

**BUFFALO MIDDLE EARLY
COLLEGE HIGH SCHOOL:**
**Supporting
College
Readiness
and Success**

NCREST

National Center for Restructuring Education,
Schools and Teaching
Teachers College, Columbia University

Jennifer Kim, Kathryn Spence, Elisabeth Barnett

2023

TABLE OF CONTENTS

1. Introduction	1
▪ Middle and Early Colleges	1
▪ The Middle College National Consortium	1
▪ Buffalo Middle Early College High School	2
▪ This Report.....	4
2. About Buffalo Middle Early College High School (MECHS)	5
▪ The Success of MECHS	5
▪ Origins of MECHS	7
▪ The MECHS Design	9
▪ Leadership Development	10
3. Implementing a College-Focused Academic Program	11
▪ Majors and Concentrations.....	11
▪ Summer Enrichment.....	13
▪ Literacy Development.....	13
▪ Real World Learning Experiences.....	14
▪ Technology	15
4. Providing Comprehensive Student Supports	16
▪ Building Relationships	16
▪ College and Career Guidance.....	17
▪ Support Classes.....	17
▪ Tutoring Supports.....	18
▪ Social and Emotional Supports.....	18
▪ Parent and Family Engagement.....	19
5. Collaborating with College Partners	21
▪ Early College Liaison	22
▪ Campus Home Bases	24
▪ Faculty Engagement.....	24
6. Practicing a Culture of Continuous Improvement	25
▪ School Culture	25
▪ Professional Development.....	26
▪ Staff Meetings	27
▪ Data Collection and Analysis	28
7. Conclusion and Lessons Learned	29
▪ Students Served	29
▪ Academic Program	30
▪ Student Supports.....	31
▪ College Partnerships	31
▪ Continuous Improvement.....	31
Appendix A: Technical Notes.....	32
Appendix B: Five-Year Academic Plan.....	34
Appendix C: Literacy Plan Timeline	35

ABOUT NCREST

This report was prepared by the National Center for Restructuring Education, Schools, and Teaching (NCREST) at Teachers College, Columbia University. NCREST has been involved in research and development projects related to Middle and Early College High Schools for over two decades. 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 association 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.

1. INTRODUCTION

Middle and Early Colleges

Middle and Early College High Schools and programs aim to provide high school students with early access to college courses and a chance to accumulate college credits through dual enrollment opportunities. Dual enrollment programs have gained in popularity because of their positive outcomes, preparing students to be successful in college and in life.¹ Dual enrollment opportunities also enable students to save both time and money required to complete a college degree.² Research has shown that students who participate in dual enrollment programs are considerably more likely to be successful academically and graduate from high school, enroll in college, earn college credits, and graduate from college.³

Traditionally, dual enrollment programs have attracted and served primarily highly motivated and high achieving high school students. However, studies show that the students who would most benefit from early access to college coursework are those who are traditionally underrepresented in college.⁴

Middle and Early College High Schools⁵ engage in practices that support a broader range of students as they take dual enrollment courses. They are typically small schools located on or near a college campus, offering a mix of high school and college level courses. Students may need academic and interpersonal support to be ready to take and succeed in college courses. The schools provide strong instruction, college-oriented advising, and a range of supports to help students accumulate a significant number of college credits or an associate degree upon graduating from high school. Extensive evidence demonstrates that these schools are effective, especially for traditionally underserved groups of students.⁶

In the early 2000s, the launch of the Early College Initiative with funding and support from the Bill and Melinda Gates Foundation brought national attention to this model. The Middle College National Consortium (MCNC) was selected as one of the intermediary organizations for the Early College Initiative and was charged with developing and supporting a set of small Early College schools. Buffalo Middle Early College High School (MECHS) is one of the schools the MCNC founded and supported.

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 designed to reflect the best practices of the small schools reform movement 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.⁷ Their schools follow a set of design principles (see the following page) intended to enable successful student experiences and outcomes.⁸

1 Fink, J., Jenkins, D., & Yanaguira, T. (2017). What happens to students who take community college "Dual Enrollment" courses in high school? New York, NY: Community College Research Center.

2 Hoffman, N. (2005). Add and subtract: Dual enrollment as a state strategy to increase postsecondary success for underrepresented students. Boston, MA: Jobs for the Future; U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, What Works Clearinghouse. (2017). Transition to College intervention report: Dual Enrollment Programs. Washington, DC: Author.

3 U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, What Works Clearinghouse. (2017). Transition to College intervention report: Dual Enrollment Programs. Washington, DC: Author.

4 American Institutes for Research & SRI International. (2013). 2003–2007 Early College, early success: Early college high school initiative impact study. Washington, DC: American Institutes for Research.

5 Read more about Middle and Early Colleges at <https://mcnc.us/faq/>.

6 Edmunds J. A., Unlu F., Glennie E., Bernstein L., Fesler L., Furey J., Arshavsky N. (2017). Smoothing the transition to postsecondary education: The impact of the early college model. *Journal of Research on Educational Effectiveness*, 10(2), 297–325.

7 <http://mcnc.us/about/our-history>.

8 These four principles are based on what research has shown that schools need to do to support students successfully accessing college courses and accumulating college credits (see, for example, Conley, 2005).

Buffalo Middle Early College High School

Buffalo Middle Early College High School (MECHS) was created after the Buffalo school district and a partnering postsecondary institution, the State University of New York at Erie Community College (now called SUNY Erie), submitted a proposal in 2002 to the MCNC to open a new school as part of the national Early College Initiative. While MCNC primarily focused on redesigning existing Middle College High Schools into Early Colleges, two new Middle Early College High Schools were opened, including Buffalo MECHS.

