. 7.21 (HB 1473, 2007 Budget Act)*

**Date Due: January 15, 2012**
Report # 49
DPI Chronological Schedule, 2011-2012

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# Update on Small Restructured High Schools (Redesigned High Schools Supported by the North Carolina New Schools Project)

Since 2004, North Carolina has made significant progress in opening and supporting innovative secondary schools across the state that share the common goal of graduating every student ready for college, careers and life. Including early college high schools and STEM-redesigned schools – created and supported largely with state funding – 106 innovative schools in 71 of the state's 115 districts operated during the 2010-11 school year, with a combined enrollment of more than 23,000 students. The 35 redesigned small high schools, including nine turnaround STEM schools, which are the subject of this report, enrolled 10,740 students in 17 districts last school year.

With the support from the Bill & Melinda Gates Foundation, North Carolina leaders created the North Carolina New Schools Project (NCNSP) in August 2003 to focus leadership and financial resources on significant reform in the state's high schools. The purpose of NCNSP is to accelerate innovation in secondary schools across the state so that ultimately all high schools in the state graduate every student ready for college, careers and life. In cooperation with state and national partners, NCNSP has launched an unprecedented effort to create more than 100 academically rigorous, focused and flexible innovative high schools across North Carolina. The N.C. State Board of Education; the N.C. Department of Public Instruction; the UNC and N.C. Community College systems; national organizations such as Jobs for the Future, the New Technology Foundation, Asia Society and the Middle College National Consortium, among others, have worked in partnership to create these innovative high schools.

NCNSP formed six-year partnerships (one year of planning followed by five years of implementation) with local school districts and higher education partners to transform the structure of high schools including governance, student support and teaching and learning. Each innovative high school is autonomous, with its own principal and school budget, and serves up to approximately 100 students per grade level, or a maximum of about 400 students in grades 9-12 or 9-13. Some models may emerge as 6-12 schools serving up to 600 students. Each innovative high school also is expected to implement and exhibit a rigorous and far-reaching set of best-practice conditions, known as Design Principles, which lead to student success as measured by all students graduating ready for college, careers and life. These Design Principles are based on the experiences of innovative schools across the country that succeed in graduating all students prepared for postsecondary education and the workforce, research on best practices in effective innovative high schools and NCNSP's own experience. The Design Principles are:

- **Ready for College:** Innovative high schools are characterized by the pervasive, transparent, and consistent understanding that the school exists for the purpose of

preparing all students for college and work. They maintain a common set of high standards for every student to overcome harmful tracking and sorting.

- **Powerful Teaching and Learning:** Innovative high schools are characterized by the presence of commonly held standards for high quality instructional practice. Teachers in these schools design instruction that ensures the development of critical thinking, application and problem solving skills often neglected in traditional settings.

- **Personalization:** Staff in innovative high schools understand that knowing students well is an essential condition of helping them achieve academically. These high schools ensure that adults leverage knowledge of students in order to improve student learning.

- **Redefined Professionalism:** The responsibility to the shared vision of the innovative high school is evident in the collaborative, creative, and leadership roles of all adult staff in the school. The staff of these schools takes responsibility for the success of every student, holds themselves accountable to their colleagues, and is reflective about their roles.

- **Leadership:** Staff in NCNSP schools work to develop a shared mission for their school and work actively as agents of change, sharing leadership for improved student outcomes in a culture of high expectations for all students.

- **Purposeful Design:** Innovative high schools are designed to create the conditions that ensure the other four design principles: ready for college, powerful teaching and learning, personalization, and redefined professionalism. The organization of time, space, and the allocation of resources ensures that these best practices become common practice.

## Design Principles

NCNSP and its partners work with local school districts and their higher education partners to create several types of innovative high schools, including redesigned high schools, early college high schools, networks of STEM-focused schools and regional schools.

- **Redesigned High Schools:** NCNSP has partnered with local school districts to subdivide conventional high schools into small autonomous, focused and academically rigorous schools which operate on the existing campus. Each of these new schools have adopted a curricular focus or common methodology as one strategy to enable teachers in core courses to collaborate and make connections between courses and the world of work. The intent of a focus is not preparation for a specific career but preparation for a lifetime of learning and change. Redesign schools include "whole-school" conversions of entire traditional campuses as well as single, small stand-alone schools located on the campuses of existing high schools or on free-standing sites.

> Eighteen redesigned high schools completed their grant support in 2009-10, and all 18 remained open as small schools during 2010-11.

- **Early College High Schools:** Based on the campus of two- or four-year community colleges and universities, early college high schools provide an academically rigorous course of study with the goal of ensuring that all students graduate with a high school diploma and two years of transferable credit or an associate's degree. The North Carolina Early College High School Initiative submitted a separate status report to the State Board of Education and the Joint Legislative Education Oversight Committee in January 2012 in accordance with SL 2007-323. Early college high schools target students for whom conventional schools are not a good match and who are the first in their family to attend college.

