

The Middle College National Consortium Guiding and Sustaining the Development of Middle and Early College High Schools



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About the National Center for Restructuring Education, Schools, and Teaching

This report was prepared by the National Center for Restructuring Education, Schools, and Teaching (NCREST) at Teachers College, Columbia University for the Middle College National Consortium.

Since 2002, NCREST has been involved in research and development projects related to Middle and Early College schools. We have worked with a range of schools and intermediary organizations, but the majority of our work in this area has been carried out in partnership with the Middle College National Consortium.

NCREST is particularly known for our collaborative work with school systems, districts, school networks, and non-profit organizations. Our work to make research a meaningful contributor to practice is best expressed in our role as a research partner with several school development organizations. At NCREST, we assert that research can become relevant, which we take to mean actionable, when a trusting, respectful, and credible practitioner-researcher partnership is in place.

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WHY ARE MIDDLE AND EARLY COLLEGE SCHOOLS IMPORTANT NOW?

Introduction

Through dual enrollment programs, high school students are able to take college courses and receive college credit. Dual enrollment opportunities are widely seen as a way to prepare students to be successful in college and life as studies increasingly find positive outcomes for participants (U.S. Department of Education, 2017). Because these programs enable students to begin college course work when they are still in high school, dual enrollment can decrease the time and costs required to complete a college degree (Hoffman, 2005). Such time and cost savings have the potential to increase access to higher education for low income populations whose families can be financially burdened by the lack of income contributions resulting from extended education. In addition, dual enrollment students are able to make effective use of their senior year, rather than drifting into courses that may not contribute much to their future success (Bailey, Hughes, & Karp, 2002).

Attesting to dual enrollment's benefits to students are the rigorous research findings, that students participating in dual enrollment programs were considerably more likely to perform well in high school, graduate high school, enroll in college, accumulate college credits, and earn a college degree (U.S. Department of Education, 2017).

However, most dual enrollment programs are designed to serve primarily high achieving and highly motivated students, who are most likely to be identified as ready for college level work while in high school. At the same time, students most likely to benefit from the college readiness and early start on college coursework through participation in dual enrollment, are those students who are traditionally underserved or underrepresented in college.

Middle and Early College high schools, including those associated with the Middle College National Consortium (MCNC), have developed approaches that enable a broader range of students to successfully participate in dual enrollment opportunities. Among other practices, the MCNC programs and schools typically:

- Form close partnerships with colleges in order to provide access to courses that can meet the needs of a wide range of students.
- Engage students in preparatory orientation processes that encourage them to prepare to take college courses while in high school.
- Provide students with multiple, early opportunities to acquire the content knowledge and skills needed for success in dual enrollment.
- Set up both academic and social supports designed to increase the chances that students will do well in dual enrollment.
- Use data to continuously inform and improve students' experiences and produce higher outcomes.

In this report, we describe the key features, design principles, evidence of effectiveness, and contextual factors associated with the Middle and Early College schools affiliated with the Middle College National Consortium. We hope that MCNC research- and experience-based practices can inform the work of schools that aim to provide a wider range of students with dual enrollment options, in particular, students from groups traditionally underserved in higher education. This report is prepared by the National Center for Restructuring Education, Schools, and Teaching (NCREST), a research and development center located at Teachers College, Columbia University. We have served as a strategic partner of the MCNC since 2002.

Middle and Early College Schools

Early Colleges gained national recognition in the early 2000s when the Bill and Melinda Gates Foundation launched the Early College Initiative, aimed at developing small schools that would increase college course access for students traditionally underrepresented in higher education. Many of the Early College features were adopted from existing Middle College high schools, which had been designed to increase college opportunities for students who typically did not attend college.

The first Middle and Early College schools can be traced back to Simon's Rock Early College which was founded in 1966, and the Middle College High School at LaGuardia Community College which opened in 1974. Simon's Rock was targeted to academically advanced students and Middle College High School was created as a dropout prevention option for students who were struggling academically and/or socially (Wechsler, 2001). However, both were committed to the idea that students would be inspired, motivated, and successful if they took college courses while still in high school. Middle College High School later evolved into a model-type school, which led to the development of additional middle college high schools associated with the Middle College National Consortium.

With the launch of the Early College Initiative in 2002, the Middle and Early College High School model gained traction nationwide. When the 10-year initiative came to an end, many of the nonprofit or governmental participating intermediary organizations that were selected to support the development of Early Colleges continued to advance Early and Middle College schools and principles.¹ All followed a set of core principles that included the development of rigorous coursework, systems of academic and social support, high school-college partnerships, and the opportunity for students to earn up to 30 college credits while in high school (American Institutes for Research & SRI International, 2013).

In addition, other “Early College designs” have emerged that incorporate many of the principles and practices of the original set of Early and Middle College high schools, including:

- Early College programs within traditional high schools (Michigan, Texas);
- STEM Early College high schools (Texas, Michigan);
- Career-Technical Education focused Early College high schools, such as the Pathways in Technology Early College High Schools (New York, Colorado, California); and
- Programs that blend remedial and college level coursework (Oregon, Tennessee, Arkansas).

In all cases, students are offered the chance to take college coursework as a substantial part of their high school curriculum. As Cecilia Cunningham, Director of the Middle College National Consortium, states:

“It’s not too difficult to take the features of Middle and Early Colleges and do this in a larger school setting. People want to see these practices more widespread. You can start as a smaller learning community focused on college attainment and as this demand grows, the school then adjusts to this being a whole school initiative serving all students, particularly those who do not see themselves as college ready or college material.”

Early College high schools have been rigorously studied. An experimental evaluation of full-school Early and Middle College high schools found that participating students were considerably more likely than students in traditional high schools to graduate high school, enroll in college, and earn college degrees (Berger, Turk-Bicakci, Garet, Knudsen, & Hoshen, 2014).

1. The Bill and Melinda Gates Foundation funded several nonprofit organizations that served as intermediary organizations to help create and develop early college high schools across the United States. By 2010-11, there were a total of 14 intermediary organizations: Board of Regents of the University System of Georgia; Center for Native Education; The City University of New York; Communities Foundation of Texas (Texas High School Project); Foundation for California Community Colleges; Gateway to College National Network; KnowledgeWorks Foundation; Middle College National Consortium; National Council of La Raza; North Carolina New Schools Project; SECME, Inc.; Utah Partnership Foundation; and Woodrow Wilson National Fellowship Foundation.

The Middle College National Consortium

The Middle College National Consortium (MCNC) is a practitioner-led, high school membership organization aimed at preparing students for college readiness and success by providing early access to college course-taking during high school.

MCNC schools are guided by a set of core school design principles aligned with a number of the best practices stemming from the small schools reform movement, including features such as small school size, student-centered teaching, inquiry-based learning, multiple forms of assessment, school-wide support structures for students, democratic school governance, and ongoing meaningful professional development (Middle College National Consortium, n.d.).

The MCNC was formally established in 2002, but prior to that, it existed informally as a small group of “like-minded” principals who gathered regularly to discuss and share practices associated with serving “at-risk youth” across their school sites. In the 1980s, the principal of Middle College High School at LaGuardia Community College at the time – Cecilia Cunningham – received grant funds from the Ford Foundation to support the replication of six Middle College High School model sites in various states. A decade later, funding from the Pew Charitable Trusts and the DeWitt Wallace-Readers Digest Fund enabled the more than 20 Middle College high schools located on college campuses across the country to form the Middle College National Consortium.

In 2002, based on its work creating and developing Middle College schools, the MCNC launched its Early College Initiative, as part of the national-level initiative funded by the Bill and Melinda Gates Foundation. Charged with redesigning their existing Middle Colleges into Early Colleges and creating new Early College high schools, MCNC expanded and formalized their ongoing professional development and support for member schools; this work continues today through its bi-annual conferences held in the winter and spring, coaching, and other forms of technical assistance.

“The mission of the Middle College National Consortium is to increase the number of high school students, nationally, who have access to college classes in Early Colleges, Middle Colleges and Dual Enrollment Programs.”

–Middle College National Consortium

“Redesigning into an Early College from an existing Middle College put our school and students on an intentional path toward college.”

– MCNC School Principal

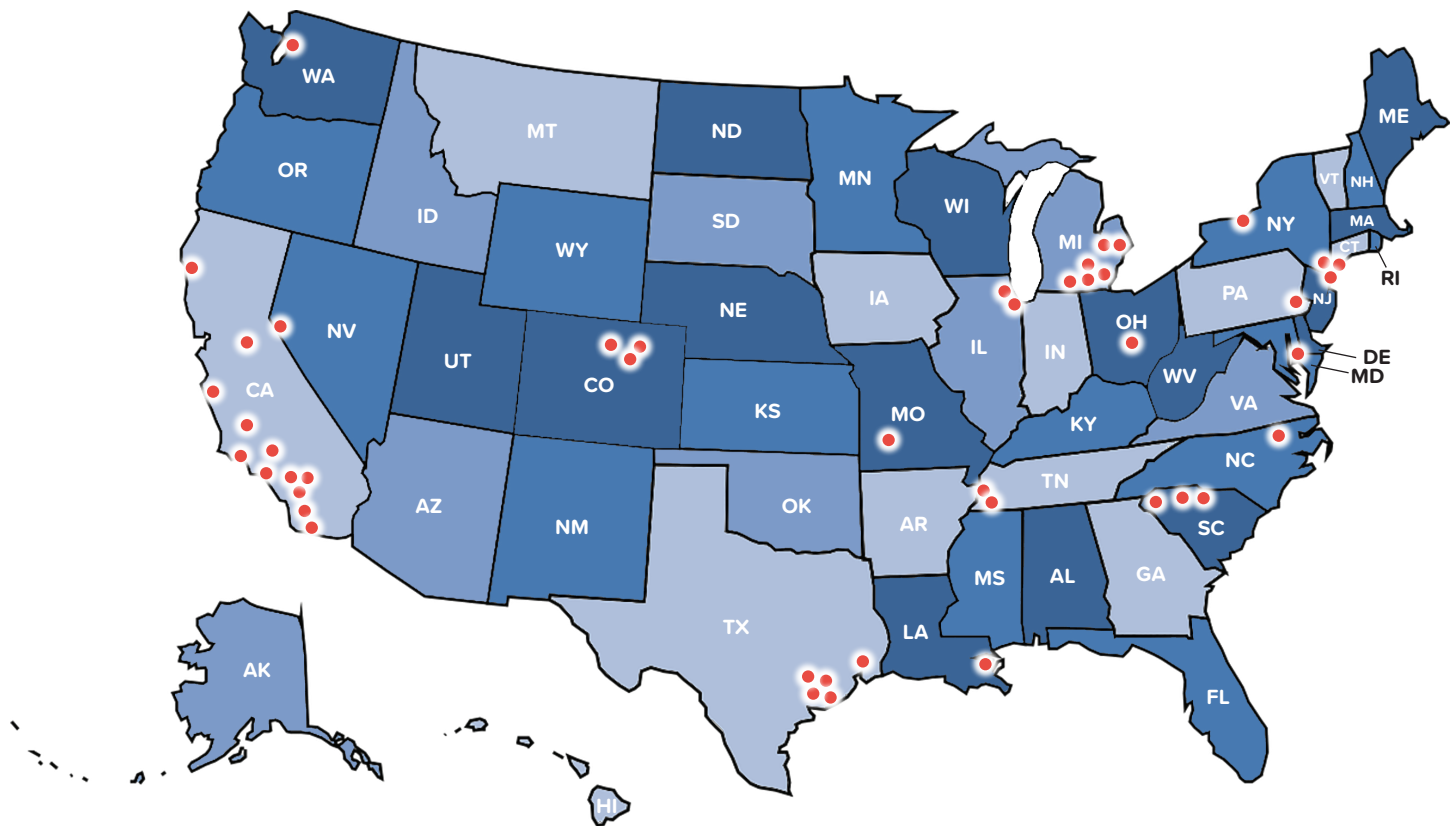


Middle College National Consortium Key Moments in Middle and Early College Development

