



Teaching and Learning Conditions Improve High School Reform Efforts



February 2007

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Acknowledgments

CTQ could not have conducted this research without the support of the North Carolina Business Committee for Education (NCBCE) and the Center for 21st Century Skills. The North Carolina New Schools Project (NCNSP) also provided valuable insight for the research, especially in considering and selecting schools, scheduling site visits and articulating high school reform principles. CTQ would especially like to thank Tricia Willoughby of NCBCE, Melissa Bartlett of the Center for 21st Skills, Geoffrey Coltrane of NCNSP, and Tony Habit of NCNSP for their collective leadership and contributions for moving this research forward.

The CTQ research team for this project included Scott Emerick, Diana Montgomery, Cynthia Reeves, Keri Church and Eric Hirsch.

Most importantly, we would like to extend our sincere appreciation to teachers, counselors, principals, administrators and district officials in redesigned and early college high schools who were so willing to share their time and input with us while they were working to provide a tremendous high school experience to all of their students.

There are new demands on North Carolina high schools to provide students with the knowledge and skills necessary to compete and succeed in the 21st century. With the exponential growth of knowledge in many fields (especially in science and mathematics), the 21st century worker faces new intellectual challenges. For students to compete in a global economy, they need to produce, analyze and communicate knowledge, not just learn it. Unfortunately, mounting evidence demonstrates that the majority of United States students leave high school under-prepared for college and ill-equipped for 21st century work and citizenship.

In recent years, North Carolina has created considerable momentum toward reinventing the high school experience. The high school reform movement in North Carolina is built on the premise that helping students compete in the 21st century marketplace requires high schools to offer challenging curriculum to all students, create courses relevant to the lives and goals of today's students, and surround these students with adults who know and care about them.

With an \$11 million grant from the Bill and Melinda Gates Foundation, the North Carolina New Schools Project (NCNSP) provides planning and implementation grants for the creation or redesign of high schools. With support from the NCNSP, Governor Easley's Learn and Earn program created 33 early college high schools to provide students with college credit and work-related skills. An additional 25 existing schools were redesigned to provide small learning communities for students. Another 33 high schools are currently in the planning phase (14 early college high schools and 19 redesigned high schools). The Partnership for 21st Century Skills also supports the North Carolina high school reform movement by engaging business and education to promote a collective vision for dramatically changing schools in ways that better prepare students for the demands of 21st century work.

Working conditions will prove essential in making these investments successful because the rigor, relevance and relationship cornerstones of the high school reform movement are highly dependent on teaching and learning environments. Rigorous courses require teachers with sophisticated knowledge of their field. Relevance in the classroom requires teachers with the flexibility, time and creativity to teach their subject matter in different ways. Finally, creating productive relationships requires that teachers have the commitment and opportunity to support students' growth in and out of the classroom.

HIGH SCHOOL REFORM GOALS

“We’ve been in the business of consolidating schools to save money and it’s been to the detriment of children’s education. In smaller schools better things can happen, children don’t fall through the cracks and teachers can communicate with each other and with parents more readily.”

—Veteran teacher at a redesigned high school

The high school reform movement in North Carolina is built on the premise that helping students compete in the 21st century marketplace requires high schools to offer challenging curriculum to all students, create courses relevant to the lives and goals of today's students, and surround these students with adults who know and care about them.



The North Carolina high school reform movement is focused on creating small, personalized and academically rigorous schools that increase graduation rates, reduce suspension and expulsion rates, increase college going rates and reduce college remediation rates.

American high schools are failing to provide students with the knowledge and skills they need to succeed in post secondary education and work. On the 2004 National Assessment of Educational Progress, only 38 percent of 17-year-old high school students (down from 41 percent in 1994) could read and understand material typically presented at the high school level, and only 6 percent could synthesize and learn from specialized reading materials. In addition, only eight percent could use basic algebra or solve math problems with more than one step.¹ In North Carolina, only about 60 percent of ninth graders graduate from high school in four years.²

The North Carolina high school reform movement is focused on creating small, personalized and academically rigorous schools that increase graduation rates, reduce suspension and expulsion rates, increase college going rates and reduce college remediation rates.³ To achieve these goals, NCNSP supported high schools focused on building relationships and creating relevant and rigorous learning opportunities for students. Redesigned and early college high schools in North Carolina vary in terms of design, organization, and instructional practices. Yet, each is fundamentally committed toward a common vision of creating meaningful relationships with students, providing students with relevant instruction that prepares them for the realities of the world around them and ensuring rigorous learning opportunities that help them excel in college and the workforce.

Along with the consistency of these three overarching redesign principles, the redesigned and early college high schools also share a goal of serving students who typically fail to thrive in traditional high schools: first-generation college goers, economically disadvantaged students, and English Language Learners. This report describes how redesigned and early college high schools provide working conditions for teachers that contribute to rigor, relevance and relationships, ensuring that all students develop skills for critical thinking, problem solving, communication, collaboration and innovation.

RESEARCH DESIGN

With support from the North Carolina Business Committee for Education (NCBCE) and the Center for 21st Century Skills, the Center for Teaching Quality (CTQ) evaluated teaching and learning environments in redesigned and early college high schools across the state. The research is intended to inform policy decisions related to the support and development of redesigned, early college and traditional high schools, while documenting best practices for creating working conditions which promote effective high school teaching and learning.