For the purposes of this report, SL 2007-323 calls on the State Board of Education to report on the results of an annual evaluation of the small restructured high schools (also known as redesigned high schools) that received supplemental funding from the General Assembly. The Department of Public Instruction (NCDPI) in conjunction with the North Carolina New Schools Project (NCNSP) is monitoring and evaluating the progress of these schools in implementing the school model and in the schools' effect on student achievement. This report provides an update on the initiative and the schools that were open for students during the 2010-11 school year, as well as student achievement data from these schools

**Redesigned High Schools**

Thirty-five redesigned high schools were open for students during the 2010-11 school year. The 35 schools were located across 21 high school campuses and 17 local school districts. Eight of the schools focused on a health and life sciences theme, six were information technology-enabled, 12 were science, technology, engineering or math-focused (STEM) high schools, one was an international studies-focused high school and nine of the schools were based on a local focus, such as coastal studies, biotechnology and ecology. Nine[1] of the STEM-focused redesigned high schools were also part of the turnaround high school initiative with NCDPI. The nine schools chose to work with NCNSP as part of their turnaround requirement. These nine

[1] One STEM turnaround school, James Kenan School of Engineering, converted in 2009-10 to Duplin Early College High School

schools received initial planning grants from the General Assembly in 2006-07, but have not received any additional supplemental funding from the General Assembly to support the implementation of their redesigned high school model. Instead, these nine schools have used local funds from their respective school districts to cover the cost of their implementation and support from NCNSP. For a complete list of the 35 redesigned high schools that were open for the 2010-11 school year, see Attachment A.

Eighteen of the schools completed their five-year grant support from the Bill & Melinda Gates Foundation in 2009-10. Significantly, however, all 18 continued to operate during the 2010-11 school year as small schools independent of NCNSP support.

*Student Demographics*

Collectively, the 35 redesigned high schools served 10,740 students in the 9th through 12th grades during the 2010-11 school year.[2] The number of students per grade level that were served in redesigned high schools for the 2010-11 school year is presented in Table 1 below. Student demographic information for the 36 schools combined is presented in Table 2 below:

**Table 1. Number of Students per Grade Level in Redesigned High Schools, 2010-11**

| Grade Level | No. of Students |
|---|---|
| 9th | 3,292 |
| 10th | 2,730 |
| 11th | 2,586 |
| 12th | 2,132 |
| Total | 10,740 |

Source: 1st Month MLD data from NCDPI

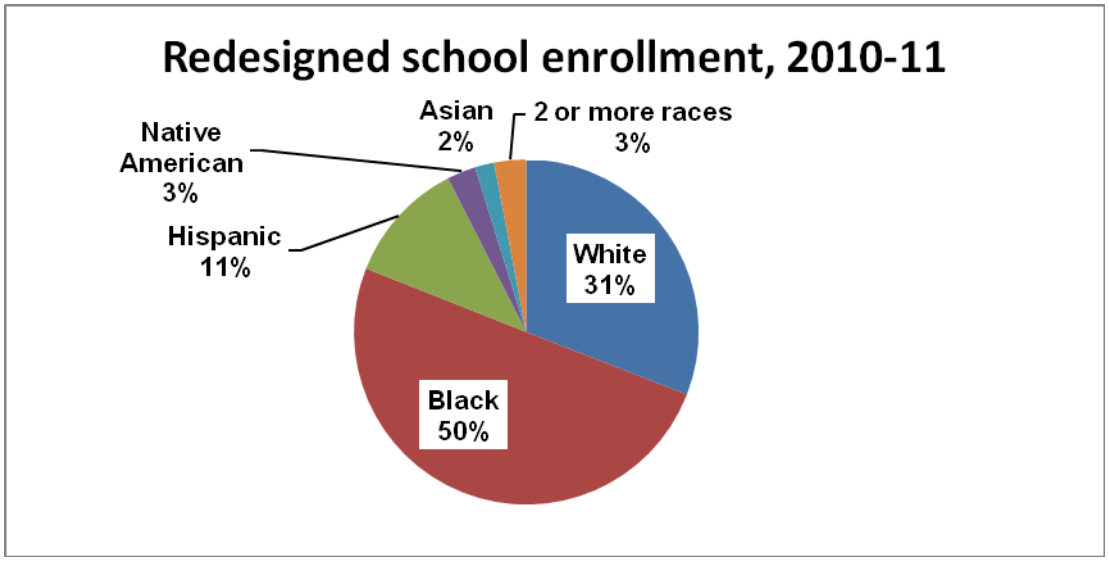
[2] Thirty five of the 36 schools exclusively served students in the 9th through 12th grades. The Cape Hatteras Secondary School of Coastal Studies served students in 6th through 12th grades.