1974	Middle College High School at LaGuardia Community College opens. Five years later in 1979, Cecilia Cunningham becomes and remains as principal until 2002 when she transitions to develop and lead the Middle College National Consortium (MCNC).
1980s	Six Middle College High School (MCHS) replication sites are created and developed under the leadership of the MCNC, with funding support from the Ford Foundation.
1993	The Middle College National Consortium network of schools is created with initial funding support from the Pew Charitable Trusts and the DeWitt Wallace-Reader's Digest Fund. Professional development conferences and student conferences are organized, both of which still continue bi-annually and annually, respectively.
2002	The nationwide 'Early College Initiative' begins, funded by the Bill and Melinda Gates Foundation, Carnegie Corporation of New York, W.K. Kellogg Foundation, and Ford Foundation. The MCNC receives a five-year grant as one of the intermediary organizations charged with developing Early College schools, and begins to support the process of redesigning existing MCNC Middle College High Schools into Early Colleges (e.g., LaGuardia MCHS and International High School in New York; Mott MCHS in Michigan; Santa Ana MCHS and San Joaquin Delta MCHS in California). The MCNC also partners with NCREST around the use of data for continuous improvement.
2002-03	Two newly created Middle and Early College schools open under the leadership of the MCNC: Harbor Teacher Preparation Academy at Los Angeles Harbor College, and Buffalo Middle Early College High School at Erie Community College.
2005	In Michigan, the Michigan Early/Middle College Association (MEMCA) is established as an affiliate of the MCNC organization, organized by the founding principal of Mott MCHS, a MCNC member school.
2007	Extended Early College Initiative professional development in math and literacy is provided by the MCNC to its schools, with support from an additional two-year grant from the Bill and Melinda Gates Foundation.
2013	In California, the California Coalition of Early Middle Colleges (CCEMC) is established as an affiliate of the MCNC organization, founded by former and current principals from Harbor Teacher Preparation Academy at Los Angeles Harbor College, John F. Kennedy MCHS, MCHS in San Bernardino, and MCHS at San Joaquin Delta College – all MCNC member schools.
2014	The STEM Early College Expansion Partnership (SECEP) begins with funding from the U.S. Department of Education i3 Innovations Grant. The five-year project – in partnership with NCREST, the Michigan Early/Middle College Association, and Jobs for the Future – aims to create high school to college STEM pathways by enhancing STEM instruction and college course-taking for high school students in four Michigan intermediate school districts and schools in the Bridgeport, Connecticut district.
2017	The College in High School Alliance (CHSA) is formally launched to advocate for policies that promote effective dual enrollment, concurrent enrollment, and early college high schools. The MCNC, along with Bard College, Jobs For the Future, KnowledgeWorks, and the National Alliance of Concurrent Enrollment Partnerships are leading this joint effort.

The MCNC is an association of 44 public and charter schools, on or in close proximity to college campuses, located across 16 states. The majority of the MCNC member schools serve grades 9-12, but some also enroll students in grades 7-12 or grades 11-12. In a number of states, the Middle and Early College schools add a fifth year so that students are enrolled

in high school through the 13th grade, which gives them additional time to take more college courses and earn more college credits. Students are enrolled in college classes as early as ninth grade and follow a plan that enables students to earn a significant number of college credits, or even an associate degree upon graduation from high school.



MCNC Middle and Early College High Schools

- 44 member schools across 16 states
- State clusters in California (12), Michigan (6), New York (4), Texas (4), Colorado (3), South Carolina (3), Illinois (2), and Tennessee (2)
- Single school representation in Louisiana, Maryland, Missouri, North Carolina, Nevada, Ohio, Pennsylvania, and Washington
- School size/enrollment: Less than 400 students (59%), 400 to 499 students (21%), 500 to 599 students (14%), and more than 600 students (6%)

Students Served by the Middle College National Consortium Schools

The Middle College National Consortium targets students in underserved communities as well as underrepresented students. Student demographics, across the MCNC member schools are displayed in **Figures 1 through 4**. These show that MCNC Middle and Early College schools enroll high proportions of students from racial minority groups (80%), low income students (64% are eligible for free or reduced lunch), and 56% female and 44% male students (Middle College National Consortium, n.d). In addition, according to a student survey of MCNC students, 37% of the students speak a language other than English in the home (National Center for Restructuring Education, Schools, and Teaching, 2017).

Since 2002, the National Center for Restructuring Education, Schools, and Teaching (NCREST) at Teachers College, Columbia University, has collected and analyzed data that is used by the MCNC leadership and membership to assess their progress toward key goals and to share their stories with a range of stakeholders. Much of these analyses were done in partnership with a sub-set of schools called the 'MCNC Data Project Schools' and their outcomes are highlighted throughout this report.

Figure 1. Race/Ethnicity

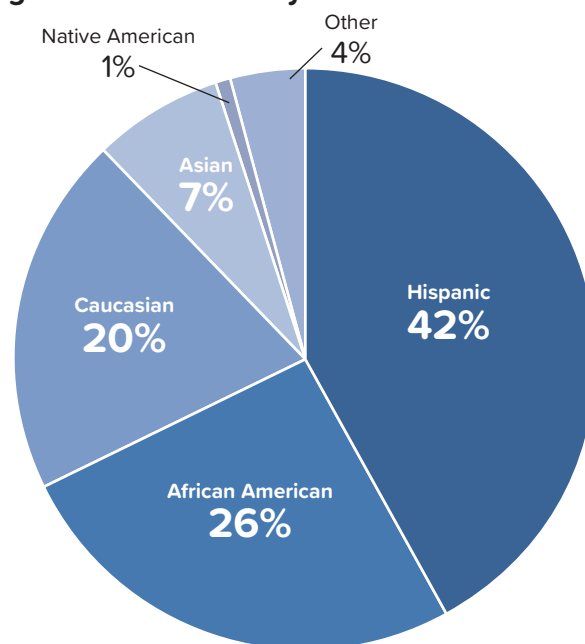


Figure 2. Gender

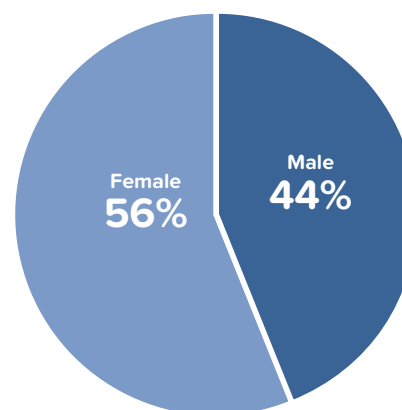


Figure 3. Free/Reduced Lunch

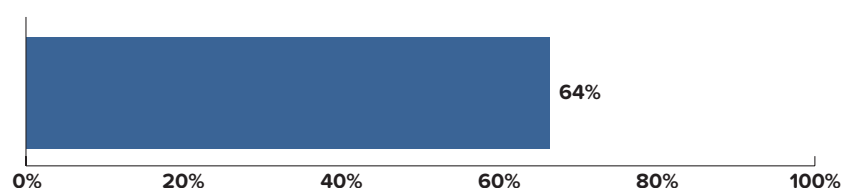
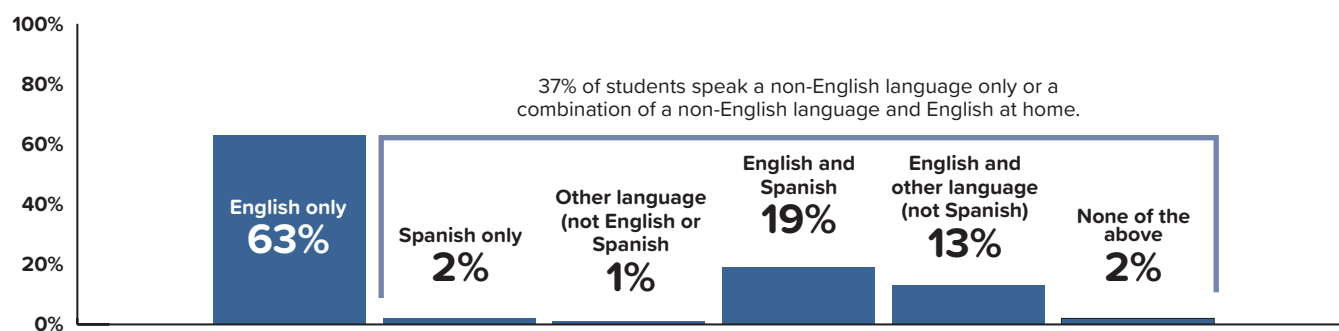


Figure 4. Languages Spoken at Home





MCNC Middle and Early College schools also aim to serve students with a wide range of academic abilities instead of only those with high levels of academic performance, as is often the case in dual enrollment programs. **Table 1** represents the range of students enrolled in a set of MCNC schools based on one indicator of prior academic achievement, 8th grade assessment scores. Although students who entered high school with low academic proficiency did not accumulate as many college credits or have as high GPAs compared to their academically proficient counterparts upon graduating from high school, they nonetheless demonstrated college success by earning, on average, an equivalent of one-year of college coursework (30 credits) and a C+ college GPA (Barnett, Bucceri, Hindo & Kim, 2013).

Table 1. Prior Achievement and College Coursework Performance in High School, MCNC Students

Students' Prior Achievement	College GPA by High School Graduation	College Credits Earned by High School Graduation
Below 8th grade state standard (n=117)	2.35	30
Met or exceeded 8th grade state standard (n=183)	2.78	42

THE MCNC APPROACH TO MIDDLE AND EARLY COLLEGE SCHOOLS

Engaging traditionally underserved students in rigorous college course work presents challenges. Many dual enrollment programs have provided access to college courses only to see students struggle and sometimes fail. Students in MCNC schools are successful because of the schools' philosophy, the commitment of their staffs, the small, caring environments – and because of the use of a set of four design principles which have been developed and refined over time.



CORE MCNC DESIGN PRINCIPLES

- 1. College-Focused Academic Program:** Schools implement comprehensive, standards-based curricula that provide a bridge to postsecondary studies and incorporate both high school and college coursework.
- 2. Comprehensive Student Support:** Supports are offered to all students to meet their academic, social, and emotional needs in high school and in the transition to college.
- 3. Dynamic High School and College Partnerships:** High schools and colleges take joint responsibility for students' educational success and establish structures that permit high school students to take college courses.
- 4. Culture of Continuous Improvement:** High schools and colleges engage in evidence-based discussions to continuously improve students' experiences and outcomes.

“Many of our students come to us and don't view themselves as successful and/or having a future. So they have trouble admitting they have not learned something or have forgotten something. So you have to build a system that builds the social and emotional, while building cognition. We also get some students who perform high academically, but they're not secure socially or emotionally. The common thing is they don't feel secure.”

– MCNC School Principal

MCNC Design Principle 1: College-Focused Academic Program

If teachers and the staff demonstrate that they believe their students have high levels of ability by setting high expectations, students are more likely to believe in themselves (Raffini, 1993), and to learn effectively (Bamburg, 1994). One way that MCNC member schools encourage students to aim high is by giving them access to college courses as part of a well-developed and sequenced curriculum. Students are able to experience themselves as actual, successful college students. The academic plans used by schools typically allow students to take a combination of high school and college courses in which they build capacity gradually.