North Carolina's continued commitment to collecting and analyzing working conditions data (www.northcarolinatwc.org) provides schools in the state with data to understand and respond to the school conditions and teaching supports in their own unique environments. Results from the North Carolina Teacher Working Conditions Survey were used as the first factor in selecting research sites for this effort. Other criteria included strength of school leadership; diversity of innovation models; geographic representation; mix of school size; and overall student achievement levels. Selection criteria are described in detail in Appendix A. The demographics and basic descriptors for the six schools ultimately invited to participate are available in Appendix B.



To more fully understand the school's design, performance, and teacher working conditions CTQ researchers conducted focus groups with teachers at the six schools, observed their classroom teaching practices, interviewed administrators and district personnel and reviewed sup-

porting materials and documents relative to key working conditions. The data collection and analysis were designed to shed light on the degree to which educators:

- Use emerging technology and other resources to assess and manage information, and create new learning opportunities well integrated with 21st century learning objectives;
- Access professional development that supports the application of 21st century skills in teaching strategies in the classroom;
- Benefit from leadership that demonstrates and promotes effective 21st century learning tools and objectives;
- Have the time, resources, support and opportunity to collaborate with other educators, outside partners and external experts in creating and achieving a vision for teaching 21st century skills; and
- Engage in important education decisions in a consistent and meaningful manner.

TEACHER WORKING CONDITIONS ARE ESSENTIAL FOR KEEPING TEACHERS, HELPING STUDENTS LEARN AND DEVELOPING 21ST CENTURY SKILLS

An increasing body of research evidence demonstrates the effect that working conditions have on both teacher attrition, and ultimately, student achievement. Data collected and analyzed by CTQ from more than 125,000 educators in North Carolina, Kansas, Arizona, Nevada and Ohio show powerful links between teachers' working conditions and both teacher attrition rates and student achievement levels in elementary, middle and particularly high schools.

As Governor Easley has noted, "teacher working conditions are student learning conditions." Research from North Carolina indicates that teachers' perceptions of certain working conditions are closely correlated with schools' Adequate Yearly Progress (AYP) status and the ability to reach student achievement growth targets. Data from the 2006 North Carolina Teacher Working Conditions Survey indicate that high schools with a school leadership domain of greater than 3.90 were 2.2 times more likely to meet or exceed growth expectations (using a statistical model shown to significantly impact growth at the $p < .1$ level).

Working conditions matter for students and matter for keeping teachers in all schools. And nowhere are working condition reforms more critical than in improving high schools and informing high school redesign efforts currently underway across the state. While working conditions are viewed more negatively at the high school level than at elementary or middle schools, redesigned and early college high schools demonstrate that improvement is possible.

- *Teachers in redesigned and early college high schools were significantly more positive about every working condition area than their high school colleagues across the state.*
- *The working conditions where high school teachers are generally the least positive—time, professional development and empowerment—are the same areas where teachers in redesigned and early college high schools were most positive relative to their high school colleagues across the state.*

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Developing strong, productive relationships among faculty, students, parents and community requires that teachers have opportunities to collaborate with other staff and to support students' growth in and out of the classroom.

- *Educators in redesigned and early college high schools are much more likely (about 80 percent) to note an atmosphere of trust in their school than their colleagues across the state (about two-thirds).*
- *Redesigned and early college high schools embrace teacher leadership and empower teachers with important education decisions.* Less than half of all North Carolina high school educators believe teachers are centrally involved in education decisions compared to about three-quarters in redesigned high schools. Teachers in redesigned and early college high schools are much more likely to report an effective process for making group decisions, having time to work collaboratively, solving problems and working with effective school improvement teams.
- *Teachers in redesigned and early college high schools are more likely to believe that leadership addresses their concerns.* While only half of high school teachers believe school leadership addresses issues related to empowerment (52 percent) and professional development (53 percent), more than three quarters of teachers in redesigned high schools note sustained efforts to address empowerment (78 percent) and professional development (81) percent.

These data indicate that teachers in redesigned and early college high schools in North Carolina are significantly more positive regarding conditions of work than their colleagues across the state. The CTQ research was designed to determine why and how these more positive learning environments have been created.

We know that creating positive working conditions is critical for ensuring a sufficient supply of quality high school educators who can serve all North Carolina students well. This report is intended to describe how lessons from the high school reform movement can inform education policymakers and stakeholders about creating effective teaching and learning environments in every high school across the state. Environments that provide the relationships, relevance and rigor that all students need to develop the knowledge and skills necessary to succeed in life.

CREATING RELATIONSHIPS IS THE FOUNDATION FOR SUCCESS IN HIGH SCHOOL REFORM

“You have got to have that relationship and trust before other things are going to come ... You have to work together as a team. You have got to build that trust.”

—Principal at a redesigned high school

Developing strong, productive relationships among faculty, students, parents and community requires that teachers have opportunities to collaborate with other staff and to support students' growth in and out of the classroom. For faculty and students to establish relationships with the broader community, these schools also needed to provide additional time for working with public partners beyond the school building. Many working conditions factors in these redesigned and early college high schools promote the kind of relationships which help all students learn at extremely high levels.