**Table 2. Race and Gender of Students in Redesigned High Schools, 2010-11**

| | Male | Female | Total |
|---|---|---|---|
| **White** | 15.7% | 15.2% | 31% |
| **Black** | 24.6% | 25.4% | 50.1% |
| **Hispanic** | 5.9% | 5.6% | 11.5% |
| **Native Amer.** | 1.5% | 1.2% | 2.7% |
| **Asian** | 0.9% | 0.9% | 1.8% |
| **2 or more races** | 1.4% | 1.7% | 3.0% |
| **Total** | 50% | 50% | 100.0% |

Source: NCDPI, Grade, Race, Sex data, school year 2010-11

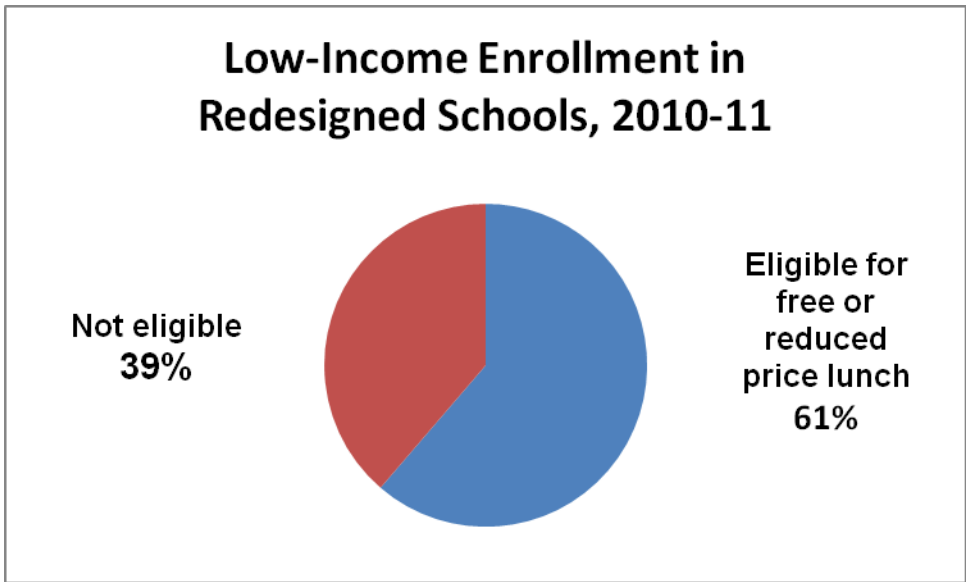
**Chart 1. Redesigned High School Enrollment by Race, 2010-11**




Source: NCDPI, Grade, Race, Sex data, school year 2010-11

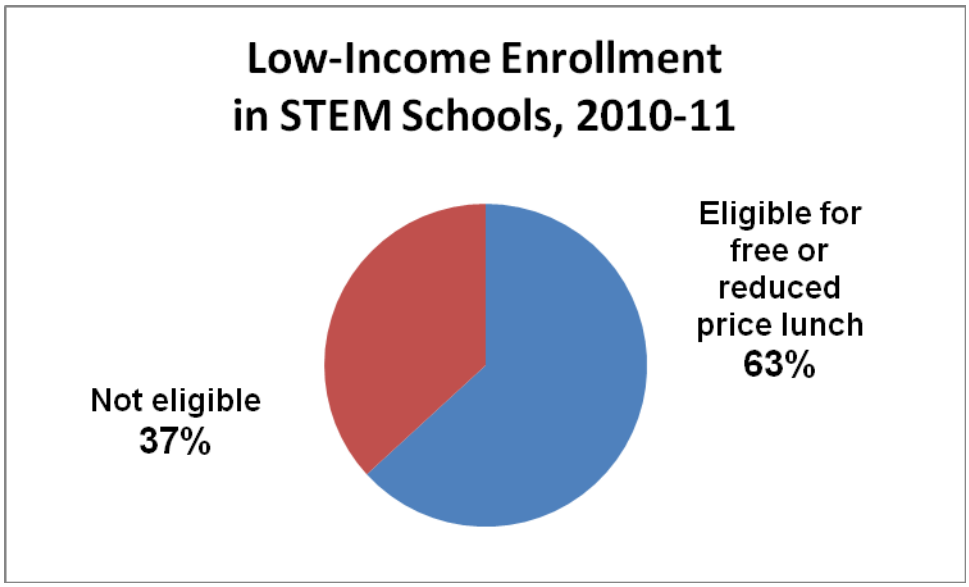
In aggregate, the 35 schools serve a student population that mirrors the state overall in terms of the proportion from low-income families.