Many of the college courses taken by MCNC students count toward the graduation requirements of both high school and college and usually both high school and college credit is awarded, potentially decreasing the time required to complete a college degree. A sample academic plan for Harbor Teacher Preparation Academy is highlighted in **Table 2**. At this school, students take college courses that count towards an associate degree. According to the school's outcomes, all their students earn a significant number of college credits, and 62% of the high school students in their 2017 graduating class earned an associate degree.

Table 2. Students' Academic Plan for Teacher Preparation Academy at Los Angeles Harbor College

Subject	9th Grade	10th Grade	11th Grade	12th Grade
English	English 9 Summer after 9th— College English prep course for 30 students who are recommended to be college ready.	English 10	AP English Language or American Literature and/or ENG 101 (students w/ 4-5 scores on the AP English Lang exam are exempt from ENG 101).	AP English Literature or World Literature and/or ENG 102 (students w/ 4-5 scores on the AP English Lit exam are exempt from ENG 102).
Math	Algebra I or Geometry	Geometry or Algebra 2 or Pre-Calculus	Algebra 2 or Pre-Calculus or AP Statistics or AP Calculus or COLLEGE MATH	Pre-Calculus or AP Statistics or AP Calculus or COLLEGE MATH
Science	Biology	Chemistry	AP Environ Science and/or COLLEGE SCIENCE (CHEM, PHYSICS)	AP Biology or AP Environ Science or COLLEGE SCIENCE (BIOL, CHEM, OCEANOGRAPHY)
Social Studies	World History/ Geography	AP European History or other course	AP US History or US History or History 11	Economics; Government
Other	HEALTH 11 MUSIC 101 KIN 229 KIN 245	Spanish Speakers 2 SPANISH 21 & LAB SPANISH 22 & LAB MUSIC 411 KIN 229 KIN 245	AP Spanish SOCIO 1 GEOG 7 PSYCH 1 SPEECH 101 CHILD DEV 1	AP Computer Science ANTHR 101 POLI SCI 1 COLLEGE COURSE(S)
Support	Avid 1 / Seminar Advisory	Avid 2 / Seminar Advisory COUNS 17: COLLEGE SURVIVAL SKILLS	Avid 3 / Seminar Advisory	AVID Senior Seminar Advisory
Total College Credits (51-65)	10	9- 11	14-22	18-22

Note: College courses are highlighted in blue.

Across the MCNC Middle and Early College schools, 9th grade students typically do not take any college courses or start with one college course to get them acclimated to college norms and behaviors (e.g., a college success

course, introductory computer or art courses). By grades 11 and 12, most students are taking increasingly more higher-level college courses, while also fulfilling the requirements needed to graduate from high school (see **Table 3**).

Table 3. Types of College Courses Taken in 9th Grade and 12th Grade, MCNC Schools

School	9th Grade	12th Grade
School A	Introduction to Art	Medical Terminology College Math
School B	College Success 101	English 101 Statistics
School C	Kinesiology	Calculus Psychology Life Development
School D	Introduction to Music	Engineering Computer Science
School E	Introduction to Keyboarding	Chemistry English Literature Womens

College-Focused Planning at Harbor Teacher Preparation Academy – Los Angeles, CA

Harbor Teacher Preparation Academy (HTPA), one of the Early Colleges newly created by the MCNC at the start of the national Early College Initiative, is located on the Los Angeles Harbor College campus and is a part of the Los Angeles Unified School District. First opened in 2002, the school has demonstrated success in providing students with college course-taking opportunities and college readiness skills through targeted college-focused academic planning.

Students served – HTPA serves a majority of students underrepresented in higher education – 96% of the students are non-white, with the highest percentage being Hispanic (58%), followed by African Americans (15%) and Asians (10%); and 66% are eligible for free/reduced lunch and 57% would be the first in their families to go to college. HTPA has had a 100% high school graduation rate for the past four years.

Academic plans – An advisory group (not to be confused with the advisory class for students), including high school administrators and staff, meets monthly to review the school's overall academic plan and align it with the college's 'Student Educational Plan' guide. A college counselor, funded by a local five-year grant to work part-time with HTPA and its students, also attends these meetings. The counselor visits 9th grade classes to communicate what college courses are available and meets with students individually during the 10th grade year to collaborate on academic plans.

College coursework – HTPA students start taking college courses based on teacher and school recommendations as to when students can handle general college classes; they were using Accuplacer for placement into college courses, but the college recently stopped using placement exams. HTPA and college staff meet once a month to discuss effective ways to assess students' readiness for college courses. 'College Survival Skills' is a key course which orients students to the college environment (e.g., using the library, time management, communication, self-esteem, and managing stress). Students take more advanced college courses in the later grades.

College readiness skills development – The majority of HTPA teachers are trained to teach AVID (Advancement Via Individual Determination), a curricular program focused on helping students develop college readiness skills; and AVID classes are integrated into students' 4-year academic plans. HTPA also uses a software program called Naviance which allows students to explore colleges and careers, set goals each school year, and submit college applications. HTPA teachers use Naviance as part of their curriculum in AVID and several teachers use it to motivate 9th and 10th grade students toward college early on. Student advisory classes incorporate college readiness activities such as college visits, and HTPA also provides extra tutoring and credit recovery to help students stay on track.

“When students come in, we make sure to communicate that we have expectations for them. We say that college is here and available. We pay for all the books and we help them to schedule all their classes so that everyone has that college course-taking opportunity.”

– Jan Murata, Principal of HTPA

Students who participate in a classroom that provides scaffolded instruction have been found to develop higher levels of cognitive and metacognitive skills (Van de Pol, Volman, & Beishuizen, 2010). In MCNC Middle and Early College schools, high academic expectations of students and early exposure to college courses are coupled with scaffolded instruction and assignments. Research conducted on the practices of math and English teachers in Middle and Early College high schools found that scaffolding varies by discipline. English teachers are especially likely to emphasize intellectual openness, inquisitiveness, and argumentation while math teachers are more likely to emphasize precision and accuracy as well as problem solving (Barnett, Philippeaux-Pierre, & Stenbridge, 2010).



“We always use scaffolding in all our core high school courses. And we also start helping our students develop these skills starting in 9th grade through the Early College seminar, and we have implemented the development and practices of these skills across all our classrooms.”

—MCNC Administrator

“When students start at our school, we have expectations for them. And we really build that early on in the 9th and 10th grades so they are prepared for expectations they will encounter with their college courses. And the expectation is not just for our students, but also equally important, for our teachers and staff to support the students to be college ready.”

—MCNC School Principal

Cultivating Deeper Learning Experiences – The MCNC Student Leadership Initiative

The MCNC Student Leadership Initiative aims to engage students in deeper learning through a collaborative project that addresses a pressing societal issue. Each year, led by an MCNC staff member and teacher advisors, about 125 to 150 students from across the MCNC Middle and Early College schools are selected to embark on a series of benchmark tasks that culminate in a final school team project which is presented during a four-day leadership conference. MCNC schools take turns hosting the student conference and students from the host school lead other school teams in a series of pre-conference forums that take place through social media platforms.

In 2017, the theme was ‘Adolescent Homelessness’ and the MCNC Student Conference took place in Houston, Texas. The benchmark tasks centered activities around the creation of three podcasts leading up to the final project. The first benchmark required students to gather in school teams to discuss how they felt about youth homelessness, what questions they had, and what they wanted to learn, and then produce a ten-minute edited podcast. The second benchmark podcast assignment required students to interview at least one

person who was involved in a homeless situation. The final podcast assignment asked students to reflect on what they had learned and what they hoped to do after completing a related volunteer project in their own communities. Throughout the project, students also engage in writing pieces that relate to the benchmark task activities. For their final project, the student team from Brooklyn College Academy developed a simulation game which demonstrated specific decisions and situations that can render youth homelessness. The student leadership team piloted their simulation game project with fellow students at their school prior to their final presentation at the student conference meeting.

“By focusing a large group of youth on an issue that is relevant to their lives, students engage in an extended dialogue with peers across the nation, each with unique perspectives but equal concern. The experience improves literacy and promotes college readiness skills as students learn to be competent writers and deeply engaged readers, and do meaningful research outside the confines of the classroom. They become spokespeople for the school community, develop confidence and view themselves as change agents.”

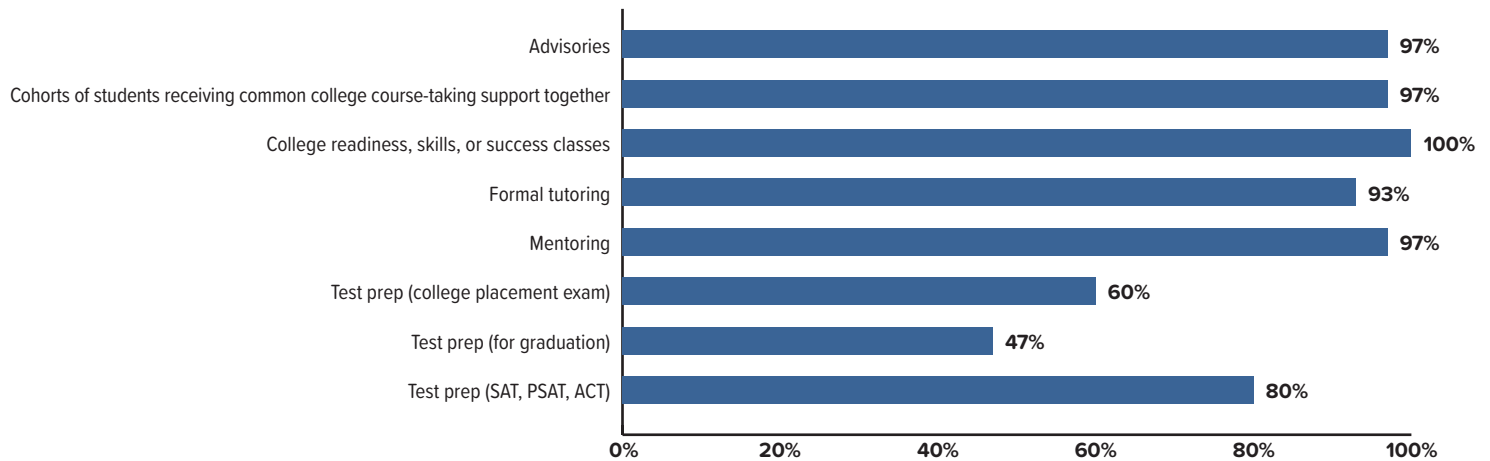
— Terry Born, Director of the MCNC Student Leadership Initiative

MCNC Design Principle 2: Comprehensive Student Support

MCNC schools aim to establish high standards for all of their students, and they are committed to providing students with strong academic supports. The goal is to both assist students in their high school and college coursework, and prepare them to pursue a

college education. MCNC schools view academic and social supports as equally necessary for student success. Core academic and social support services offered by MCNC Data Project schools are shown in **Figure 5**.

Figure 5. Student Supports Provided by MCNC Schools, 2016-17



Services that support students in their coursework primarily include common college course-taking supports, college readiness support classes, and tutoring. Notably, 93% of MCNC schools provide students with formal tutoring. Participating in tutoring can produce positive effects on academic performance and attitudes. Students who participated in tutoring are found to score better on examinations than students who did not participate while also developing positive attitudes towards the subject in which they received tutoring (Cohen, Kulik, & Kulik, 1982).