The school opened in September 2003 with one cohort of 9th graders, seven teachers, and a principal. The founding principal, Ms. Susan Doyle, led much of the effort to design the school. A partnership with Buffalo State University was established in 2015, allowing students a wider range of academic options.

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.

SCHOOL OVERVIEW

- **District and location:** Buffalo City School District, Buffalo, NY
- **Postsecondary partners:** SUNY Erie and Buffalo State University
- **Year Opened:** 2003
- **Enrollment:** 320 (grades 9-12)*

* A fifth year of college coursework (13th grade) follows the final year of high school for students in the SUNY Erie program.

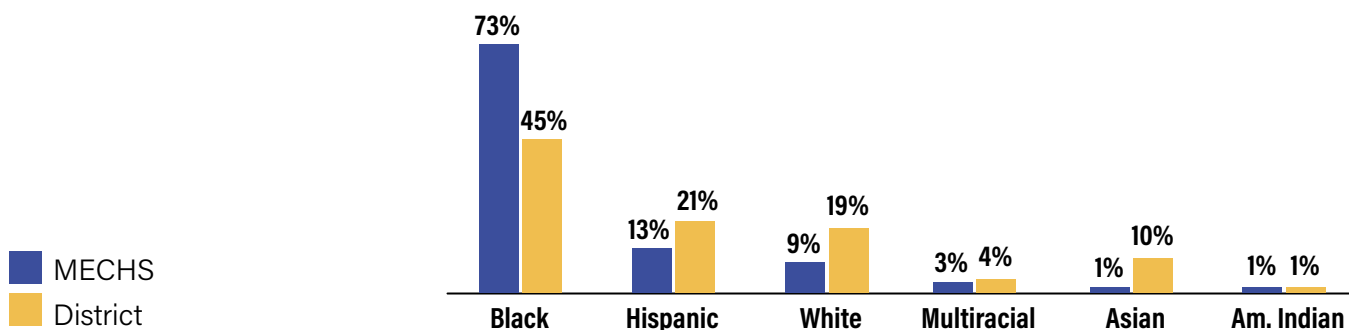
Demographics

- Male: 45%, Female: 55%
- Black/African American: 73%, Hispanic: 13%, White: 9%, Multiracial: 3%, Asian: 1%, American Indian: 1%
- Economically Disadvantaged: 75%
- Students with Disabilities: 17%
- English Language Learners: 4%

Source: New York State Education Department, 2020

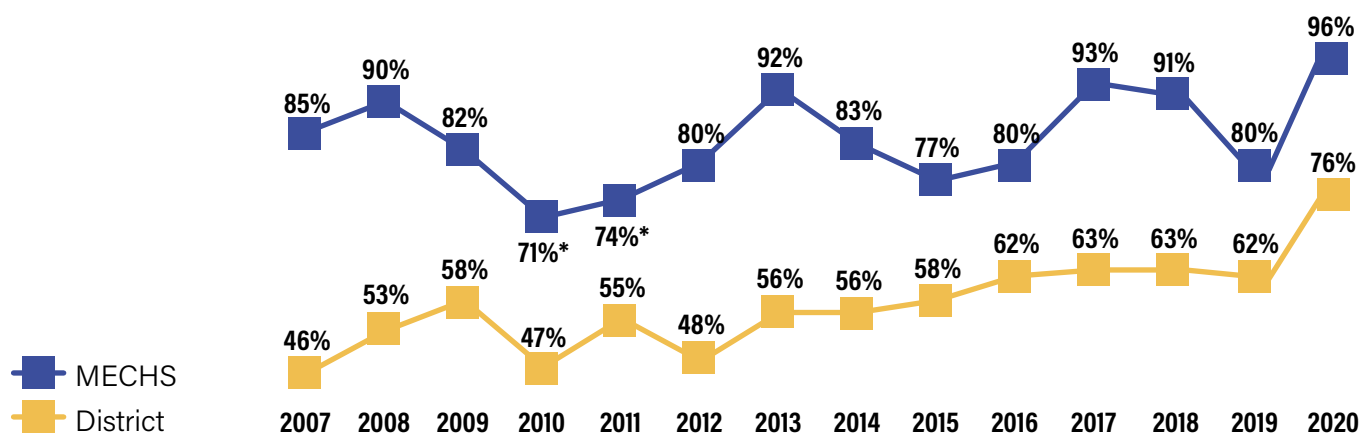
MECHS primarily serves students from groups underrepresented in college, including a greater percentage than are found in the Buffalo City School District overall (see top figure on page 3). At the same time, graduation rates for MECHS have been consistently higher than the district (see bottom figure on page 3). The school is committed to creating opportunities for their students to gain the knowledge, skills, and perseverance that will allow them to succeed in future education, in careers and in life.