- 1) **School leaders' commitment to building trust contributed to positive relationships in schools and communities.**

As indicated in Table 1, 87 percent of teachers in redesigned and early college high schools (compared to 63 percent of teachers in all North Carolina high schools) agreed that “there is an atmosphere of trust and mutual respect within the school.” Teachers reported that the principals' willingness to discuss problems, encouragement of teachers to take active leadership roles, and awareness and attention to building trust were important factors contributing to this



finding. In focus groups, teachers routinely described their principals as “democratic,” “approachable,” and “collaborative.” In most of the study schools, the faculty meets once a week to discuss issues they consider significant. At one school, these meetings take the form of Professional Learning Communities and the principal works through these groups to make school level decisions.

School leaders were also working to foster more trusting and meaningful relationships among higher education institutions and with the broader community. Community college liaisons and, in the case of the comprehensive high school undergoing full conversion, a site coordinator, served important roles to foster more consistent communication with higher education partners and more effective use of their resources. Redesigned and early college high schools are working to develop partnerships for student work-studies, internships, and field trips. The career-themed high schools were more likely to develop these kinds of external partnerships. One of the career-themed high schools included community members on their advisory council. Another school brought in parents and community members to help monitor and evaluate the progress of students. The local business council came to watch students present the results of their project. When working effectively, these partnerships succeed because businesses and schools trust and understand how they can contribute to each other’s success.

2) The small size of redesigned and early college high schools promoted collaboration among faculty and staff.

Physical proximity based on the size and layout of the schools was a facilitating factor in many of the redesigned and early college high schools. Schools participating in the study oftentimes created shared office space for teachers. As one principal described, “Their offices are designed so that there are four teachers in an office at a time. Collaboration occurs naturally ... It forces collaboration.” In a small school with a small staff, teachers see more of each other and have more opportunities to interact with each other and with students than teachers in a large comprehensive high school. Concerted effort is made to facilitate collaboration as well. For example, three of the early college high schools created time each week specifically for faculty to convene around professional learning objectives.

3) The size and culture of redesigned and early college high schools helped build relationships with students.

“We have relationships and positive interactions with students ... In other high schools, students would have never come to me when something was wrong, and I never would have known to ask ... That’s not the case here.”

—Teacher at a redesigned high school

The intimacy of the smaller building spaces was also considered an advantage for building relationships with students. Teachers reported that the small school environment helps to build meaningful relationships between students and faculty because students feel a high degree of comfort interacting with teachers outside of regular class time.

Several of the study schools made great efforts to ensure that students maintained consistent interactions with the same educators to meet their learning needs. For example, the Personal Learning Period (PLP) implemented in one school serves students from all grades in one class. The students attend PLP with the same teacher during all four years of high school. The PLP teacher is responsible for helping the students with their schedules each year and is responsible for establishing and maintaining communication and relationships with parents and guardians.

In a small school with a small staff, teachers see more of each other and have more opportunities to interact with each other and with students than teachers in a large comprehensive high school.



- 4) **Teachers in redesigned and early college high schools did not have more scheduled planning time than teachers in other high schools, but more effective communication and collaboration added value to that time.**

“I have enough time here to actually build relationships with other educators, and that is not always true at other schools.”

—Teacher at a redesigned high school

Teachers at one redesigned high school explained that block scheduling and their use of project-based learning provided opportunities for collaboration. The longer class periods and more intensive independent learning opportunities organized around project-based learning created time for teachers to collaborate while students work on their projects. Redesigned and early college high schools without block scheduling created opportunities before, after, or during the school day for staff to gather and discuss instructional strategies.

These strategies provided teachers in redesigned schools with more opportunities for collaboration with colleagues. On the North Carolina Teacher Working Conditions Survey, 71 percent of teachers in redesigned and early college high schools across the state agreed they have sufficient time available to collaborate with colleagues, compared to only 50 percent of teachers in all North Carolina high schools.

- 5) **Collaborative professional development provided teachers with opportunities to work with colleagues on relevant educational issues.**

The size, culture and focus of redesigned and early college high schools create opportunities for more discussion of professional development activities. Professional development in these schools was a shared undertaking where educators consistently learned from each other. Through the NCNSP, educators in redesigned and early college high schools were provided opportunities to share strategies and experiences with other schools implementing similar reform models across the state. There was also an expectation that teachers share professional development learning with colleagues. In many cases, time was incorporated into regularly scheduled meetings to allow for this group reflection and learning.

Table 1. Teacher Agreement on Questions About Working Conditions Found to Facilitate Relationship Building

	Redesigned and Early College High Schools	All North Carolina High Schools
Teachers have time available to collaborate with their colleagues	71%	50%
There is an atmosphere of trust and mutual respect within the school	87%	63%
Teachers are provided opportunities to learn from each other	86%	61%

The size, culture and focus of redesigned and early college high schools create opportunities for more discussion of professional development activities. Professional development in these schools was a shared undertaking where educators consistently learned from each other.

ESTABLISHING RELEVANT LEARNING OPPORTUNITIES: AN EMERGING STRATEGY IN HIGH SCHOOL REFORM

“We try to help students see the relationship of the classroom to the world.”