Seminar, in the MCNC schools, is a hallmark feature which involves cohorts of students receiving common college course-taking support.



The Early College Seminar

To assist students undertaking college courses, some Early Colleges offer seminar, designed to help students “unpack” college-level coursework, navigate college systems, and obtain help with assignments. In one study, students reported that seminar provided step-by-step help with “doing” college. The support that they received was not limited to academic issues. Students explained that seminar was also a place to obtain personal support and to solve other types of problems.

“Of all of our classes, Seminar is the one. It’s really great for a 16 year-old or 17 year-old kid who cannot do college right away. You need to go step by step. In seminar, they help us go through each step.”

– MCNC Student

An NCREST study looked at the most common features of seminar in MCNC Early Colleges (Hindo, Barnett, & Kim, 2010):

Targeted students – Seminar was originally designed to support college course-taking students. In all but one school, which required all students (college course-taking and non-college course-taking) to participate in a seminar designed around the Advancement Via Individual Determination (AVID) curriculum, this was the case.

Frequency and duration – In the majority of schools, seminar occurred one to four times per week. Many schools scheduled seminar on alternating days with college course meeting times. In these cases, scheduling depended on how often the college course met and for how long. However, some schools must hold seminar wherever students have schedule openings.

Credits – Just over half of schools offered seminars for high school credit, ranging from 0.5 - 3.0 credits.

Curriculum and materials – Aside from the schools that used AVID, few utilized a specific curriculum for seminar. In most schools, seminar was taught based on teacher- and/or counselor-developed lessons addressing particular topics (e.g. using a syllabus, time management, when to ask for help from a professor, and reading a college textbook). Other seminars were directly tied to specific college courses and reinforced what was being taught in the course. Still other seminars incorporated supplemental materials such as test preparation books and college readiness or “College 101” publications.

MCNC emphasizes comprehensive social-emotional support for students through a “Wraparound Support System” (Middle College National Consortium, n.d.). In this system, counselors and other school staff pay careful attention to students’ social-emotional well-being and provide support when they perceive that there is a need. In addition, teachers and other adults in MCNC schools think of themselves as counselors and mentors for students. This is especially important since low-income and minority students may be dependent on non-familial individuals, such as teachers and school counselors, to provide them access to resources that advance their education (Stanton-Salazar, 1997). Radford, Ifill, and Lew (2009) find that students who had conversations about life after high school with a counselor were more likely to search for different college options, visit a college campus, plan to enroll in a bachelor’s degree program, and plan to complete the Free Application for Federal Student Aid (FAFSA).

“Wraparound services means that one person cannot be the ‘counselor’ and service 400-600 students. Wraparound means you have enough adults to support the whole child, that you are wrapping around enough services so students feel totally supported.”

– MCNC School Principal

Advisories, in which students meet regularly in groups with a caring adult to talk about school and life, is another key feature of MCNC schools. Mentoring, both formal and informal, is another important social support in many schools. Janet Lieberman, the founder of Middle College High School at LaGuardia, wrote about the importance of diverse student supports, and specified well-established theories such as “positive role models improve behavior” as a key part of the rationale for Early Colleges (Lieberman, 2004, p. 3). With this in mind, many MCNC schools engage older college students in mentoring roles and also foster peer study groups.

Wraparound Support System at Mott Middle College High School – Flint, Michigan

Mott Middle College High School (MCHS) serves a high-needs and underrepresented student population—75% of the students are eligible for free/reduced lunch, and 70% of their students are African American. Many of the students enter the school academically underprepared; however, the school had a 94% high school graduation rate in 2017 and 95% in the previous year.

“It is our responsibility as educators to completely envelope our students with full support. Graduating from high school is not the finish line, but just one important marker in our students’ journeys of life. Therefore, we’re not only the cheering section but our teachers, counselors and staff are also coaches and secondary parents supporting them academically and emotionally to go beyond that first finish line.”

– Margaret Green, Principal of Mott MCHS

Key features of Mott MCHS’s wraparound support system include:

Summer orientation program – Newly entering Mott MCHS students participate in a required four-day program which the administration describes as “getting acclimated to the climate and culture they will become a part of and developing a feeling of family with the teachers and fellow students.”

Focus family groups (Advisory) – Heterogeneously grouped across grades and race, focus groups meet twice a week as part of the school schedule. The curriculum was developed by Mott MCHS staff and administrators, and all teachers lead a focus family group. Students remain with the same teacher through high school.

Seminar – Focused on college readiness, the seminars provide support for dual enrollment that changes over time as Mott MCHS students take on more complicated college courses.

Professional counselors – There are two full-time counselors to handle crisis intervention and personal counseling at Mott MCHS. Focus group teachers can alert the counselors to a situation where extra help is needed or vice versa.

High school tutoring lab – The Mott MCHS lab is staffed by people with an English or math background who come to know and care about the school, such as former reading specialists or elementary reading teachers, a retired engineer and a health industry person. The importance of Mott MCHS operating its own lab is summed up by the founding principal: “We learned you can’t go to some professional tutor who knows nothing about your school, the approach used by your teachers, the pedagogy we’re trying to use – disconnected tutoring was not working with our students.”

College resources – A range of college academic and social support services are available to Mott MCHS students, including career exploration services, counseling services, and writing and math labs.

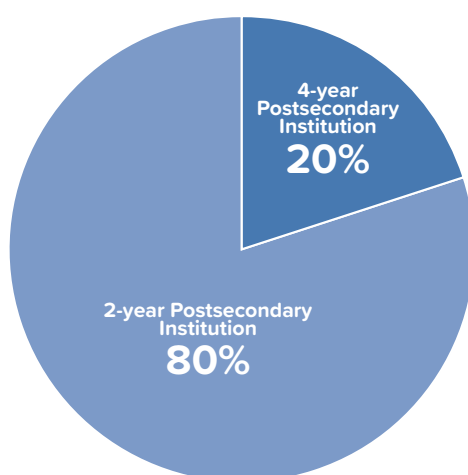
“The entire staff views themselves as quasi advisors-counselors first, and their role as teacher or administrator is second. From the time there’s any interaction, from the information night to graduation, families are viewed as families who have ‘scholars’ who need help to fulfill their potential. So the emphasis has always been on potential and the celebration of progress. So how do you do that? We help them see themselves differently, because we as a group of educators see them differently.”

– Chery Wagonlander, Founding principal of Mott MCHS

MCNC Design Principle 3: Dynamic High School and College Partnerships

The high school and college partnership is a hallmark of the Middle and Early College high school model and, as shown in **Figure 6**, the large majority of MCNC Middle and Early College schools are affiliated with a two-year postsecondary partner. This is not surprising as community colleges, historically, have aimed to provide open access to college courses and serve their local communities (Cohen & Brawer, 1996).

Figure 6. MCNC Schools' College Partners



Contributing to the sense of partnership, the majority of MCNC Middle and Early College schools are physically located on a college campus or are situated in close proximity to the college. Early in the development of the Middle and Early College movement, the core group of MCNC principals identified “the power of the site” as key to student success. By this, they mean that location of the high school on the college campus provides the weight and authenticity of actual felt experience, which communicates to students “what college is really like.”

“When our partnering college built new buildings and remodeled older ones a few years back, they moved us into one of their central buildings. It was a game changer... to have that kind of support from the college for our students.”

– MCNC School Principal

Additionally, locating the school and students on the college campus can be beneficial for the college. Through the bi-annual MCNC meetings, college administrators have shared positive comments about their school-college partnerships, such as the college coursework success of the high school students adding to the overall success of the college, or potentially new grant-funded initiatives generated as a result of their successful partnership.

Almost 90% of MCNC Middle and Early College partnerships have a staff person who serves as an Early College liaison between the school and the college. Typically, this person is a college employee who has been charged with coordinating communications between the high school and college. In some cases, this person is solely dedicated to the partnership, but more often, this role is added to their other college job responsibilities. Often times, the liaison is the director of high school partnerships at the college, a college counselor, or a senior administrator at the college. These college personnel are often heavily invested in the success of Middle and Early College schools.

“This work is all about relationships. In our program, our partnering high school principal is part of our college planning committee meetings. We have to know what’s going on with the high school students, what’s working and what’s not, so we can ensure that the students are successful and that our program and both the high school and college are being successful.”

- College Administrator

All the MCNC middle early college principals meet with their college partners at least two to four times a year and more than half (56%) met monthly or more with their college partner, typically discussing topics such as funding, curricular alignment, and professional development opportunities.

Building A Strong College Partnership at Career Education Center Early College of Denver – Denver, Colorado

The Career Education Center (CEC) serves as an Early College and also a Career-Technical Education Center for students from Denver City Public Schools. Originally established as a vocational program in 1976, the school formally redesigned into an Early College in 2003. CEC serves a high percentage of both Hispanic students (86%) and economically disadvantaged students (82% are eligible for free or reduced lunch). The school also has an 80% high school graduation rate and 59% of the graduates continue on to enroll in college.

Postsecondary partners – CEC is located about one mile from its primary college partner, the Community College of Denver (CCD). The school also has partnerships with Emily Griffith Technical College, Red Rocks Community College, Arapahoe Community College, and the University of Colorado at Denver. All the partnerships support CEC’s career-technical education programs which include 20 pathways.

“The concurrent enrollment program through the Community College of Denver and CEC Early College is built on a strong foundation of partnership between the high school and college. We communicate regularly to align and develop programming; share and respect each other’s perspectives and needs; and provide opportunities for collaboration and growth. This is always done with a focus on student success.”

- Brandon Protas, Director of College Pathways and Concurrent Enrollment Programs at CCD

High school space on college campus – CEC students experience daily life on a college campus. At CEC, approximately 200 juniors and seniors spend half of their day - mornings or afternoons - on the CCD campus. The school runs a midday shuttle daily between the school and the college,

and some students have their own transportation. The college provides three classrooms to CEC on the college campus; four CEC high school teachers are stationed at the college where they teach students and take care of case management.

High school and college collaboration – Regular interaction and planning between high school and college administrators and staff are also key in developing and providing successful experiences to CEC students. The college liaison for CEC serves as the Director of College Pathways and Concurrent Enrollment Programs at CCD. Several CEC high school teachers serve as adjunct instructors for CCD and teach college courses on the high school campus; this further helps to strengthen the partnership between the school and the college. CEC is also recognized by the Higher Learning Commission as an “additional location” to the college, removing restrictions on the numbers of college courses that can be offered at the high school site.

Full-time college experience option – Students who choose to participate in the 5th and 6th year CEC programs are at the college full-time. About 25 CEC students participated in the 5th year full-time college program during the 2016-17 school year, and CEC served approximately 40 students in the 5th and 6th year programs during the 2017-18 school year.

“During my time at CEC, there were four different college presidents. I tried to be very purposeful and intentional in our collaboration work with our college partner. I attended quarterly meetings at the college, which involved folks from the college and our high school, and I met once a year with the college president.”

- Scott Springer, Principal at CEC from 2005-2017

MCNC Design Principle #4: Culture of Continuous Improvement

The MCNC's culture of continuous improvement encompasses two main areas—professional development and mutual support strategies to improve instruction, and the use of data for continuous improvement of school structures and practices.

The approach to professional development varies across schools, although most engage teachers in school-based learning, district-based learning, and participation in MCNC conferences and events. MCNC holds two annual conferences: the MCNC Winter Leadership Conference which takes place in February and the MCNC Summer Professional Development Institute, which is held in June. These events emphasize peer learning, with multiple opportunities for school leaders, teacher teams, and partnering college representatives to present and share practices that have been successful for their programs and students. Additionally, discussing areas of improvement and strategizing ways to address challenges are key aspects of the conference proceedings. Rooted in the MCNC's philosophy of practitioner-led expertise, many of the breakout workshops during the conferences are led and facilitated by MCNC member school administrators and/or teams.