STUDENT DEMOGRAPHICS, MECHS AND DISTRICT



Source: New York State Education Department, 2020

HIGH SCHOOL GRADUATION RATES, MECHS AND DISTRICT



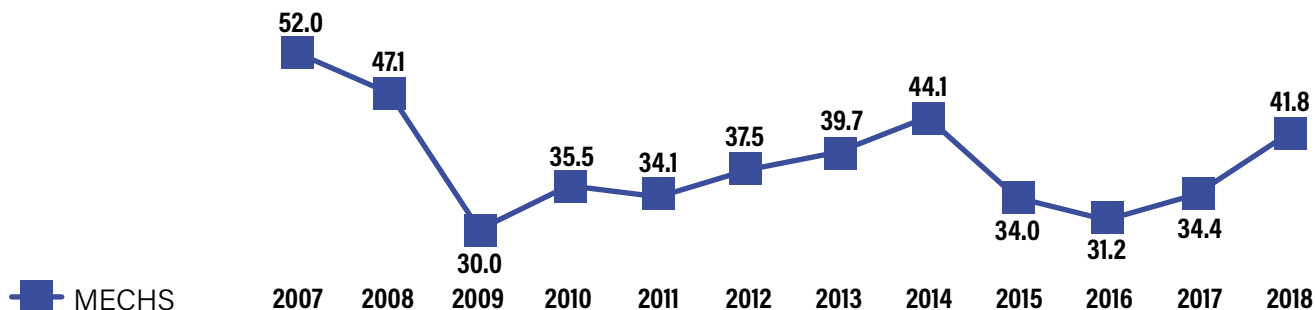
Source: New York State Education Department; Buffalo MECHS

* For 2010 (71%) and 2011 (74%), the graduation rates do not reflect solely MECHS students. For these two years, MECHS shared a school code with an Occupational Training Center school and those students are included in the percentages.

MECHS students take college courses at both of the school's partner colleges during the early grades and then choose one of them to attend beginning in the spring of their junior year. In selecting SUNY Erie, a two-year institution, the juniors are committing to continue at the college for an additional year after graduating from high school (known as the fifth year or 13th grade), in order to complete their associate degree. With Buffalo State University, a four-year institution, MECHS students do not commit to attend an additional year, but most enroll at the college upon graduating from high school.

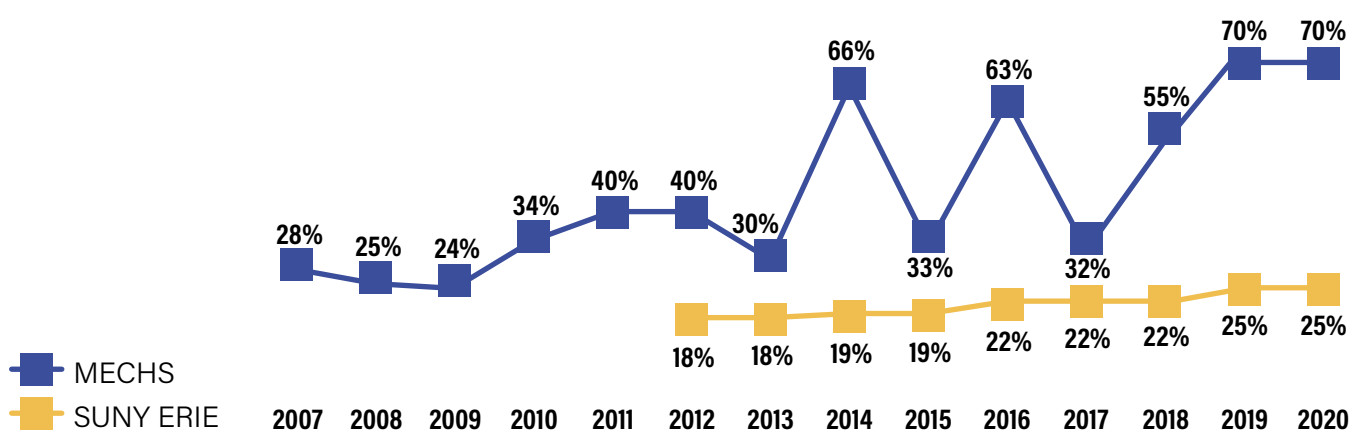
The majority of MECHS students accumulate a significant number of college credits. Upon graduating from high school, each 12th grade class at MECHS earned an average of 30 to 52 college credits (see top figure on page 4). Over the years, the majority of MECHS graduates who continue on to SUNY Erie for a fifth year earned their associate degree by the end of that fifth year (see bottom figure on page 4). In general, associate degree attainment for MECHS students has been consistently higher than that of the general SUNY Erie population.