—Teacher at an early college high school

Building from these strong relationships with students and staff, redesigned and early college high schools work to deliver learning opportunities that are relevant to students’ interests and are closely related to the knowledge, research and communication skills students will need to excel in rapidly changing, technology-rich, and team-oriented work environments.

Relevance in the classrooms of reformed high schools requires changes in the ways educators teach and students learn. The teacher working conditions of redesigned and early college high schools contributed to the development and implementation of relevant instruction in a variety of ways.

1) *Teachers were integrally involved in determining and deeply committed to the vision and design of the school.*

“We’ve been empowered so much. I have never felt more like a professional than the year in planning this school. You want to solve retention? Empower teachers.”

—Teacher at a redesigned high school

Teachers at redesigned and early college high schools played active roles in decision-making at their schools. Interviews at the case study schools indicated that teachers’ strong involvement in the design of the new schools played a key role in establishing shared leadership and empowering them as instructional leaders. In the planning phase, teachers collaboratively shaped the school vision and designed the school based on that common vision for student learning. The impact was apparent in survey results, where 84 percent of teachers from the redesigned and early college high schools indicated “the faculty and staff have a shared vision,” compared to only 59 percent of teachers from all high schools in the state (see Table 2).

An uncompromised commitment to student learning was described by teachers and administrators as an essential component of their school vision and mission. A full 94 percent of teachers in the reformed high schools agreed that “the faculty are committed to helping every student learn,” compared to 78 percent of all North Carolina high school teachers. Knowledge of students’ needs and implementation of related strategies to meet those needs both proved critical in providing relevant instruction to help every child learn.

In two case study schools, teachers determined that students’ progress was limited by below grade-level reading and both responded with strategies to address the need. In one school, a reading specialist was hired to work with students to enhance reading skills to high school levels. In another school, teachers learned about integrating literacy into content areas and set up libraries with content-appropriate books in each of their classrooms.

Expectations Early College High School

Expectations Early College High School (EECHS) is representative of the efforts undertaken in these schools to build meaningful relationships that allow students and educators to fulfill their school’s mission. Teachers at EECHS described strong, positive relationships among faculty, staff, students and community. The relationships at EECHS are created by a number of strategies to improve working conditions.

- Teachers shared office space (four to an office), and plans for creating a single large group office were under development.
- Fridays were used for student enrichment activities and staff meetings for faculty. During these staff meetings, teachers discussed issues, shared experiences and received feedback from each other.
- Teachers were expected to share their professional development experiences with the rest of the faculty.
- Student application interviews included not only students and principals, but also parents and teachers.
- Teachers had the cell phone number of all their students and vice-versa.
- Students participated in service-learning projects to integrate curriculum with opportunities to improve the local community.

2) *Teachers were empowered as instructional leaders in their schools.*

“We are working from the premise that everyone on staff is in a leadership role.”

—Teacher in a redesigned high school

Once the redesigned and early college schools were established, teachers continued to have key roles in making decisions about educational issues. One teacher at an early college high school commented, “We are all leaders in this school ... We have a democratic governance structure, and everyone is expected to make instructional decisions.” In redesigned and early college high schools 72 percent of teachers agreed that “teachers are centrally involved in decision making about educational issues,” compared to 44 percent of all high school teachers in North Carolina.

At case study schools, regular times to meet oftentimes included a clear focus on providing relevant student learning opportunities and promoted continued engagement of teachers as instructional leaders. At one school, faculty and administrators met weekly for 90-minute “Teaching and Learning Meetings.” The amount of time dedicated to these meetings was not markedly different from the typical high school faculty meeting. The distinction was in the focus on student learning and the collaborative approach of teachers and administrators in making instructional decisions that met the needs of the students in the school. One teacher described these meetings as “the biggest thing we do” to accomplish schools goals, noting that learning new strategies for teaching and learning make the meetings “different from a regular staff meeting.” He continued, “Even the way meetings are run are models of using protocols—critical friends models—that can be taken back to the classroom ... It’s powerful.”

3) *Principals were strong instructional leaders who helped make learning opportunities relevant.*

Principals in redesigned and early college high schools took active roles as instructional leaders. In some cases, this took the form of providing what teachers needed for effective instruction and protecting them from disruptions and duties that would detract from their focus on instruction. A principal at one school commented, “We work really hard as an administrative team to keep teachers outside of the daily grind of things. Anytime it’s possible, if someone is out and there needs to be coverage, we try to do it as an administrative team. I don’t require lunch or bus duty—just basic hall (monitoring) during class changes. Teachers are only responsible for providing instruction to the extent possible.”

Principals were also proactive in challenging practices and shaping instruction and related policies to promote student learning. In two different schools, for example, principals questioned the practice of “giving zeros” on work not completed by students. One principal went so far as to suspend homework assignments and promote teachers’ deliberation of the issue, explaining, “A big driving force in kids getting zeros was kids not doing homework. So I said, ‘Ok—we won’t give homework for awhile ... We will articulate why are we giving it, what are we giving—so we can assess kids on what they are doing as opposed to what they’re not doing.’ It forced conversations about assessments and grading practices.” This level of awareness and attention to instruction was characteristic of principals as leaders in the redesigned and early college high schools. Beyond shaping instructional direction and policies, one principal at a health science redesigned high school took shared leadership a step further, by not only distributing leadership responsibilities, but also taking on the responsibilities of a classroom teacher. The small faculty said they benefited tremendously from the instructional expertise of a “teacher-leader” serving as a teaching colleague, while leading the school.