A number of the MCNC schools utilize the peer review system, a school-based distributed leadership model that is designed to encourage teacher ownership and engagement, provide opportunities for professional knowledge building and peer learning, and develop internal accountability. With support from an MCNC coach, a teacher-led personnel committee actively participates and coordinates helping fellow teachers reach their potential in the classroom (American Institutes for Research & SRI International, 2008).

Continuous Professional Development and Data Driven Improvement at Buffalo Middle Early College High School – Buffalo, New York

Buffalo Middle Early College High School (MECHS) opened in 2003 as a newly created Early College. The current principal at MECHS and close to one-third of the teaching staff have been with the school since it opened 15 years ago. The low staff-turnover rate has allowed MECHS to develop in a meaningful and targeted way to improve college readiness for its students, 70% of whom are African American. Over two-thirds (65%) of the students served by MECHS are eligible for free or reduced lunch, and 15% are in special education, a proportion which is unusual in small schools. The high school graduation rate in 2017 was 93% and the 12th grade cohorts for the past ten years have consistently earned an average of 30 or more college credits upon graduating from high school.

Literacy focus – Literacy has been a central focus for MECHS since it opened. A literacy specialist worked with the staff during the first year of MECHS's opening and for several years afterward. With the arrival of the Common Core standards, MECHS staff transitioned to collaborating with a literacy specialist with a grounding in the Common Core for another several years. According to the principal, "Continuous staff development in literacy was important because so many of the students in our entering classes were academically below proficient; so it has been really important to continually equip and support our staff with relevant and effective instructional strategies."

Peer Review – MECHS uses the MCNC Peer Review process as a "celebration" of its teachers. Teachers volunteer to participate and a fellow teacher observes the participating teachers' classes and meets with them individually to provide feedback and encouragement. On the final professional development day of the school year, participating teachers make a presentation about their experience before the entire faculty and their work is displayed in a gallery walk exhibit. The fellow teachers also facilitate a question and answer time with the peer-reviewed teachers. An MECHS teacher summed up the experience: "Not only did I learn a lot about my teaching strengths and weaknesses, I felt so validated about the work I was doing as a teacher and for students."

Regular review and use of data – MECHS has three Academic and Intervention Support (AIS) teachers to support continuous improvement initiatives. The AIS teachers work with teacher teams at each of the 9-11 grade levels and oversee the weekly common planning periods. One of the AIS teachers, a math teacher, also serves as the data coordinator for MECHS and manages data activity projects between partnering organizations and the school.

"We're focused on helping students to be successful, and more importantly, more successful than when they entered our school. Our staff development strategies and us regularly reviewing data on our students – work products, college coursework and grades, perceptions and attitudes, and overall outcomes – this has helped us to tell the successful story of our students."

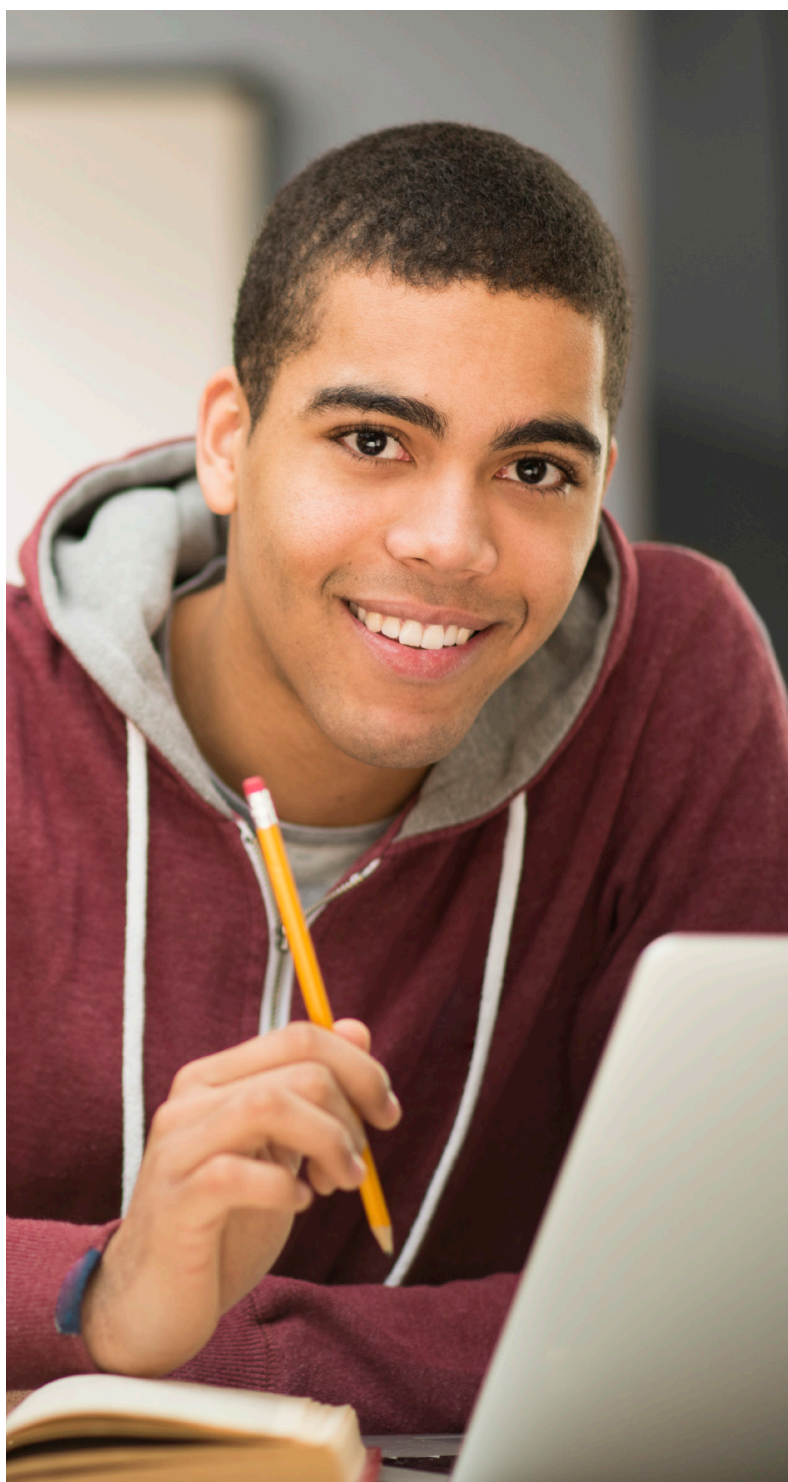
– Susan Doyle, Principal of MECHS

For schools participating in the MCNC Data Project, data use is structured as a normal part of life. The MCNC Data Project was initially funded through grants, but more recently has been supported by participating schools.

These schools use data reports for two main purposes: internally, to reflect on and strengthen their practices, and externally, to inform project partners, community members, parents and others about the value of the work taking place. Each year MCNC Data Project member schools participate in one or more of the following data activities, each of which results in school level and aggregate reports:

- College Coursework Data Analysis;
- MCNC School Profile Survey;
- National Student Clearinghouse Data Analysis;
- High School Coursework Data Analysis;
- Graduating Student Survey; and
- Alumni Student Survey.

Working with a designated data coordinator from each participating MCNC Data Project school, NCREST collects information needed for the data activities. At the MCNC conferences, NCREST team members meet individually with participating school teams and their college partners to discuss the data reports. School leaders learn to understand their data so that they can use it to inform practice. In addition, NCREST members share and present data collected through the MCNC Data Project with the entire MCNC school membership through conference plenary sessions and breakout workshops, to provide insight into their progress as a consortium.



EVIDENCE OF EFFECTIVENESS

Research on Middle and Early College schools has shown that they are effective in helping students to graduate high school, enroll in college, and progress through college (American Institutes for Research & SRI International, 2013). Further, we know that students participating in dual enrollment programs are considerably more likely to perform well in high school, graduate high school, enroll in college, accumulate college credits, and earn a college degree (U.S. Department of Education, 2017). The Middle College National Consortium collects data

on a number of additional indicators of effectiveness including student performance in dual enrollment coursework, student experiences and perspectives, and preparation for college and careers.

The data presented on MCNC Middle and Early College schools in this section were collected from schools participating in the MCNC Data Project, a subset of MCNC member schools which reflect the same student demographic profile as the MCNC schools as a whole (refer back to Figures 1 through 3).



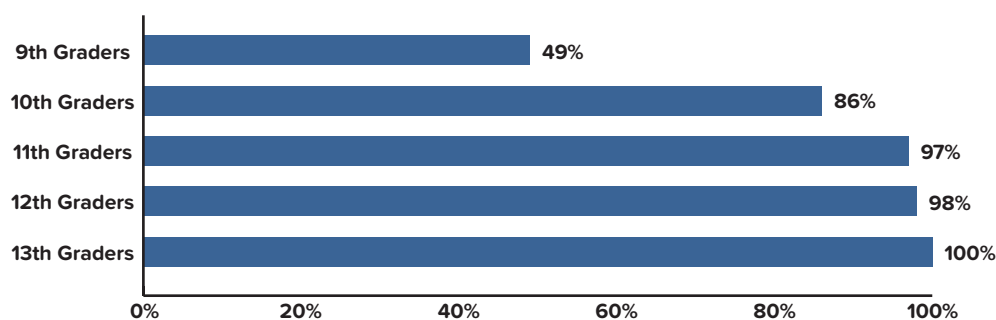
Dual Enrollment Coursework: Participation and Success

In this section, we look at the MCNC schools' effectiveness as indicated by students' access to and performance in college courses while they were in high school. As part of the MCNC Data Project, NCREST collected student- and course-level college data for all students who had enrolled in at least one college class and their grade level and demographic information. The outcomes presented in this section are based on data collected on the 2015-16 college course-taking students across 13 MCNC Middle and Early College schools, as well as data collected over time in previous years.

Access to College Courses by MCNC Students While in High School

MCNC Middle and Early College schools aim to provide college course-taking opportunities to all their students. Of the 4,850 students enrolled in grades 9-13 across the 13 MCNC Data Project schools, 84% had taken at least one college course during high school. Students in the upper grades were more likely to have taken college courses, and the vast majority of the graduating students left high school with college course-taking experiences – 98% of 12th graders and 100% of 13th graders (see **Figure 7**).