**Chart 2: Redesigned High School Enrollment by Poverty, 2010-11**




Source: NCDPI Free and Reduced-Price Lunch data, 2010-11

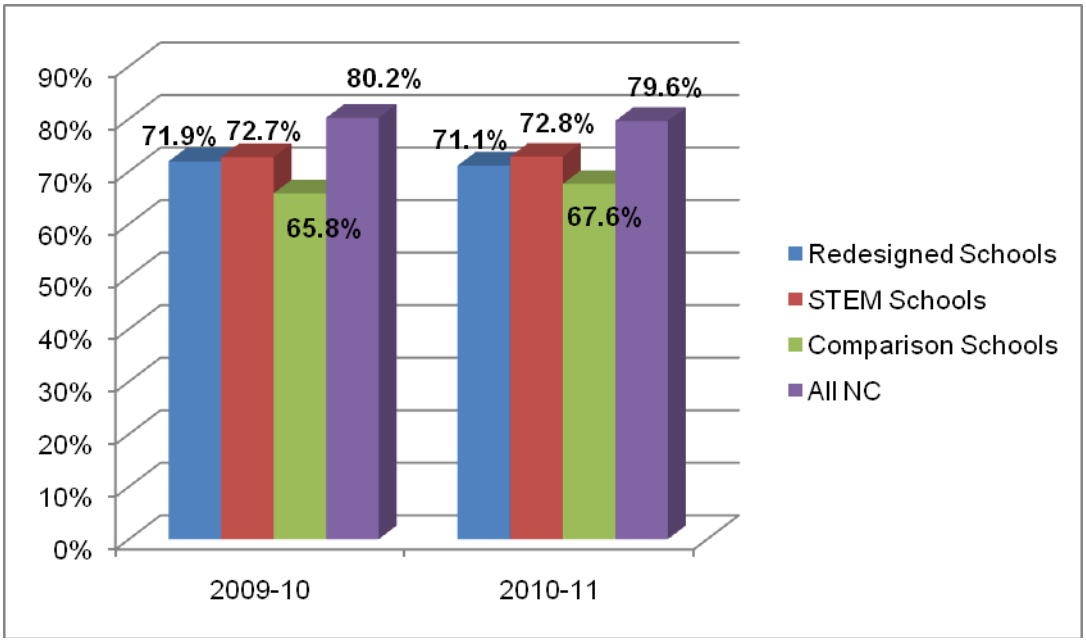
**Chart 3: STEM High School Enrollment by Poverty, 2010-11**



*ABC End-of-Course Test Results*

Taken together, the redesigned high schools showed little change in performance in 2010-11, generally mirroring the performance of high schools statewide. However, they outperformed comparison schools within their district. Nine of the 26 schools received support services from NCNSP during 2010-11, since grant support for the other schools ended with the 2009-10 school year. Redesigned schools, as a group, saw a slight dip in passing rates on all end-of-course tests combined, from 71.9 percent in 2009-10 to 71.1 percent in 2010-11, as did all high schools statewide, from 80.2 to 79.6 percent. **It is important to note that NCNSP-affiliated redesigned high schools enroll a greater percentage of low-income students compared to the state as a whole and generally to other schools within their districts.**