AVERAGE COLLEGE CREDITS EARNED, MECHS 12TH GRADERS



Source: NCREST - MCNC Data Project

ASSOCIATE DEGREE COMPLETION, MECHS 5TH YEAR STUDENTS AND SUNY ERIE



Source: Buffalo MECHS; SUNY Erie

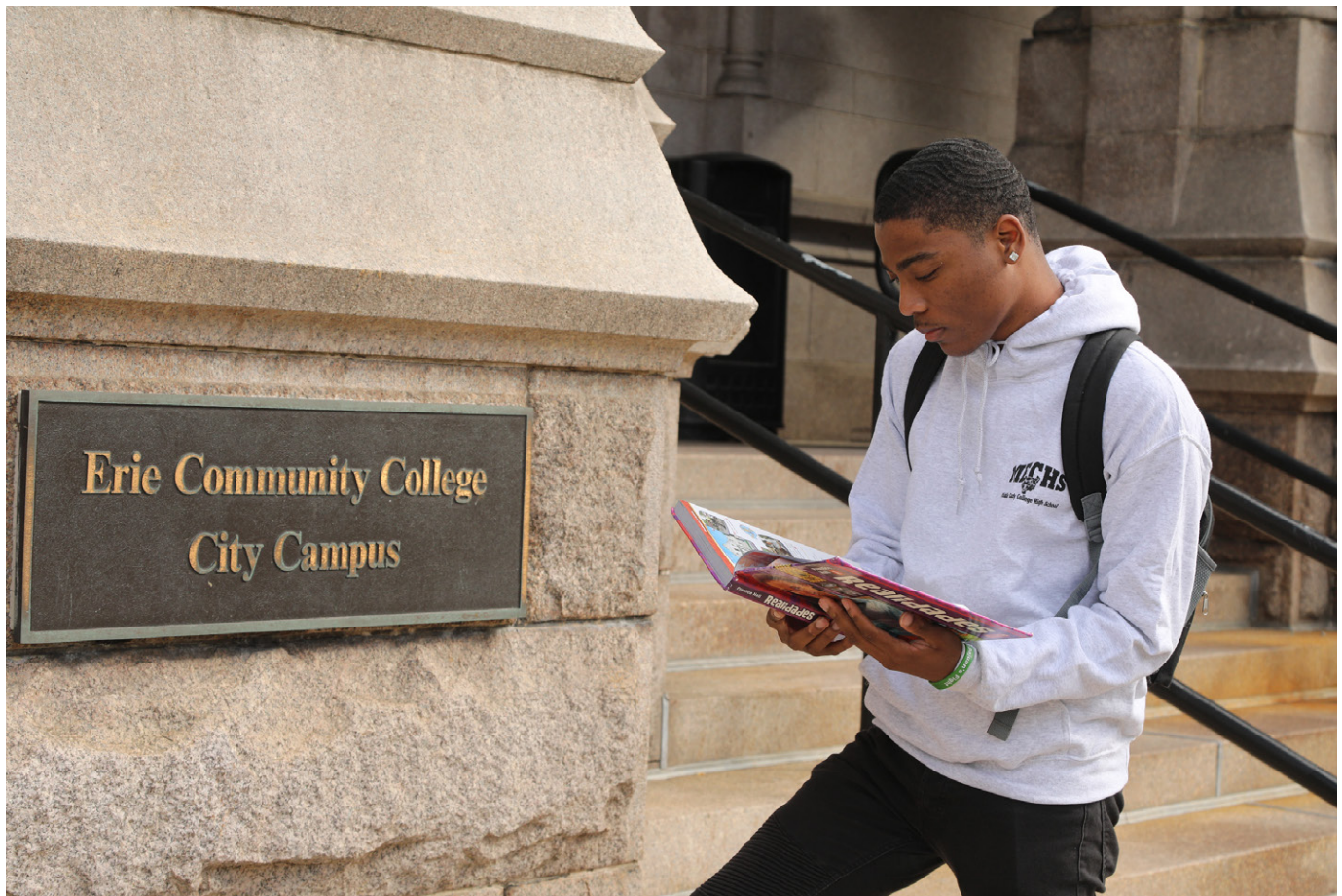
This Report

In this report, we describe the key features, design principles, and contextual factors associated with Buffalo MECHS. We hope that information about their experiences and practices can inform the work of high schools that aim to provide a wider range of students with dual enrollment options. We share the story of how MECHS implemented the four MCNC design principles and offered early, college course-taking opportunities and thoughtfully developed supports to primarily low-income and racially minoritized students. This report focuses on practices and student achievement at Buffalo Middle Early College High School from its inception through the 2019-2020 academic year. We focus on the school during the leadership of founding principal Ms. Susan Doyle and the time before the disruptions of the COVID-19 pandemic. We hope that stories about subsequent years can be told in the future.

The research used in this report was conducted by researchers at the National Center for Restructuring Education, Schools and Teaching (NCREST) located at Teachers College, Columbia University in New York. Our center has engaged as researchers and thought partners with organizations supporting Middle and Early College High Schools for over two decades. To capture the story of MECHS, we used a case study approach. The report relies primarily on individual interviews and focus groups with K-12 and higher education leaders, faculty, staff, and student alumni. We also undertook document analysis and drew on data collected during past site visits to the school.⁹ For more information on our data sources and technical notes, see Appendix A.

⁹ Additional site visits were planned but not possible due to the COVID-19 pandemic.

2. ABOUT BUFFALO MIDDLE EARLY COLLEGE HIGH SCHOOL (MECHS)



The Success of MECHS

MECHS' student outcomes are impressive, whether considered independently or in comparison to district or partner postsecondary institutional data. One college partner noted that MECHS student success rates are "better than that of traditional students at [SUNY Erie] for graduation, retention, completion." This is despite the fact that many of their students had not expected to go to college. The student population, was described by an MECHS staff person as "contrary to popular belief, not honors students, but middle of the road students."

A representative from Buffalo State University, the school's other postsecondary partner, reflected on the success that occurred from early in the partnership:

The first year, I think we had five students come to Buffalo State, matriculate to the college. Four of them graduated the next year. We had students, some of them graduated within three years, three and a half years. This campus has never seen a rate like that. This by far was the most rewarding. It did what it was supposed to do with young people who needed the support to be successful.

Dr. Cecilia Cunningham, the director of the Middle College National Consortium (MCNC) explained that MECHS stands out, even among Early and Middle Colleges, emphasizing, "It does graduate a huge percentage of young men of color, the biggest in our organization."

This academic success continued even when in-person learning shut down due to the COVID-19 pandemic in the spring of 2020. Despite suddenly shifting to fully online learning, students at MECHS still maintained their academic focus, as evidenced by their college GPAs. A college counselor explained, "They're doing amazing this past year. Even with COVID, the cumulative GPA for the cohort was a 3.13 and we had several that received a 4.0 for the spring semester." While reflecting on this success, one teacher connected student success to what is at the heart of MECHS:

It's insane to know our kids are kids that are average or very much struggling when they enter. Our program shows that with extreme support how every student can be successful. Our graduation rate and the culture of the school really demonstrate that.