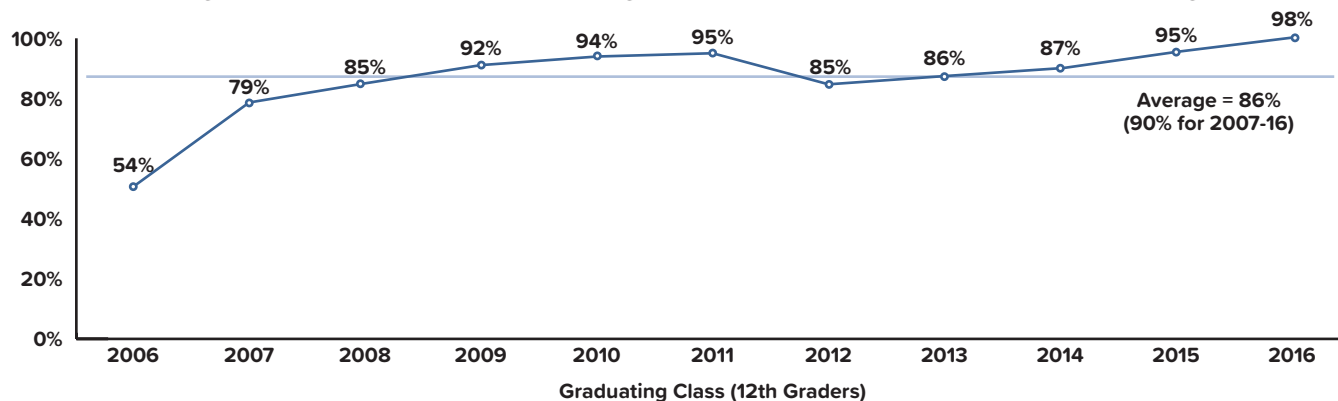
Figure 7. Percentage of MCNC Students Taking College Courses, 2015-16 MCNC Students



More importantly, the high percentage of students graduating from MCNC Middle and Early College schools having experienced college courses is not only reflected in the most recent 2015-16 cohorts shown in Figure 7, but also in the college course-taking experiences of past MCNC graduating classes. MCNC Middle and Early College schools

have continually provided college course access and opportunities for the majority of their students, and not just a select group of students enrolled in their schools. As shown in **Figure 8**, the MCNC graduating classes between 2006 and 2016 averaged an 86% participation rate in college courses by the time they graduated from high school.

Figure 8. Percentage of Students Who Took College Courses, 2006-2016 MCNC Graduating Classes

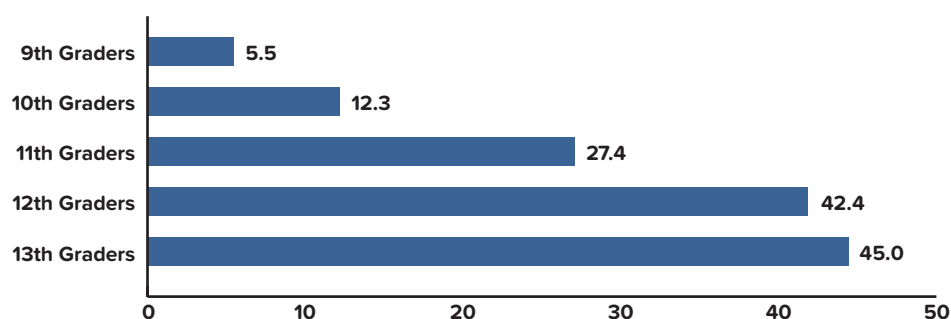


Note: Graduating Class includes only 12th Graders, since the majority of MCNC Data Project schools did not have a 13th grade cohort. The number of schools participating in the MCNC Data Project varies slightly by school year.

Performance of MCNC College Course-Taking High School Students

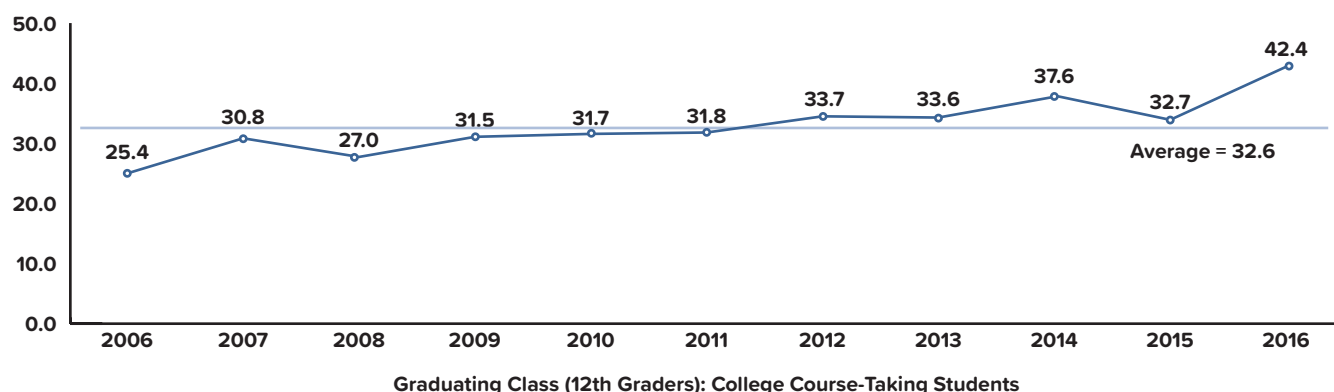
When considering performance or success in college coursework, it is important to consider two indicators: college credits earned and students' course grades. The 2015-16 MCNC college-course taking students in grades 9-13, on average, earned 25 college credits; however, the number of college credits varies by grade cohort. As shown in **Figure 9**, the average number of college credits earned ranged from 5.5 to 45.0. By the time students graduated from high school after the 12th or 13th grade, they had accumulated an average of more than 40 college credits.

Figure 9. Average Cumulative College Credits Earned by Grade Level Cohort, 2015-16 MCNC Students



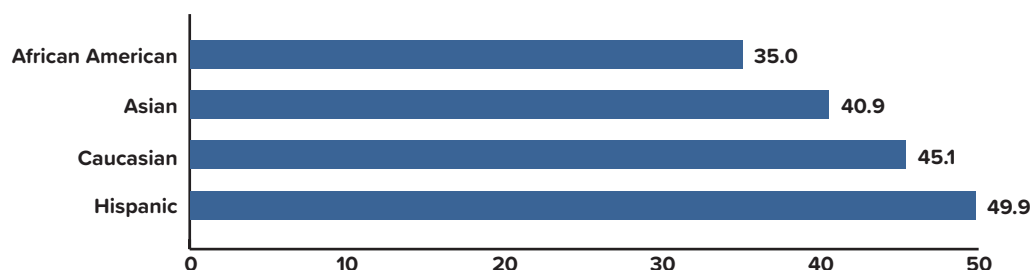
As shown in **Figure 10**, the MCNC graduating classes between 2006 and 2016 earned, on average, 32.6 college credits by the time they graduated from high school, which is equivalent to a typical year of college course work.

Figure 10. Average Number of Cumulative College Credits Earned, 2006-2016 MCNC Graduating Classes



Average credit accrual varies by racial subgroup for MCNC students, ranging from 35.0 to 49.9 credits (see **Figure 11**). This may be attributed to a higher concentration of particular racial groups in certain schools and college course-taking policies that may vary by school. Although African Americans, on average, earned fewer credits, they still earned 35 college credits, an equivalent of more than one-year of college credits, upon graduating from high school.

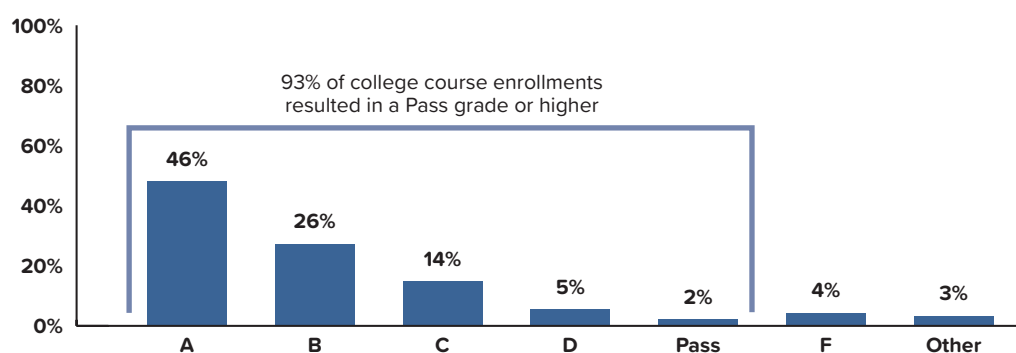
Figure 11. Average College Credits Earned by Race/Ethnicity, 2015-16 MCNC Graduating Class



Note: Native American and Other categories not included due to small sample size.

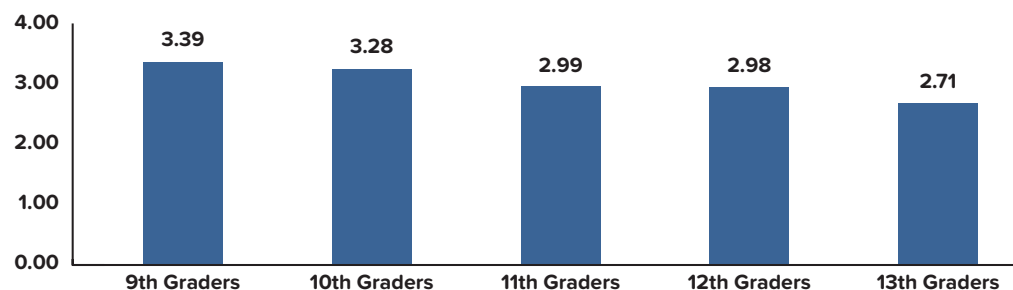
Further, MCNC students also demonstrate success in their college courses. The overwhelming majority of students' college course grades resulted in a passing grade (93%), and impressively, 72% of the students' cumulative courses resulted in an A or B grade (see **Figure 12**).

Figure 12. College Course Grade Distribution, 2015-2016 MCNC Graduating Class



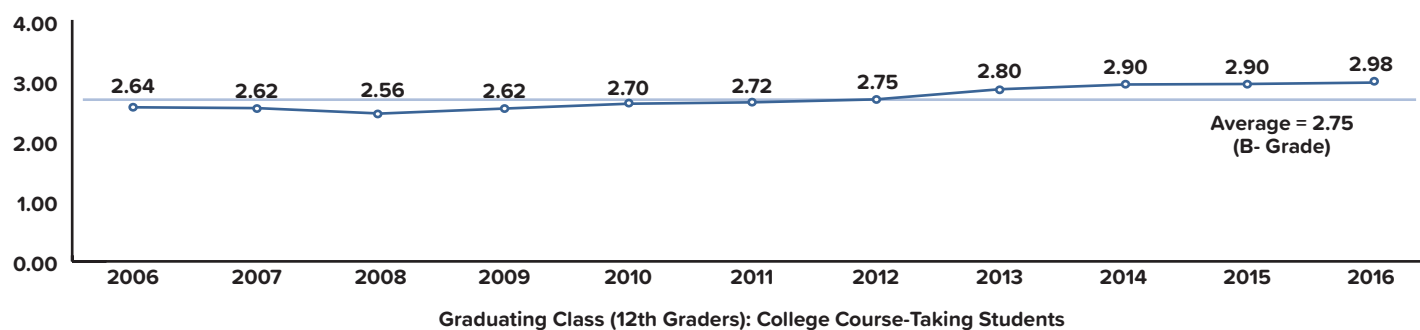
Overall GPA is another important indicator of student performance. **Figure 13** highlights MCNC students' cumulative college GPA by grade cohort, which ranges from 2.71 to 3.39. Not surprisingly, average cumulative GPAs are lower for upper grade students as they have taken far more college courses over time and, typically, more challenging or demanding courses than 9th and 10th grade students. Nevertheless, the 12th and 13th graders' cumulative coursework resulted in 2.98 and 2.71 GPAs respectively, equivalent to an average B- grade.