**Chart 4: End-of-Course Exam Composite Pass Rates, 2009-10 vs. 2010-11**




Source: NCNSP analysis based on NCDPI EOC data by school, 2009-10 and 2010-11

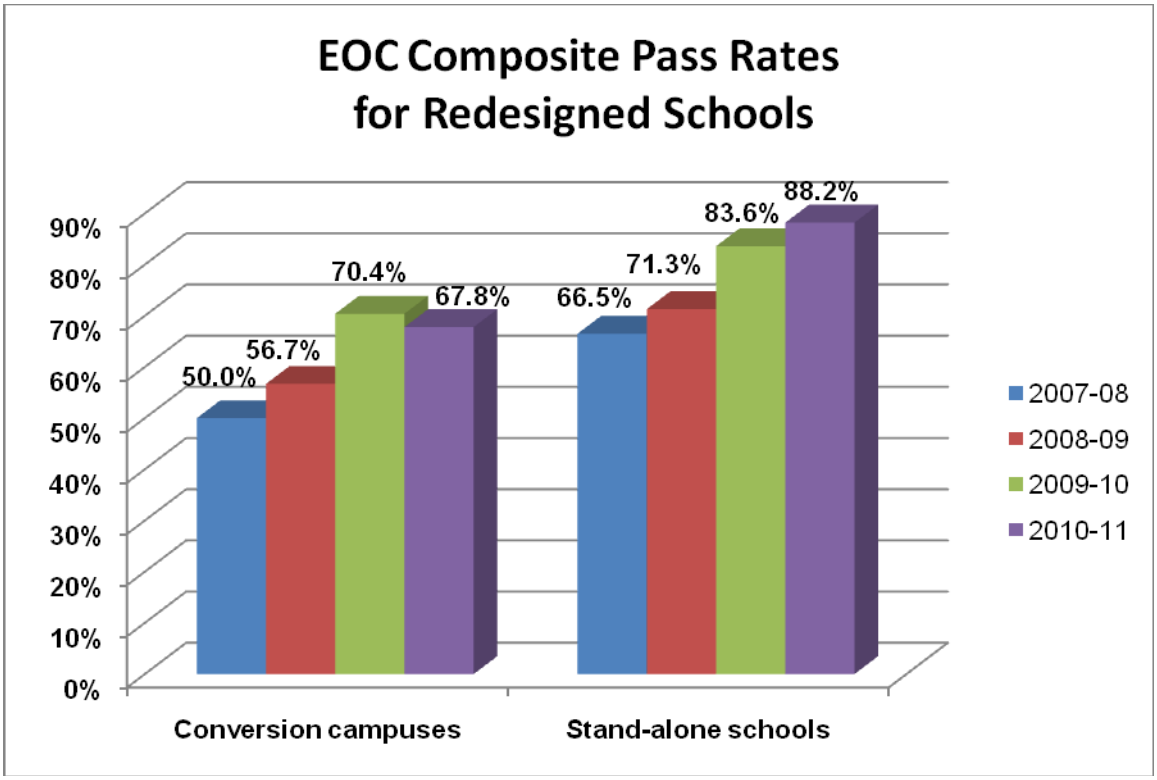
In 2010-11, the 35 redesigned (including 9 STEM) high schools had performance composites (or the percent of students proficient on all End-of-Course tests) ranging from 45.4 percent to 95.9 percent, with one third of the redesigned high schools posting performance composites of 80 percent or greater (compared to 35 percent of the redesigned high schools' comparison high schools[3] and 50 percent for all high schools statewide). One quarter of the redesigned high schools (26 percent) had performance composites that were greater than their comparison high school. About one half of redesigned high schools in 2010-11 (51 percent) also met the growth

[3] NCNSP has strategically selected a traditional, comprehensive high school to serve as a comparison high school for each redesigned high school. The comparison high school serves as a benchmark in order to more effectively judge the growth and progress of the redesigned high school in improving student achievement. Each comparison high school was selected based on its similarities to the redesigned high school on geographic location (either on the same campus, in the same school district or in a neighboring school district), its student demographics (primarily race, gender and the percentage of students eligible for free and reduced lunch when available) and the school's prior student performance on End-of-Course tests.

targets set for their school under the state's ABC accountability measures (made expected growth), compared with a similar percentage of the comparison high schools and 74.5 percent of all high schools statewide. Nearly one third of the redesigned high schools (31 percent) exceeded their growth targets (made high growth) compared to about the same percentage of the comparison high schools and 44.3 percent of all high schools statewide.

A clear difference in performance is found between the group of redesigned high schools created as conversions of comprehensive high school campuses (such as East Wake High, Garinger High in Charlotte-Mecklenburg and Scotland (County) High) and stand-alone redesigned high schools, such as Howard Health and Life Sciences High School in Cumberland County or the School of Inquiry and Life Sciences at Asheville. The stand-alone schools have demonstrated stronger results, pointing to significant challenges in converting often large traditional high schools into a group of smaller schools housed on the same campus. Chart 5 illustrates that contrast in performance, as measured by composite pass rates on end-of-course tests.