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4) *Facilities and resources supported 21st century learning goals.*

“We are not a “technology school”—but technology is part of our teaching. Students use technology in projects and research ... and it is relevant to the particular technology used for specific careers.”

—Teacher at an early college high school

At the redesigned and early college high schools, higher education and community partners provided important resources as well as concrete links to relevant future goals and aspirations of students. Teachers at schools operating on college sites noted the intrinsic value of high school students who were striving for eventual college admittance and success to be learning and functioning on the grounds of a college campus. Many teachers believed “the power of site has tremendous influence over students’ outlook and behavior at an early college high school.” Before ever teaching a lesson, many educators said they already had an advantage of “a different feel in getting students to function more maturely.”

Being housed on college campuses also opened doors for increased access to technology, laboratories, libraries, and college instructors. Not only did early college teachers have access to campus science and computer laboratories for classroom instruction, but they were especially positive about the level of technology support they received from support personnel at their host college. At one school, a college professor and early college high school teacher were forming even stronger bonds and integrated instruction by team-teaching a class. The connections of high school learning to college-level work were concrete and readily apparent to students in these schools.

Strong ties to other community resources enhanced the relevance of coursework as well. Particularly in career-themed high schools, student work-studies and internships with local businesses were (or were planned as) a core part of the curriculum. In many of these schools, a staff member served as a liaison for seeking out work study opportunities for students and assuring sound placements and successful community-based experiences. At one health science school, the teachers themselves had prior health services careers and brought strong knowledge of health science applications to their classrooms.

At the redesigned and early college high schools, higher education and community partners provided important resources as well as concrete links to relevant future goals and aspirations of students.

Table 2. Teacher Agreement on Questions About Working Conditions Found to Facilitate the Development of Relevant Learning Opportunities

	Redesigned and Early College High Schools	All North Carolina High Schools
The faculty are committed to helping every student learn	94%	78%
The faculty and staff have a shared vision	84%	59%
Teachers are centrally involved in decision making about educational issues	74%	47%
Opportunities are available for community members to contribute to this school’s success	80%	68%

*Newfound Health and Life Sciences
High School*

At Newfound Health and Life Sciences High School, project-based learning with clearly defined standards for mastery was the foundation for accomplishing 21st century learning goals. At this school, large blocks of time were dedicated to project work, during which teachers served as facilitators and resources for the students. The goal was to have students engaged in independent learning during 70 percent of instructional time. Students worked on projects in a large open room with work tables in the center and three walls of computers around the perimeter. The principal noted, “Access to and use of the Internet is key to our project-based learning efforts... Instructional technology has become a useful tool for completing projects. Our kids find ways to use technology beyond anything we imagined.”

Also critical to project-based learning was the pursuit of relevant, interest-based topics that centered on “real world” health science topics. Students selected topics based on their personal interest for the cross-disciplinary projects that they designed, researched, and presented to their school and to members of the broader community. One student, for example, completed a project on the public health risks and costs of smoking. “My dad was a smoker and I know it’s dangerous and expensive, so my project is looking at the risk factors for smoking... I think this is a good way to learn. It’s more difficult, but it’s interesting. It’s easier for me to do this kind of research and use the Internet to find information I am interested in.” The principal of the school agreed, “The number one way for us to differentiate instruction is based on kids’ interests. When a kid is in charge of selecting his/her topic of interest, they are driving their own learning.”

WORKING TOWARD RIGOR IN HIGH SCHOOL REFORM

“The United States is one of the few countries where people believe that academic achievement is based mostly on ability; the rest of the world believes academic success is based on hard work. We are working toward a paradigm shift to make people understand that hard work on rigorous curriculum leads to meaningful achievement.”

—Principal at a small redesigned high school

Helping students attain the skills necessary to compete in the 21st century marketplace requires a challenging curriculum for all students. Achieving the learning objectives of high school redesign is dependent on schools ensuring sufficient attention to, and awareness of, whether students are actually reaching the rigorous set of new learning expectations described by redesigned and early college high school educators and reformers.

Educators at the study schools believed that establishing relationships and providing relevance were necessary precursors for ensuring and measuring rigor. One principal at a redesigned high school stated, “In our first year, we focused almost completely on the academic progress of our students, but we have realized that without first establishing relationships, rigor is impossible.” While ensuring rigorous curriculum presents considerable challenges, there was evidence of commitment to and movement toward the principle.

1) *Accelerated coursework promoted academic rigor.*

All of the participating early college and redesigned schools articulated the goal of providing students with accelerated coursework. In the early college high schools, students finish their high school career with both a high school diploma and two years of college credit (the equivalent of an associate’s degree). All students in the redesigned schools were enrolled in honors-level classes as a consistent minimum standard. The honors-level courses and high expectations were intended to create an academic foundation for all students to become life-long learners. One teacher described the goal of providing rigorous coursework for students to be-

come ready for, “not only college, but for living in this world” by developing “habits of mind and workplace skills” that many educators in these schools believed to be at least as important as academic learning. In addition to the design of courses, a large majority of teachers in redesigned and early college high schools reported that they had access to the appropriate materials and resources (78 percent, compared to 68 percent of all high school teachers in the state—see Table 3).