Figure 13. Average College GPA by Grade, MCNC 2015-16 Students



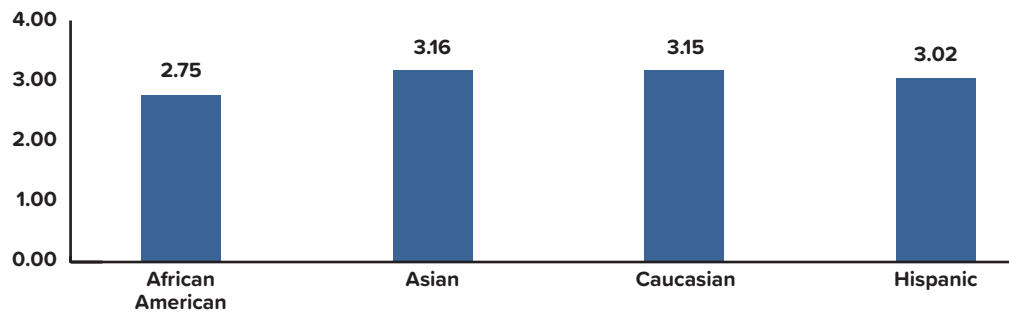
An average B- letter grade GPA equivalent has also been maintained by the past 11 MCNC graduating classes (see **Figure 14**), underscoring the successful college course-taking performance of students enrolled in MCNC Middle and Early College schools.

Figure 14. Average College GPA Earned, 2006-2016 MCNC Graduating Classes



The GPAs by subgroups were highest for Asian and Caucasian students, followed by Hispanic and then African American students (see **Figure 15**). The 2.75 GPA for African American students (B- equivalent) suggests that while strides have been made to ensure successful outcomes for all students, more work needs to be done to close the achievement gap.

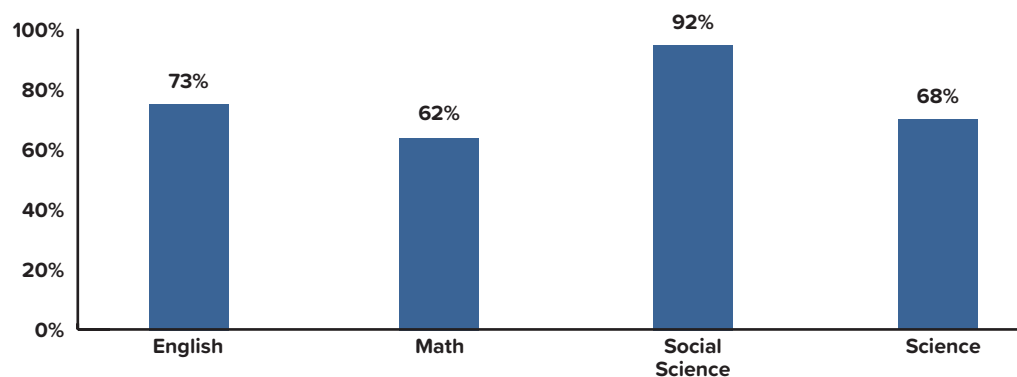
Figure 15. Average College GPA by Race/Ethnicity, 2015-16 MCNC Graduating Class



Note: Native American and Other categories not included due to small sample size.

MCNC students enroll in a diverse range of college courses and the majority graduate high school having experienced at least one college course in the core subject areas of English, math, social science, and science (see **Figure 16**). This indicates that a majority of these students had the opportunity to experience 'gateway' college-level English and math courses while in high school.

Figure 16. Percentage of Students Taking At Least One College Course in Core Subjects, 2015-16 MCNC Graduating Class



The Student Experience

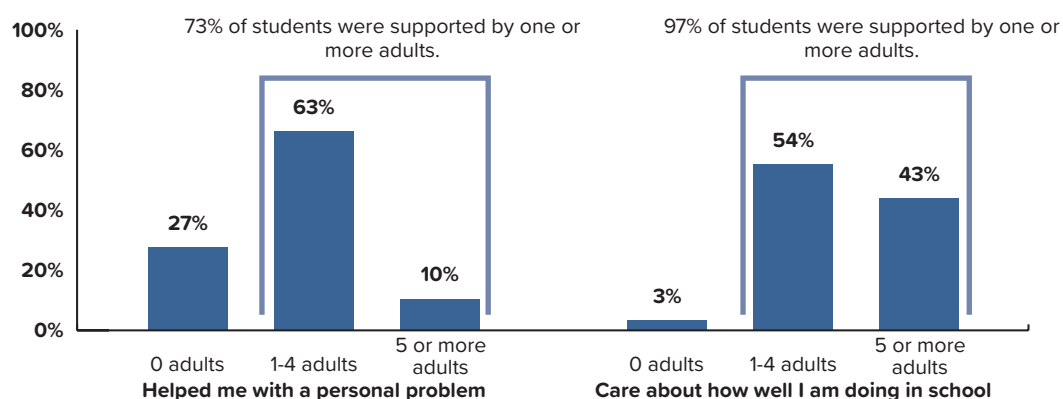
In this section, we look at MCNC schools' effectiveness as indicated by students' perceptions of their experiences at MCNC Middle and Early College schools. As part of the MCNC Data Project, participating schools administer the MCNC Graduating Student Survey annually each spring. Designed by NCREST and informed by the national Early College Initiative survey work, the MCNC survey captures various aspects of students' perceptions of their academic and social experience, as well as their future plans. We highlight students' views on their college and career preparation, college readiness, and post-graduation plans using data gathered from 837 student survey-takers in the graduating class of 2016-17, which represents an 87% response rate across the MCNC Data Project schools.

Support for Students

MCNC students indicate that they feel well-supported by the adults in their schools (see **Figure 17**). Ninety-seven percent of students reported that one or more adults cared about how well they were doing in school, while 73% reported that one or more adults helped them with a personal problem. Students also took advantage of college resources with 81% indicating that they used college instructors' office hours a few times a year or more.

Figure 17. Support Provided by Adults in the School

(Percentage of Students Who Agreed or Strongly Agreed)



Students had the opportunity to express in their own words what they most valued about their high school experience. The following students' responses are typical of the sentiments of many others.

“ Thanks to the curriculum offered at Middle Early College program, I was fortunate enough to gain a well-rounded education, in addition to college experience and college transferable units. As I progress in life and transition to my full-time college career, I will use this experience efficiently. ”

“ The best part of this experience would have to be the fact that we got an early exposure to a college setting. It's true that these past four years have been difficult for everyone and not all of us were able to handle the pressure as well as others; however, we all got to get a glimpse of what college is like. ... We got to see what college is like, how expensive it is, how to plan for it and why we should take our education seriously before we are let out on our own and that is something that, I think, every student should be able to experience. ”



Many students also appreciated the opportunity to save money by participating in an MCNC Middle and Early College program. In fact, 85% of students indicated that earning free college credits was of great or utmost importance in their high school experience. As one student explained:

“ The best part of my Middle Early College experience has been that I am able to have a weight lifted off my shoulders regarding money and obtaining college credits. I wouldn't have been able to go to college without this opportunity. ”

However, for many students, the most important part of the MCNC Middle and Early College experience was the support they felt from adults and peers. Ninety-seven percent of students agreed that adults care about how well they're doing in school, and 93% said that they received help planning for their future, college and careers. Students also shared the best part of their high school experience:

“ Being able to have teachers over the years who strive to help kids understand the material to pass final exams, along with all the friends I have made... ”

“ Creating a new family with the people who attend and the teachers. Also getting a head start to attend college. ”

“ Making friends in college classes that will last through my adult life. ”

College Academic Preparation

Our data also indicate that MCNC students have high levels of engagement in their college courses. For instance, students agreed or strongly agreed that their college courses were interesting (86%), relevant to real world problems (81%), and challenging (73%); in most cases they reported slightly lower ratings for their high school classes. Students also showed high level of persistence as the majority of them also reported that they kept trying to do well on their college courses even when the material was not as interesting (80%).

Many students reported that they participate in various academic activities on the college campus, indicating that they have opportunities to learn about and physically experience being in a college environment. Sixty-seven percent of students reported that they used writing lab services a few times a year or more, and 94% students reported that they used the college library.

“The best part is being able to experience what college is going to be like beforehand. It was helpful to learn how college classes work and what professors expect of their students.”

Figure 18. Self-Efficacy in Math and Writing

(Percentage of Students Who Agreed or Strongly Agreed)

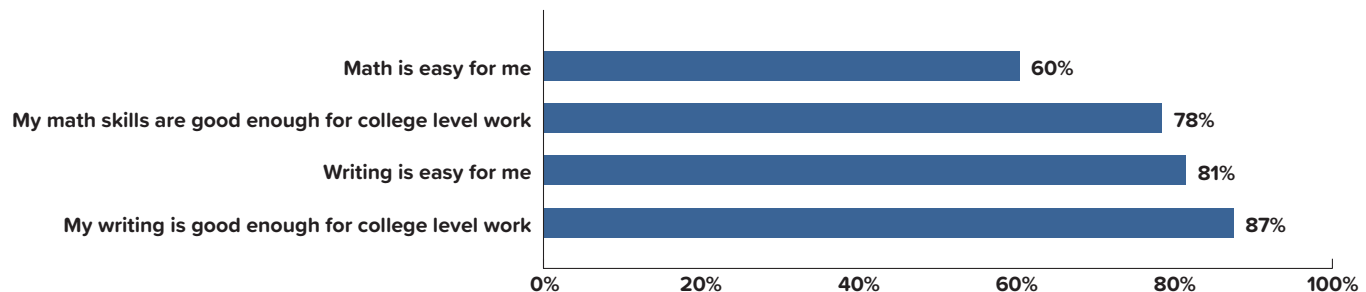
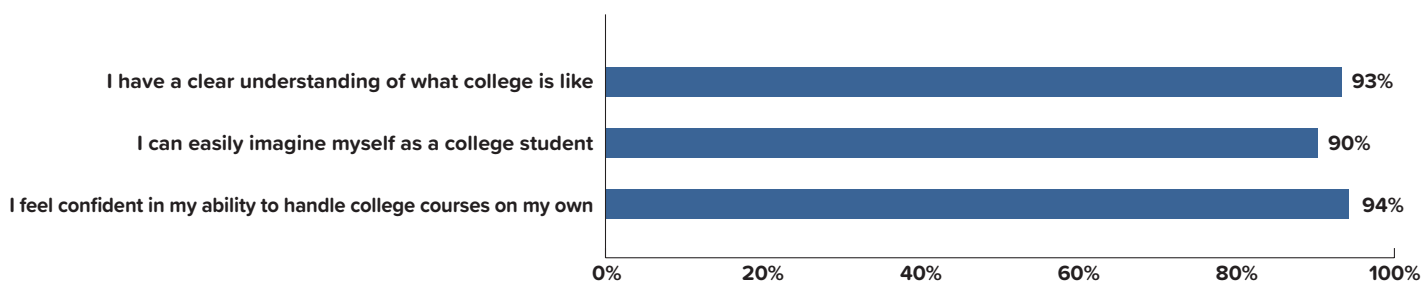


Figure 18 indicates that the majority of MCNC graduating students, feel ready for college course work in math and English, even if the subject is not easy for them. In particular, 78% of students think that their math skills are good enough for college level work and 87% of students think that their writing skills are good

enough for college level work. Overall, 94% of students said that they agreed or strongly agreed that they would be able to handle college courses on their own, and 90% or more could imagine themselves as a college student, and felt they had a clear understanding of what college would be like (see **Figure 19**).