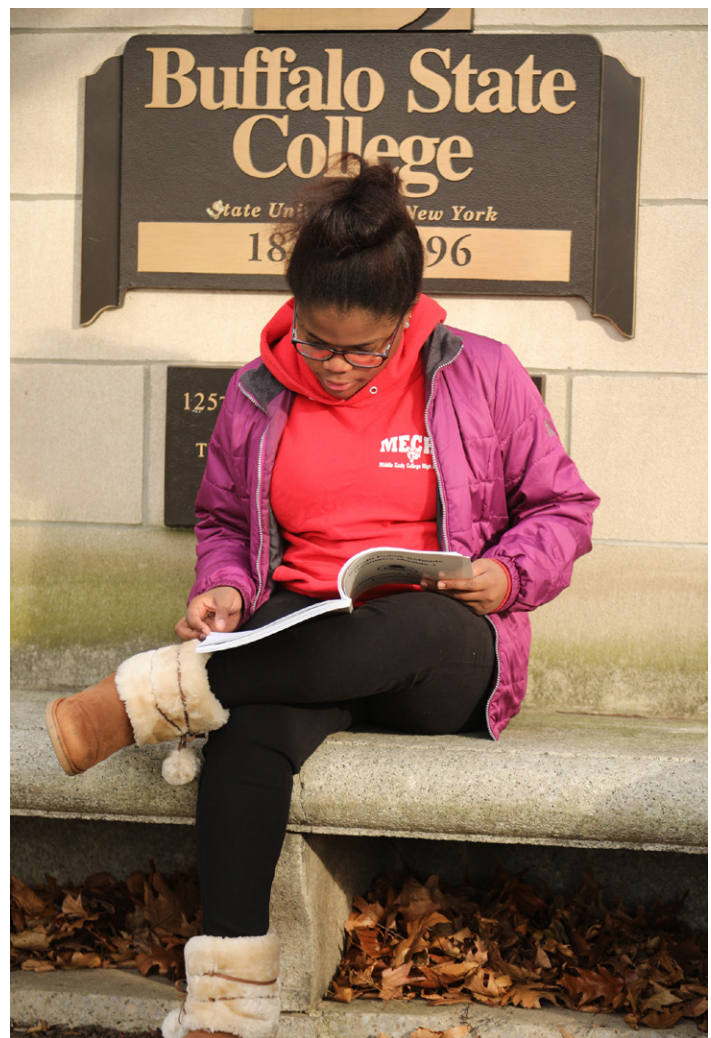
Despite its success, staff and student alumni alike described MECHS as a great school that no one knows about. Two student alumni who graduated from the school shared the following sentiments:

I definitely would say it's a hidden gem. And I would say that this program is something while you're in the program, you don't really understand how important and how much it can put you ahead because you're 16 or 17 and nobody's really worried about that far in the future.

A lot of kids that are in the middle need this opportunity. You know, they're not always up highest but they're trying to figure it out and this school will help them figure it out. So the school needs more and more attention. So many kids don't know about it.

A college representative remarked on how little awareness there was about the school and its accomplishments:

I can't tell you how many times I'd be talking to reporters and they'd be talking about something else and somehow Middle Early College would come up and I said you need to go look at [Buffalo Middle Early College High School]. This is the best kept secret in the district.



Origins of MECHS

Prior to its opening, the incumbent president of SUNY Erie and the then superintendent of Buffalo City School District were both highly interested in the idea of opening an Early College High School in their district. They were intrigued with what they had heard about Middle and Early College High Schools and thought that it could be an effective model for Buffalo students. A school was conceptualized with the following mission:

The Middle Early College High School mission is to create lifelong learners who possess the skills, confidence, and knowledge to meet the challenges of high school and college and ensure upon graduation that students will flourish and contribute to a global society.¹⁰

With support from the Middle College National Consortium (MCNC), the school opened in 2003. The founding principal of the school, Ms. Susan Doyle, remained the school leader until her retirement in 2020. She recalled her initial reaction upon hearing about the new school where students would be taking college courses while in high school: "I thought it was an honors program!" Relieved to find out that the school was actually targeting traditionally underserved students with high potential and middling grades, she still had to grapple with how to provide an authentic college experience for these students:

These kids are honors kids? No. I was wondering how I could figure out college course taking for these kids. It was a clean slate and I had no knowledge about how to get high school kids taking college courses. But I knew I had to empower the kids when coming in. We thought there was always stuff for the honors kids and kids that fail. But those middle of the road kids - I called it untapped potential - they had the potential, but no one ever really told them, 'yes, you can go to college, you can do this.'

Ms. Doyle's college partners were also on board and willing to take a chance on the new collaboration. One college leader shared, "What I believe to be true came true – that these are students, given the right supports and systems, and held accountable to be responsible like college students, that they would succeed. They have shown that success in the past."

Once appointed as principal of the school, Ms. Doyle had a short amount of time to operationalize the vision. The summer before the school opened, there was still no teaching staff and no school building. However, Dr. Cecilia Cunningham, the MCNC director, who was coaching Ms. Doyle, saw the principal's opportunity to hire her own staff as an advantage. Of the teachers who began at the school, all stayed through 2020 (except for those who retired). A district administrator discussed reasons for retention of teachers and staff at MECHS:

There's people that have been there the entire career of Middle College. To me what it indicates is that there's people, when they're getting the results they get there, they don't want to leave. They like the culture. They like the environment. They love the kids. They like the leadership.