Based on the recommendations of NCNSP, one redesigned school “de-tracked” their curricula. For example, all students take Algebra for honors level credit. Every student in the school scored proficient or above in math last year, and 65 percent were proficient in writing—the highest percentage in the district.

2) *Parents and community helped promote rigor.*

Many redesigned and early college high schools have developed ways to engage parents and community members in the pursuit of rigor. On the working conditions survey, 80 percent of teachers in the redesigned and early college high schools reported that opportunities are available for community members to actively contribute to their school's success, compared to 68 percent of all high school teachers in the state.

Some educators reported that because rigorous curriculum challenges students in new ways, parental support proves absolutely necessary to help students face difficulties inherent with such a challenging course of study. The principal at Dewey High School noted that after the first few weeks of school, a barrage of students found the work load overwhelming and wanted to give up. The principal firmly believed that taking time to help parents understand what to expect in the first few weeks of school was absolutely necessary to keep students from leaving the school. This year the principal at Dewey ensured that a detailed explanation of rigor and expectations was a consistent and strong refrain when meeting with parents prior to the beginning of school. The school did not lose a single student from the 2006-2007 freshman class, and the principal believed this could be credited largely to the informed support of parents.

Another school used adult business leaders to help ensure rigor in students' project delivery and presentation. A local business council sent representatives to watch and evaluate the presentations and progress of students on project-based learning initiatives. Students received meaningful feedback from area business leaders regarding how their presentations would be received in a real-world work environment.

3) *Professional development improved the capacity of educators to provide rigorous learning opportunities for all students.*

Principals and teachers in redesigned and early college high schools consistently voiced an appreciation for the value and relevance of professional development in their respective schools. The primary professional development opportunities were provided by the NCNSP, with supplementary professional development activities from the school district.

This trend was seen in the teacher working condition survey responses, where 79 percent of teachers in redesigned and early college high schools agreed that professional development provided teachers with the knowledge and skills most needed to teach effectively, compared to 56 percent of all high school teachers in the state. One novice teacher defined the value of the professional development: "What we are doing in terms of professional development is highly relevant to our work in this school and very much related to what we need to help kids learn." Specifically, many teachers recognized the "critical friends" element of NCNSP professional development as a particularly useful intervention that was brought back and implemented within their respective schools.

Despite all of the positive trends related to the meaningful and relevant professional development that educators in these schools were receiving to improve their practice, there was also a consistent theme across schools regarding the amount of time away from the classroom required to participate in professional development from the NCNSP. This time away from the classroom and school was considered especially taxing on small faculties because losing two faculty members for off-site professional development might represent lacking half of the instructional capacity within the school. One principal at a small redesigned high school described a common sentiment, "There has been some resistance to the amount of time the New Schools

Many redesigned and early college high schools have developed ways to engage parents and community members in the pursuit of rigor.



Project requires of our faculty. But the professional development that NCNSP is providing is incredibly important and valuable; it's just a lot of time for a small staff to devote.”

4) *New assessment tools and strategies were needed to more effectively measure rigor.*

While two participating schools spoke to plans for developing more comprehensive evaluation measures to assess where students stood relative to the complex learning goals the schools aspired to achieve, many educators were at a loss in describing plans to measure progress toward the learning and developmental goals they articulate in their mission.

Difficulties measuring rigor are compounded by the fact that many participating schools will not have longitudinal data on their students' college performance and graduation rates for a few more years. Also further complicating matters is the fact that many principals and teachers believed the bounds of state standards for student learning did not reflect the degree to which students were or were not developing the skills most essential to the objectives of high school reform. While educators have a clear desire and need to measure students on progress including, but not limited to, end of grade testing models created by the state, few could articulate a mechanism for doing so.

Providing the rigor cornerstone of high school reform requires teachers with sophisticated knowledge of their field, new curricula and instructional delivery strategies, and new mechanisms for measuring the mastery of complex skills needed to succeed in 21st century life.

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Table 3. Teacher Agreement on Questions About Working Conditions Found to Facilitate The Development of Rigorous Learning Opportunities

	Redesigned and Early College High Schools	All North Carolina High Schools
Teachers have sufficient access to appropriate materials and resources	78%	68%
The school leadership communicates clear expectations to students and parents	85%	67%
Opportunities are available for community members to actively contribute to this school's success	80%	68%
Professional development provides teachers with the knowledge and skills most needed to teach effectively	79%	56%

CONTINUING CHALLENGES IN HIGH SCHOOL REFORM

While the story of redesigned and early college high schools in North Carolina is largely one of considerable accomplishments and even greater potential, a number of challenges remain for these schools to help all students reach the learning objectives to which they aspire. The challenges facing redesigned and early college high schools provide lessons for the future of the high school reform movement in North Carolina. As comprehensive high schools across the state move toward preparing students for the same learning objectives described by the high school reform movement, the successes and challenges of these schools should inform and improve the work of all North Carolina high schools.