**Chart 5: EOC Composite Pass Rates, Conversion vs. Stand-alone schools**




Source: NCNSP analysis based on NCDPI EOC data by school, 2009-10 and 2010-11

*Graduation Rates*

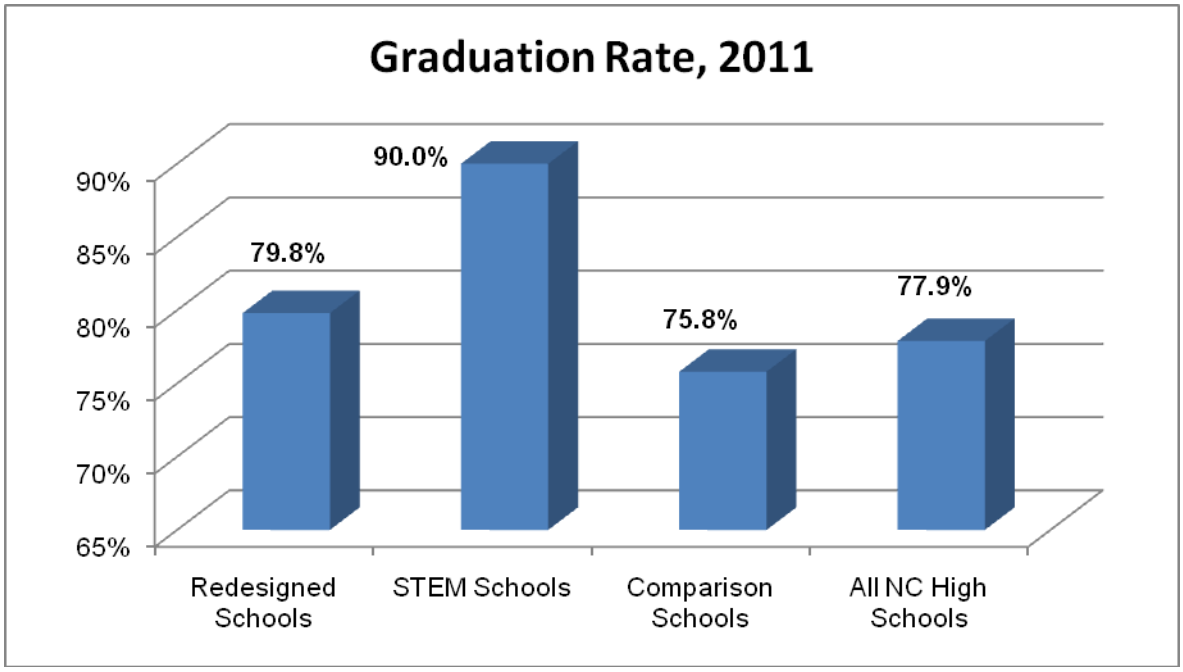
The Class of 2011 represented the largest cohort to date to graduate from the state's redesign schools, with all 35 of the schools graduating full cohorts of students. The nine STEM turnaround schools graduated their first classes. Graduation rates for all 35 schools ranged from 100 percent (Hillside New Tech High in Durham) to 57.4 percent (Leadership and Public Service High School at Garinger in Charlotte). Nineteen of the 35 schools (54.3 percent) graduated more

than 85 percent of the 9th grade cohort from four earlier. The aggregate graduation rate for the 35 schools was 82.1 percent, compared to 75.6 percent for their comparison schools and 77.9 percent for the state as a whole.

The 26 non-STEM redesigned schools had an aggregate graduation rate of 79.8 percent; the nine STEM schools had a combined graduation rate of 90 percent.

As with EOC performance data, standalone redesigned schools had stronger graduation outcomes (91.6 percent graduation rate) than conversion redesigned schools (78.2 percent).