The principal reflected on the stressfulness of that time, especially in preparing the physical school for the students. She saw the preparation of the physical space as setting the tone for the college-focused experience that the students would have:

It was the middle of July, and the school was set to open in September and we were in an office building. I had one walk through. I was wondering how I was going to turn it into a school? It's important for the kids to walk on the first day and feel safe, settled, and feel like this was their school.

10 Read more about the school's mission at <https://www.buffaloschools.org/o/ps415/page/about-mechs>.

While the school's original partner was SUNY Erie, in 2014 there were changes in policies at the college that necessitated a search for an additional postsecondary partner. After considering options, Buffalo State University was invited to enter into a relationship with the school. The Early College liaison at Buffalo State described the initial outreach from the school to her institution as serendipitous:

The principal reached out to me. I don't know how she found out my name or what she heard that made her think that talking to me would be helpful. But as soon as I heard what they had already accomplished and what they were looking to do I was just instantly excited. This was an entirely new venture for our institution. And it took time and discussions before the campus was comfortable moving forward with this.

Ms. Doyle talked about the pros and cons of forming a new partnership with a four-year institution:

I was worried because it was going to be quite different since this is a four-year university, but I was just thinking one day at a time and what could provide our students with robust college courses and readiness. Failure was not an option. After careful planning we were ready to go.

Despite these logistical challenges, the newly hired staff and the incoming class of students developed a close connection during that first year. MECHS teachers and staff cited a "family" type of culture that drove them to want to be successful and a small school size that helped to foster this type of environment.



The MECHS Design

This close family feeling and positive attitude has continued throughout the school's existence, despite three changes in physical location. The school was opened at its initial site in an office building in 2003. In 2014, it moved to a space within another school for a single academic year. The following year, it moved once again to its current location within Bennett High School, though there is discussion about eventually finding a permanent site for MECHS.

Several design features have contributed to the success students have experienced at the high school and in their college courses. There are small class sizes and there is a special educator assigned to each grade level as a co-teacher. Content-area teachers in English, social studies, and math "loop" with their students in 9th through 11th grades and use curriculum that integrates and builds on students' lived experiences.¹¹ Teachers develop close relationships with their students.

The school also purposefully developed structures that would simulate the college experience from the freshmen year forward. The high school's daily schedule includes different length class periods, with classes meeting on alternate days, mirroring the college schedules. Seemingly small features like having all high school teachers provide a syllabus as college professors do, and having classes transition without bells helps to prepare students for college classes. One teacher described balancing expectations and supporting students:

[MECHS is a] very supportive, but aggressive high school. We have high expectations but do support students along the way. We gradually remove the support. Students are ready as seniors because of what happens in 9th and 10th grade. Freshmen receive lots of support—they're almost babied a bit. But there are high expectations all along. It's nice that freshmen look up to seniors and see they're not really in high school. Seniors go to college all day. Freshmen aim for that.

The school staff are fully committed to the vision of all students accessing and being successful in college courses, but what has made the school unique is its ability to structure experiences that move students from where they are when they enter the school, as "average" high school freshmen, to where they need to be when they transition to a full college schedule.

While many of these experiences occur in the day-to-day interactions between students and teachers and between students and professors, students are also given the opportunity to participate in out-of-school settings that push their boundaries, through events like the Middle College National Consortium annual student conferences where select students implement and present projects related to a conference theme. Many of the conference projects have had to do with sustainability and the environment such as one where they undertook rainwater harvesting for use in crop irrigation.

¹¹ Looping refers to the school practice where a teacher instructs the same group of students for more than one year.

Leadership Development

The structures and supports developed at MECHS were shaped by ongoing participation in Middle College National Consortium (MCNC) coaching, professional development, and conferences for staff and students. During its first four years, a MCNC coach collaborated with the school as they worked out how to implement the four MCNC design principles. The principal, college administrators, and faculty members from both SUNY Erie and the high school attended the annual MCNC summer and winter leadership conferences. The principal also had the opportunity to participate in a “principal residency,” where she visited two Middle College High Schools that were redesigned into Middle and Early College High Schools. The MCNC director reflected on the week-long residency and its impact on school leaders:

I think the residency played a huge part. The residency was mind changing for the majority of people, like Ms. Doyle, who visited the schools that did really well. It was — how could you schedule differently? How could you use people’s time? What were you asking kids to do?

In addition, Ms. Doyle’s leadership style contributed greatly to the school’s development according to many of those interviewed. Threaded throughout conversations about the school were expressions of admiration and respect for her dynamic, caring, and strong leadership. Widely recognized as “someone who deeply, deeply cares about the students” while simultaneously being willing to hold them to high standards, Ms. Doyle embodied the mission of the school and advocated fiercely for her students. She was widely respected by her staff as well as by those in the district. A district leader shared:

Middle Early College is a wonderful concept. But if you don’t have the correct leadership with MECHS, it only remains the concept. It doesn’t become a success story. Ms. Doyle, she is a principal of hard work. She has high expectations. Her focus is never pleasing everybody, but her focus is always doing what’s right for kids. But then also always trying to do right by teachers, if that makes sense. She wants people to be happy coming to work. She connects with people.

Despite its successes, there was often tension in the district around MECHS due to changes in local leadership and priorities. One strength that served Ms. Doyle and the school well was her ability to communicate about the success of the school through sharing student outcomes data available through MCNC’s partnership with the National Center for Restructuring Education, Schools and Teaching (NCREST).¹² The MCNC director reflected on these aspects of the principal’s commitment to the school, stating, “The data that NCREST collected on the students’ college coursework and credit accrual helped save [MECHS] over and over again, and Ms. Doyle learned how to understand and explain the data to her district.”