Providing Flexibility for Innovative Learning Models

While redesigned and early college high schools in this study have reformed and reorganized, they still operate within larger, traditionally organized systems. Not all Central Office administrators and Board of Education members have been through the redesign planning process and often have little understanding of what it takes to operate such a school in terms of funding, staffing, and scheduling. The redesigned schools are continuously evaluating and making adjustments as they work to ensure their students are provided what they need to be successful. School districts are traditionally slow to change. As one school administrator stated, “We are such a large district. What we are doing is putting a square peg in a round hole. We have support at some levels, but not all the way down. We have unique issues. It makes their job more difficult ... We have a wonderful district, a big, metropolitan system. But, it’s lumbering as far as we’re concerned. We’re lean, small and quick. It causes problems.”

Assessment Reflecting 21st Century Learning Goals

Many redesigned and early college high schools described persistent challenges in assessing the progress students are making toward the learning and developmental goals they articulate in their mission. Educators in reformed schools expressed interest in assessing progress toward goals. However, many of these schools and teachers lack the knowledge, skills and tools to create and implement an effective assessment structure to measure progress toward the complex learning and life goals of the reform movement.

Maintaining a Sense of Empowerment as Schools Shift from Design to Implementation

The process of redesigning a previously existing high school or designing an entirely new high school provides inherent opportunities for teachers to inform and influence significant school decisions. The more difficult challenge is to ensure that this level of teacher empowerment remains when the high school moves from the design phase to its implementation. Similarly, many comprehensive high schools have embraced the concept of increasing distributed leadership and teacher empowerment. The challenge for all of these reform efforts will be to maintain this commitment to shared leadership in the face of tremendous pressures for high performance on state standardized tests. Effective redesigned and early college high schools offer a blue print for creating processes and school cultures which ensure that teacher empowerment becomes much more than a transitory reform strategy.

Newfound Health and Life Sciences High School

Newfound Health and Life Sciences High School is developing its own evaluation structure by putting into place a self-evaluation that includes peer review and teacher-reflection guided by an assessment rubric. The assessment rubric focuses on the degree to which students demonstrate mastery of complex concepts the school considers necessary for achieving learning goals for all students. The rubric remains in its developmental stages; however, great strides have been made. While teacher and student assessments began at somewhat divergent ends of the measurement scale, by the end of last year (the first year of implementation) the difference between teacher and peer reviews was less than .5 point on a 1-to-5 scale.

LESSONS LEARNED AND ISSUES TO CONSIDER FOR SCALING UP HIGH SCHOOL REFORM EFFORTS

Focus on Quantity, but Also the Quality of Non-Instructional Time

Redesigned and early college high schools do not provide teachers with much more non-instructional time than traditional high schools, but teachers feel the time that is available is more conducive to meaningful planning and collaboration.

Redesigned and early college high schools do not provide teachers with much more non-instructional time than traditional high schools, but teachers feel the time that is available is more conducive to meaningful planning and collaboration.

- *Administrators and teacher leaders should collaborate to create structures which help ensure that available planning time is used effectively.* The structure might focus on:
 - the overlap of planning periods for team teachers and mentor-mentee teachers,
 - protocols and agendas for using meeting time efficiently, or
 - tools for measuring progress toward goals for planning time.
- *Review current practices exemplary high schools use to create planning time and to ensure that time is used efficiently.* The review should eventually lead to the creation of a database for collecting and disseminating strategies for effective high school scheduling.
- *Technical assistance from NCNSP and/or the Department of Public Instruction regarding the effective use of non-instructional time might be considered.* The on-the-ground assistance would build capacity in schools and districts to implement many of the scheduling strategies collected in the aforementioned database.

Review Current Standards and Assessments to Align with 21st Century Skills

As North Carolina considers the emerging skills needed for students to succeed in the 21st century and the extent to which current standards and assessments accurately measure those skills, some redesigned and early college high schools can serve as models.

- *Invest resources to audit and collect existing rubrics and assessment tools.* Many redesigned and early college high schools are working to perfect tools which measure complex learning outcomes.
- *Fund the development of a clearinghouse to document assessment tools* which effectively measure 21st century skills.
- *Create a website to disseminate what works for measuring student gains within these new learning objectives,* which would dramatically improve the rate at which high schools across the state can pursue and achieve these goals.

Build Partnerships that Can Help Improve Instruction, Make Learning Relevant to the Real World and Improve Access to and Utilization of Technology

While school communities vary tremendously in access to business and university partners, high schools should fully leverage efforts to engage the community partners that are available.

- *School leaders should consider all community resources*—chambers of commerce, community colleges, local businesses, and parents—to assess technology and equipment needs and to obtain funding and other support for addressing identified needs and allowing schools and districts to maximize available resources.



- *Offer incentives for establishing and maintaining business, community, and higher education partnerships with high schools.* The incentives should promote meaningful contributions to high schools, such as those made by community colleges to early college high schools.

Empower Teachers to Influence More School-Based Decisions

The strengths of many redesigned and early college high schools rests with the empowerment of teachers to influence and take ownership of many critical decisions influencing instruction, not only in their own classrooms, but also in the broader schools where they work.