**Chart 6: Graduation Rates Compared**

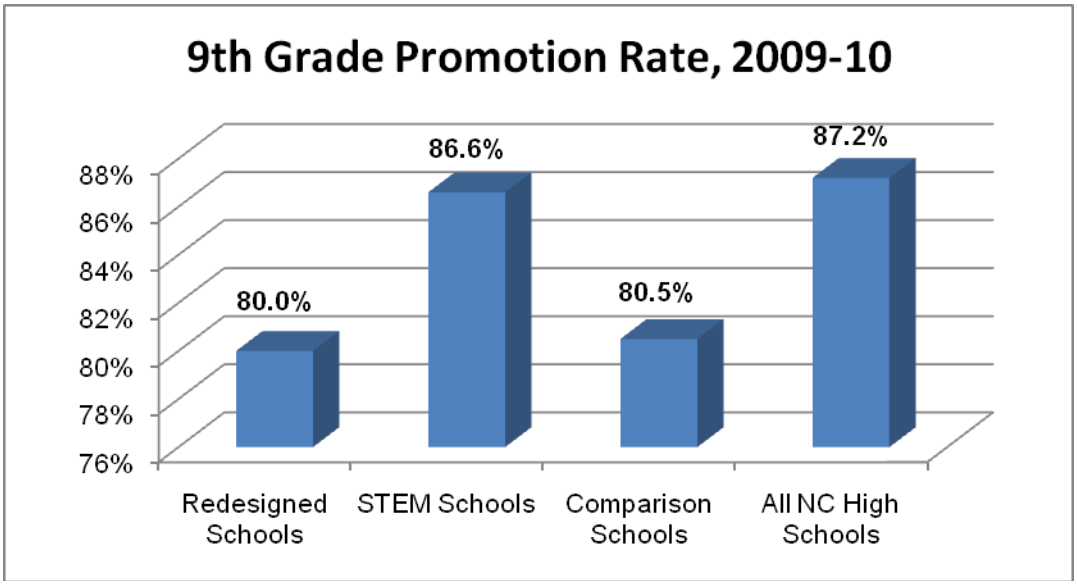



Source: NCNSP analysis of NCDPI graduation rate data, 2011

*Ninth Grade Promotion Rates*

To graduate, a student must complete the required courses and be promoted from grade to grade. Research has shown that promotion from 9th grade is an especially strong indicator of a student's likelihood to graduate. During the 2009-10 year (the most recent for which promotion rates are available), 31 redesigned schools with 9th grade classes reported promotion rates ranging from 56.9 percent to 100 percent, with 39 percent of the schools promoting 90 percent or more of their 9th graders. Together, the "standalone" redesigned schools had a combined 9th grade promotion rate of 90.6 percent, compared to a combined promotion rate of 77.7 percent for redesigned schools that were created through whole-school conversions of traditional comprehensive high school campuses.

**Chart 7: 9th Grade Promotion Rates, by school type, 2009-10**




Source: NCNSP analysis of NCDPI grade promotion data, 2009-10 (most recent available)

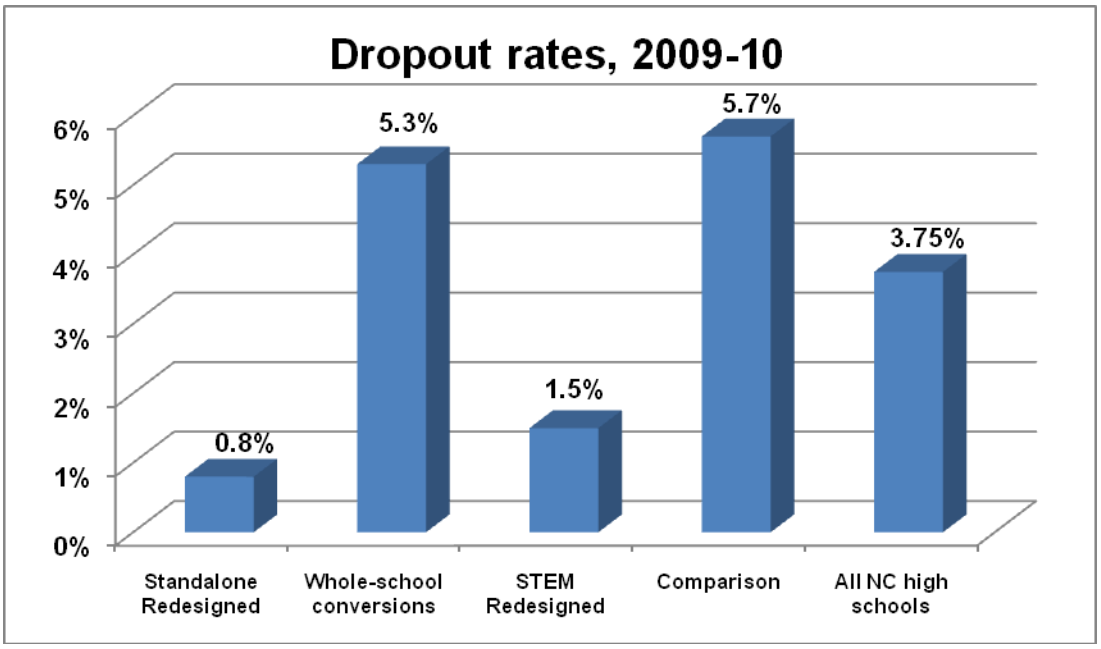
*Dropout Rates*

To graduate all students, schools must ensure that all students stay in school and do not drop out. During the 2009-10 school year (the most recent year for which dropout rates are available), the 35 redesigned high schools reported school-wide dropout rates ranging from 0 percent to 12.3 percent, with nearly one out of every four schools (23 percent) reporting **no dropouts** (by contrast, all comparison schools reported some students dropping out of school)**.** Nearly three out of every four redesigned high schools (70.3 percent) reported dropout rates that were lower than the dropout rate for their comparison high school. The 35 redesigned high schools had a combined school-wide dropout rate in 2009-10 of 4.67 percent compared to a combined rate of 5.3 percent for their comparison high schools and 3.75 percent for all high schools statewide.

One of every five redesigned high schools had no dropouts during the 2008-09 school year

Stand-alone redesigned schools had a dropout rate of 0.8 percent, conversion redesigned schools had a dropout rate of 5.3 percent and STEM schools had a dropout rate of 1.58 percent.

**Chart 8: Dropout Rates, Grades 9-12, 2009-10**




Source: NCNSP analysis of NCDPI dropout rate data, 2009-10

As mentioned earlier, a student's success in the 9th grade is crucial in terms of their eventual success in graduating from high school. Research has shown that 9th grade is the year where students are the most likely to drop out of high school. For that reason, NCNSP also tracks dropout rates at the 9th grade in addition to school-wide dropout rates for redesigned high schools.