Figure 19. College Readiness

(Percentage of Students Who Agreed or Strongly Agreed)



Preparing for the College Transition

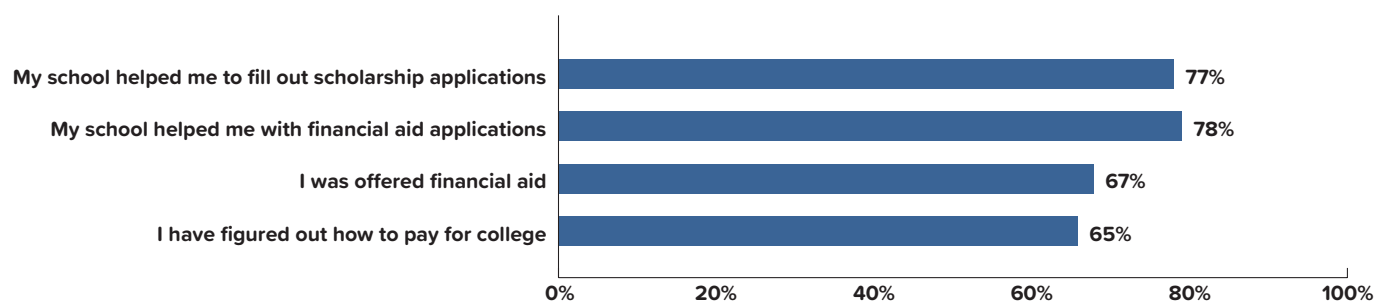
MCNC students also responded to questions about how their schools helped them with the college admissions process and the transition to becoming an independent college student. Eighty-four percent of students agreed that the assistance they received with the college application process was indeed helpful, and 75% of students reported that the assistance they received in writing their personal statements or essays for their college applications

was helpful as well. Additionally, 83% of the students had the opportunity to visit college campuses.

Further, as shown in **Figure 20**, many students stated that the assistance they received from their school was helpful in filling out scholarship applications (77%) and financial aid forms (78%). Sixty-seven percent of students were offered financial aid from colleges they planned to attend, and 65% reported that they had already figured out how to pay for college.

Figure 20. College Financial Aid Applications Support and Offerings

(Percentage of Students Who Agreed or Strongly Agreed)



Finally, it is also worth noting that 83% of MCNC students reported that they had been accepted to college at the time of the survey administration during April-May. Among those already accepted into college, 84% of the students planned to go to

a four-year college, 15% planned to go to two-year colleges and the remaining 1% wanted to go to a technical school. Ninety-two percent aspired to continue their education through the completion of a Bachelors degree or beyond.

Career Preparation

As high school graduation approached, many of the 2016-17 MCNC graduates had already figured out their career choices (84%). In fact, over two-thirds of students (69%) stated that the career preparation opportunities they experienced during their time in high school was of great or utmost importance. Many students also reported valuing their internship and job shadowing experiences during high school, while others reported the value in earning credentials in the job market. For instance, students expressed:

“The best part of my experience was going on rotations at the hospital during my freshman year so that I can develop a feel for what it’s like in a hospital workplace.”

“The best part of my experience was that I found my passion for my career choice and am graduating with a Law Certificate.”

Overall, 89% of students reported that they were able to learn about jobs and career options in classes, and a little less than half of the students had taken a field trip to a work place (41%) and had the opportunity to job shadow someone (43%). Students were most likely to report an interest in the following careers: healthcare, social sciences, architecture and engineering, business and finance, education, and computer and information technology (see **Table 4**).

Table 4: Careers and Job Interests

Occupation Group (Careers and Job Interests)	Percent of Student Respondents
1. Healthcare	33.2%
2. Life, Physical and Social Science	10.0%
3. Architecture and Engineering	9.3%
4. Business and Financial	7.8%
5. Education, Training, and Library	5.8%
6. Computer and Information Technology	5.1%
7. Undecided/Other	4.7%
8. Legal	4.2%
9. Protective Service	3.9%
10. Arts and Design	3.6%
11. Media and Communication	3.1%
12. Community and Social Service	2.5%
13. Entertainment and Sports	1.9%
14. Management	1.1%
15. Personal Care and Service	0.8%
16. Military	0.6%
17. Installation, Maintenance, and Repair	0.5%
18. Math	0.5%
19. Production	0.5%
20. Food Preparation and Serving	0.2%
21. Sales	0.2%
22. Transportation and Material Moving	0.2%
23. Building and Ground Cleaning	0.1%
24. Construction and Extraction	0.1%
Total	100.0%

Note: Students’ open-ended responses to the question, “What careers or jobs interest you? Why?” are classified into occupation groups listed in the Occupational Outlook Handbook from the U.S. Bureau of Labor Statistics <https://www.bls.gov/ooh/>.

CONDITIONS THAT FACILITATE AND SUPPORT MIDDLE AND EARLY COLLEGE SCHOOLS

Middle College National Consortium school leaders and teachers use multiple strategies to promote positive student experiences and outcomes, but opportunities for success are increased when the policy environment is conducive to their work. They are also more likely to be successful with support from an intermediary or support organization, such as the Middle College National Consortium. Finally, many of them assert that lessons on effective practice learned from peers who have gone before them are a major contribution to their success.

Policy Environment

State policies have played, and will continue to play, an important role in facilitating the growth of dual enrollment, a central feature of Middle and Early College high schools. As reported by the Education Commission of States, there were 47 states that had statewide policy for dual enrollment as of March 2016 (Zinth, 2016). The MCNC schools are located in states with a diverse record of facilitating dual enrollment programs that are accessible and effective. A few examples are provided here.

Colorado: In 2009, Colorado enacted state law (H.B. 09-1319) that aspired to vastly increase the number of postsecondary degrees earned by Colorado students. Among other measures, the law provides funding to expand concurrent enrollment programs and to increase access to groups of students with historically low college participation rates (Colorado Department of Education, 2009).

Tennessee: Similarly, Tennessee law authorizes public postsecondary institutions and local educational agencies to establish cooperative innovative programs in high schools and public postsecondary institutions. Specifically, state law (T.C.A. § 49-15) allows community colleges to establish their own programs that focus on high school students who need college remediation courses. The state also pays tuition for 11th and 12th graders who participate in dual enrollment. Moreover, all public postsecondary institutions in the state are required to accept dual enrollment credits (Zinth, 2016).

Texas: Even though schools in Texas are not mandated to offer dual enrollment opportunities, most Texas high

schools participate in the program. The state reimburses high schools and colleges the average cost associated with their dual enrollment students, and there is no cap on the maximum of college credits that a student can earn (U.S. Secretary of Education, 2017). Hence, there are specific requirements that must be met in order for students to participate in dual enrollment. In particular, students must be in grade 11 or 12 and may only enroll with written approval from the high school principal, in addition to meeting other requirements set by the postsecondary institution (Zinth, 2016).

California: Under Education Code Section 48800 or 48800.5, part-time postsecondary attendance for high school students is permitted (Zinth, 2016). However, the student/parent is primarily responsible for paying tuition. Recently, Assembly Bill (A.B.) 288 created College and Career Access Pathways Partnerships which focuses on encouraging more underrepresented students to enroll in higher education (California Legislative Information, 2015).

Michigan: The state has a long history of supporting dual enrollment starting with the Public Act 160 in 1996, followed by the Postsecondary Enrollment Options Act and the Career and Technical Preparation Act. These laws establish eligibility criteria as well as financing mechanisms for dual enrollment. There is a combination of the district and the student/parent financing for dual enrollment. The district is required to pay either the tuition or the amount of state funding the district receives for public school students, whichever is less. The parent/student must pay the remaining cost (Michigan Department of Education, 2017).

Support from National and Regional Organizations

Middle and Early College high schools affiliated with the MCNC have access to a number of resources that help them to accomplish their goals. The MCNC is an organization led by its membership, which remains relatively constant from year to year. Affiliated schools rely on the support of MCNC leaders as well as their peers. Most remain steadfast members and report that they benefit greatly from this connection. The range of services offered by the MCNC include:

- **Assistance with new school development.** Starting a new middle or early college is complex. MCNC coaches provide support to the leaders of new schools to develop a blueprint based on the MCNC design principles, strong partnership with the college, an academic plan, and other features and structures associated with school start-up.
- **Addressing implementation and fidelity issues.** Schools may struggle with how to find and nurture the right teachers, how to prepare students for college courses, how to create a college going culture, and how to finance dual enrollment courses, among other things. MCNC leaders and coaches assist with design choices and problem solving.
- **Opportunities for professional learning.** The MCNC offers two conferences each year—one for school leaders and another for school teams. Both emphasize learning from peers as well as connecting school representatives with emerging trends, research, and models that can inform their development.
- **Development of student leadership and agency.** Students from MCNC schools participate in a year-long project addressing a key societal problem culminating in a national leadership conference.
- **Using data for continuous improvement: MCNC data services.** Members of the MCNC Data Project receive support from NCREST with analyzing and using data to assess their schools' progress in achieving program outcomes, addressing students' needs, and informing key stakeholders about their successes.
- **Engagement with policy.** The MCNC is a part of several national policy initiatives in their role as a founding member of the College in the High School Alliance.



Effective Practice Models

Middle College National Consortium schools have developed a set of practices based on research and deep experience that serve as a model and facilitate strong implementation of the Middle and Early College approach. Many of these were captured in a publication titled *Ten Key Decisions in Creating Early Colleges: Design Options Based on Research* (Barnett, Bucceri, Hindo, & Kim, 2013). Key lessons identified that have been widely influential on MCNC school practice include:

- **Student selection.** Middle and Early College schools demonstrate that, given the opportunity and comprehensive support, all high school students can experience college course-taking success.
- **Location.** Research indicates that location on a college campus is associated with stronger outcomes. MCNC schools call this “power of the place.”
- **College credit accrual.** Most MCNC schools establish plans that allow students to earn at least 40 credits or even an associate degree by the time of high school graduation.
- **Preparing students to take college courses.** Schools often work to facilitate a “college going culture,” enabled by their close ties to colleges and universities. In addition, high school teachers are often very knowledgeable about college expectations due to their interactions with college faculty. As a result, they are able to give students multiple opportunities to learn college-preparatory content and practice college-ready skills.
- **Student supports.** MCNC schools emphasize “wraparound supports.” While these take different forms, they usually include high quality counseling, advisories, and academic and social supports as needed. Students indicate that they are known well by one or more adults, who check on their progress.



CONCLUSION

The Middle College National Consortium and its member schools are national leaders among those seeking to offer college course-taking opportunities to a wider range of high school students' based on the belief that this encourages postsecondary enrollment and success. MCNC Middle and Early College schools are also leaders in their commitment to including low-income and racial/ethnic minority students, as well as large numbers who will be the first in their family to attend college.

Although the implementation of the model is customized and somewhat diverse, all are based on a set of design principles that encourage consistent high quality. All are attentive to creating strong high school-college partnerships and offering students access to authentic college courses with built-in opportunities to gain college knowledge. All offer students key relationships and supports that help students to achieve success in challenging college courses. And the data show that students are successful. Graduates from MCNC schools leave with an average of 40 or more college credits, which give them the opportunity to finish college sooner, with greater success, and spending less money in the process.

Reflecting on the success of Middle and Early College schools associated with the MCNC as well as their influence in their surrounding communities, Director Cecilia Cunningham states,

“Our schools have continued to take leadership roles at the city and local levels. The schools, particularly the leadership, have become anchors for the work in dual enrollment in their local areas, evidenced by the way some of them have developed other networks. Also, the fact that they are visited by so many outside groups interested in doing early college or dual enrollment programs says a lot. The data drives this work and the focused community support that they provide for each other.”

With the support of the MCNC, more Middle and Early College programs are forming each year. Their approach to developing and growing schools and school leaders means that, over time, more students, particularly those who are underrepresented in college, will have the opportunity to meet their educational and career goals and contribute to their communities.



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