- *Consider areas where teachers can be appropriately engaged in decision making, and ensure they have the knowledge and skills necessary to make the decisions.* Professional development should be created and delivered by accomplished teacher leaders that help all educators understand how to create efficient and effective distributed leadership models.
- *School Improvement Teams (SITs) are an important vehicle to guide these efforts. The state should provide more structured guidance and technical assistance to SITs in engaging in appropriate school based decision making* (including hiring, budgeting, professional development planning, etc.). NC Network, DPI and other organizations and entities should provide necessary support to SITs in fully engaging and communicating with school faculty.

The strengths of many redesigned and early college high schools rests with the empowerment of teachers to influence and take ownership of many critical decisions influencing instruction, not only in their own classrooms, but also in the broader schools where they work.

Concentrate on Creating a Common Vision for Success

One of the most important lessons from the high school reform movement is the significance of having a faculty entirely committed to a common mission and vision. The process of reforming or building a new school dedicated to the core propositions of relationships, relevance and rigor is inherently valuable for creating a sense of common purpose within redesigned and early college high schools.

- All schools, including those that are not undergoing a dramatic reform process, should *commit themselves to clearly defining and consistently pursuing a set of agreed upon goals for student learning* that guide all school decisions.
- More should be done to *respond to available teacher working conditions data indicating the extent to which teachers believe their faculty share a common vision for success.*
 - Efforts could be made to recognize and share strategies for high schools where 100 percent of teachers agree that this vision exists.
 - Technical assistance might be provided to high schools where precipitously low percentages of teachers agree there is a shared vision.



APPENDIX A. CASE STUDY SCHOOL SELECTION CRITERIA

Teacher Working Conditions—Each of the six schools selected for this research study have high response rates on the teacher working conditions survey. As intended in the research design, three have extremely high teacher working condition scores, and three have “average” working condition scores. The high scores of most redesigned schools resulted in the selection of “average” schools that were still higher than the overall state average, but less positive than their redesigned peers.

School Leadership—With insight from NCNSP staff, CTQ selected high school research sites with leaders who actively supported this research and the reform concepts it is designed to measure. Leadership in each of the six proposed schools also demonstrated the ability to articulate their plans for reform and their efforts to address working and learning conditions. The degree to which leaders have been successful in realizing these plans and visions varies considerably, but their commitment to this work is consistent.

Diversity of Innovation Models—The differences in school innovation models were also considered in selecting schools for study. While the focus across all the redesigned schools is on creating rigor, relevance and relationships in smaller learning environments, the curriculum differences and designs for implementation vary across innovation models. Consequently, CTQ focused on selecting redesigned high schools from the two largest cohort groups of design for innovation—Health and Life Sciences and *Learn and Earn* early college high schools. CTQ selected three *Learn and Earn* early college high schools, two Health and Life Sciences High Schools, and one traditional comprehensive high school in transition to becoming four smaller learning communities. The data and research base regarding teacher working conditions in the traditional high schools is supplemented by results from high schools across the state on the working conditions survey.

Geographic Representation across the State—Given that high school reform is a statewide movement, CTQ selected schools representing a cross section of North Carolina, including one school in Eastern North Carolina, two schools in the Triangle, one school in the foothills of the state, and another school in the far western mountain region of the state.

Mix of School Size—Teacher working condition results and school climate are obviously influenced considerably by the size of the school faculty. CTQ selected one extremely small redesigned high school, three moderately-sized redesigned schools and one larger redesigned high school, along with one comprehensive traditional high school currently transitioning into four smaller schools.

Overall Student Achievement Levels—CTQ reviewed available AYP data (not available for redesigned schools not yet serving 10th graders) for all potential schools and discussed student achievement in these schools with NCNSP staff to ensure selection of a critical mass of schools that are reaching high student achievement levels.

APPENDIX B. CASE STUDY SCHOOL NAMES* AND DEMOGRAPHICS

School	Model	Grades Served	Students**	AYP Met	FRL
Brown Early College	Early College High School	9-13	45	Not Available	67%
Newfound Health and Life Sciences	Health and Life Sciences	9-11	43	2 of 2 indicators met	62%
Expectations Early College	Early College High School	9-12	70	2 of 2 indicators met	36%
John Dewey Early College	Early College High School	9-12	158	8 of 8 indicators met	54%
Earnest School of Health Science	Health and Life Sciences	9-12	233	4 of 4 indicators met	N/A
Enlightenment High School	Traditional High School	9-12	1,239	21 of 21 indicators met	N/A

* The names have been changed to protect the identity of participating schools and educators.

** The number of students is based on Average Daily Membership as reported by NC DPI for the 2005-06 school year.
<http://www.ncpublicschools.org/docs/fbs/accounting/data/adm/ratio.xls>

NOTES

1. National Center for Education Statistics. *The Nation's Report Card: NAEP 2004, Trends in Academic Progress* (July 2005) http://nces.ed.gov/nationsreportcard/pdf/main2005/2005464_1.pdf
2. National Center on Public Policy and Higher Education. *Policy Alert* (April 2004) <http://www.highereducation.org/reports/pipeline/loss.shtml>
3. North Carolina New Schools Project. <http://www.newschoolsproject.org>