During the 2009-10 school year (the most recent year for which 9th grade dropout rates are available), 31 of the 35 redesigned high schools served sizable 9th grade classes. Those 31 schools reported 9th grade dropout rates ranging from 0 percent to 31.6 percent, with more than one in three redesigned high schools (35 percent) reporting **no 9th grade dropouts** (again, all comparison school reported some 9th grade dropouts; and only 21 percent of all high schools statewide reported no dropouts from 9th grade.) Nineteen of the 31 schools (65.5 percent) had 9th grade dropout rates that were lower than the 9th grade dropout rate for their comparison high school. The 31 redesigned high schools that had sizable 9th grade classes in 2009-10 had a combined 9th grade dropout rate of 4.8 percent, compared to a combined rate of 6.5 percent for their comparison high schools and 4 percent for all high schools statewide.

**Funding and Additional Support**

Twenty-six of the 35 state-supported redesigned high schools enrolling students for the 2010-11 school year received supplemental funding from the General Assembly to support the implementation of their innovative high school model. Each school received a position allotment for one state-funded guidance counselor (approximately $68,000 per year) and two position

allotments for two clerical support positions (approximately $36,000 per clerical support position per year). The nine STEM-focused redesigned high schools that are also a part of the turnaround high school initiative through NCDPI did not receive the supplemental funding from the General Assembly (all implementation funding for these nine schools came from local school district sources).[4]

In addition, each redesigned high school (with the exception of the nine STEM-focused high schools) signed a five-year implementation agreement with NCNSP to receive grant funding from NCNSP that provides technical assistance in the implementation of their innovative high school model. The implementation grant funding came from a $20 million grant from the Bill & Melinda Gates Foundation. The implementation grant funding covered the cost of a school change and instructional coach, professional development for teachers and principals, and local cash to cover additional expenses, including travel to professional development events. Grant-funded support concluded for eight of the remaining nine schools at the end of 2010-11.

***School Change and Instructional Coaches:*** During the 2010-11 school year, the eight Gates-funded redesigned high schools received the services of a highly trained and experienced instructional coach who worked directly with the faculty on-site to support sustained change in their instructional practice. Coaches are identified and trained by NCNSP. NCNSP, in conjunction with those brokering organizations, provides extensive and ongoing professional development for school change and instructional coaches to enhance their knowledge, skills and abilities as coaches.

***Teacher and Principal Professional Development:*** Through NCNSP's program of service, called Integrated System of School Support Services or IS4, the organization combines the services of the instructional coach described above with the opportunity for schools to engage in peer review site visits and by adding the services of a leadership facilitator to support the work and development of principals.

**New initiatives**

With nearly all the original NCNSP-affiliated redesigned high schools having concluded their grant cycles, NCNSP is currently engaged in several significant initiatives aimed at building on and scaling up the strong foundation of lessons learned by those pioneering schools.

The knowledge and experience gained by redesigned high schools have shaped NCNSP's plans for its ongoing work to transform schools and school districts. NCNSP is focusing on efforts aimed both at improving the quality of redesigned high schools as well as creating new innovations that will be of value to North Carolina.

Partnering with the State Board of Education, NCDPI, higher education, and business and industry, the creation of affinity networks of schools with STEM themes allows innovative schools to work together to deepen teaching and learning through focused support from NCNSP. This approach also allows NCNSP to more closely align the evolving models with expertise in the private sector and in

[4] A 10th STEM turnaround school, James Kenan School of Engineering, converted in 2009-10 to Duplin Early College High School.

higher education. Fundamentally, the networks, which are supported by the state's federal Race to the Top grant and other sources, are one of NCNSP strategies to address scale, sustainability and quality in new schools. This work has been based upon NCNSP's work with the STEM-themed schools, which needed and received more pronounced curricular support around math and science instruction than has been typical in $IS^4$, which focuses principally on instructional strategies that are common across content areas.

The schools in affinity networks receive targeted enhanced coaching, with some teachers working together during the summer and applying collaborative technology to curriculum. In addition, each school partners with a higher education institution and with local employers to ensure that its course content is well aligned to real world demands that graduates will face. This connection to economic opportunity has made the affinity network concept attractive to a number of state leaders, including Lt. Gov. Walter Dalton and executives from a wide array of businesses across North Carolina, including Progress Energy, Duke Medicine, and others. This approach holds promise as the state, NCNSP, institutions of higher education, and business work to develop these affinity networks of innovative STEM schools.

For more information, contact the North Carolina New Schools Project at 919-277-3760.