¹² For many years, NCREST compiled data reports capturing college course performance and student perspectives through the MCNC Data Project.

3. IMPLEMENTING A COLLEGE-FOCUSED ACADEMIC PROGRAM

Buffalo MECHS worked strategically to implement each of the Middle College National Consortium (MCNC) design principles, adapting them to the Buffalo context. The first MCNC design principle emphasizes providing a college-focused academic program through a combination of standards-based high school classes and college coursework. Buffalo MECHS' college-focused academic program is outlined in the high school's five-year academic plan (see Appendix B), which reflects the school's belief that all students will successfully complete college coursework if provided with ongoing supports. The plan includes the high school and college coursework sequence for each semester from 9th through 13th grade, as well as summer enrichment programming each summer following 9th, 10th, and 11th grades.

The expectation is for students to stay for a fifth year – or 13th grade – and this is communicated to students and families from the beginning when students apply to the school. The course-taking that is explicitly mapped out through the five-year academic plan allows students to choose among several options, including an additional year at SUNY Erie for the completion of an associate degree or transfer to Buffalo State University or another four-year institution in order to earn a bachelor's degree.

The fifth year for students at SUNY Erie is provided at no cost to the students, but they have to officially apply to the college. Student costs are covered by financial aid and the "Say Yes Buffalo" program,¹³ and the Buffalo City School District pays for any remaining costs. The majority of students choose the SUNY Erie path. Students who enroll at Buffalo State University after the fourth year of high school pay their own way, typically through financial aid assistance.

The impact of earning college credits and attaining an associate degree, particularly for students who did not initially envision this for themselves, are highlighted in the following reflections from two student alumni:

My family never knew about college so I'm first generation. I believe it is something unique that is offered by the school, given the fact that many in my cohort walked out with a college degree. We didn't just take accelerated classes.

I honestly don't think that I would have really continued going to college for something as big as what I'm going for now if I didn't go to Middle Early College. I was able to get my AA degree and that skyrocketed my confidence. It really pushed me to want to be successful with everything.

Majors and Concentrations

From its inception, the goal of Buffalo MECHS has been to provide students with access to a college program that would prepare them for a high-quality future career. The founding principal shared, "When we opened, that was one of the things the district wanted; students got a degree they could be employed with, not just working at McDonald's with an hourly wage."

¹³ Say Yes Buffalo provides scholarships and support to Buffalo area students. For more information, see <https://sayyesbuffalo.org/about/story-mission/>

The school offers students several career pathway options, including business administration, criminal justice, building and trades, physical education, and office technology, as well as general studies with a career goal in mind. Most students select one of these options, beginning in spring of 11th grade. Students who are unsure of a career pathway are able to complete general education requirements that are the foundation of an associate degree.

The academic plan specifies that college courses will be delivered by both partnering colleges. As a way to begin their college coursework, all sophomores take an art class that is taught at the high school by a Buffalo State University professor. Subsequently, all juniors enroll in a history course taught by a MECHS teacher who is also an adjunct instructor at SUNY Erie. Students additionally take College Success Skills classes during both the sophomore and junior year. Once they have successfully completed their junior-level English class, students are eligible to take college-level English. If they score a 75 or higher on the New York State English Regents exam, they are exempt from the college placement exam required for college-level English.

SAMPLE OF COLLEGE COURSES TAKEN BY MECHS STUDENTS

College Success Skills
Environmental Biology
College Composition
Human Interaction

American Government
Public Speaking
Intro to Criminal Justice
Intro to Economics

Teachers and guidance counselors describe how this college course-taking model provides a “staggered” or “stair-step” approach to being in college, with higher levels of oversight at the high school when students begin their college course-taking in the sophomore year. As students mature and demonstrate success, the supervision provided by the high school is slowly reduced. Students shift to taking more college courses on the college campus, taught by college faculty. Many college courses fulfill both high school and college graduation requirements and both high school and college credit may be awarded.

By their senior year, students are enrolled primarily in college classes. Most of the college courses they take in the first semester of their senior year must fulfill both high school and college-level general education requirements. However, there is more flexibility in the second semester of the senior year, when students may begin to specialize in courses aligned with potential majors or career pathways.

INTERDISCIPLINARY LEARNING COMMUNITIES AT BUFFALO STATE UNIVERSITY

At Buffalo State University, seniors are placed within a particular learning community. The learning community consists of three thematically linked college courses with faculty who teach their courses independently of each other, integrating them in a way that will support student engagement. Based on the book/movie, *The Hate U Give*, students in one learning community took a college writing course, a history course, and a College Success Skills course as a group, along with other Buffalo State students who had opted into this learning community. The courses address topics related to police brutality, racial identity, and social justice.

To teach these courses, the college seeks out faculty who would work well with MECHS students. As one college administrator stressed, “We know we need somebody who is assertive with the students, but at the same time, they can connect. So it’s a conversation about the faculty and your people’s experiences with the departments too.”

The learning community experience helps students to make sense of the full, collegiate education experience, including how different courses can help them to make sense of the world and be successful in life, as highlighted by a teacher:

Kids are famous for saying ‘Well, you know, if this is my major, why do I have to take this?’ So they can see not only how the classes fit together, but then how it fits into their life, how it will fit into their personal lives, or what their interests are in terms of their careers.

Summer Enrichment

Another school feature that supports a college-focused academic program is the summer enrichment courses. Summer enrichment programs at MECHS are mandatory for students and operate for four weeks on a full-time schedule. The main aim of the enrichment is to ensure that all students are on-track academically and able to meet college course-taking goals. The summer programs follow the completion of 9th, 10th and 11th grades, and faculty and staff from MECHS and the college partners participate and provide instruction. Meals, college courses, support with skills development, and extracurricular activities are provided for free, at no-cost to students. Funding for these summer programs is provided through the New York State Smart Scholars¹⁴ grant.

A teacher shared, "Over the years, we've made our summer program really hone in on those skills to prepare those students for college." In their first summer, students engage in literacy and math curricula and complete the mandated physical education requirements for the year. In addition, some cohorts of students take a College Success Skills class offered by one of the college partners. In later summer programs, students continue to participate in math and literacy experiences and enroll in college level history courses that fulfill their final high school social studies requirement. Teachers reported emphasizing real world, relevant curricula during the summer program. A teacher described this type of "practical" experience and goal:

In summer, for four weeks we take them out into the field. We measure speed, time, distance in problems and measure to build a greenhouse in the garden with geometry, using more practical examples and group work. I want them to use their hands to do work on their own.

SUMMER ENRICHMENT AT MECHS

All MECHS, students are required to participate in enrichment classes in the summers following their 9th, 10th, and 11th grade school years.

- **9th grade:** Students take English and math enrichment courses taught in small groups of no more than 20 students to prepare them for 10th grade.
- **10th grade:** Students take English and math enrichment with a focus on preparing them for the Accuplacer test and college-level academics.
- **11th grade:** Students take a political science and economics course.

Literacy Development

From its inception, there has been a focus on schoolwide literacy at MECHS. This resulted from a sense that incoming students needed intensive literacy support to be successful in both high school and college courses. Under the guidance of the principal, the school developed a literacy committee that considered how to integrate literacy into all classes across the school, regardless of discipline. A teacher observed that, "through professional development and collaborative planning time," the importance of literacy deepened:

Teachers came to agree that it's everyone's job to promote literacy and let students know that you have to be a literate person to be a successful person. So very early on we started off with word walls and then we started off with journal writing.

¹⁴ Smart Scholars is a New York State program supporting Early College High Schools. For more information, see <http://www.nysed.gov/postsecondary-services/smart-scholars-early-college-high-school>.

The staff agreed upon an interdisciplinary approach to addressing literacy and started small, with all teachers posting monthly word walls and discussing those words regularly with their students. Once everyone implemented word walls and noticed that students were mastering the vocabulary, they were willing to try additional, new strategies. As MECHS developed the work on literacy over time, areas of focus have included:

- integrating timed writing into all subject areas,
- developing a common rubric to evaluate the timed writing,
- implementing sustained silent reading in classes, and
- developing an argument through writing (as articulated through the Common Core standards).

Teachers and administrators at the school attribute the success of their efforts to advance literacy to teachers' consistent implementation of whatever literacy strategies were agreed upon across all subjects. This instructional emphasis was also supported with ongoing professional development provided by an external literacy expert, structured to model literacy-based strategies that teachers could integrate into their lessons. For more information about the literacy plan timeline at MECHS, see Appendix C.

In addition, teachers took time to align the high school curriculum with college expectations, while also making sure to address high school standards. Students were better prepared for college-level work, as explained by a teacher:

In the beginning, our kids did not appear to be really to the standard that they would have liked to see in SUNY Erie as far as writing skills because we were writing towards the [New York State Regents exam], rather than writing at a collegiate level.

Real World Learning Experiences

Buffalo MECHS teachers and professors from both of the college partners spoke about ways they provided real world learning opportunities for students. At the high school, these opportunities were particularly prevalent during the summer enrichment program and in the technology literacy class, where student were learning how to use computer programs they would need for their high school and college coursework, as well as for future employment.

Students, enrolled in college courses at both SUNY Erie and Buffalo State University, were engaged in courses where faculty members strove to relate the content to their lives, whether through current event topics, communication and application of psychology theories in their relationships, or community-based action research addressing real world challenges. A teacher mentioned incorporating "regular journal writing" into lessons, specifying, "I choose a current event or some societal issue and ask for their feedback and then create a discussion around this." Two college faculty described their curriculum:

It's a human interactions class. We talk about communications from everything from first impressions, all the way through building relationships. We talked about stages of relationships from acquaintances, all the way up to romantic relationships and familial relationships.

The final culminating project for this was a community action research project where the kids had to perform an investigation where they had to address a real world challenge that impacted teens. And so they had to prepare an eight to ten page report and they had to go out and interview teens. They had to develop questionnaires. We did a little bit of visual ethnography where they had to take some pictures and use pop culture to articulate some of their findings.

Seniors also participate in a job shadowing day when they could learn more about the career paths they were considering. Some of the experiences shared by staff included “riding along in a police car,” “accompanying the mayor or a councilperson,” or “assisting in a health care facility.” Students would then write a reflection about their experience. A student alumnus shared his thoughts on career preparation provided by the school:

It’s still hard work but Middle College does let you get a step ahead. It allows you a lot more opportunities, whether it be internships or just the credits in general. You’re eligible for more jobs straight out of school.

Technology

Students at Buffalo MECHS are explicitly taught how to use technology in order to be successful in both their high school and college classes. All freshmen take a computer literacy course called, “Introduction to Computer Applications”, which incorporates the applications, platforms, and technology skills students need in high school and college. This course seeks to address an issue which one teacher described in the following way: “Many students of the digital age are knowledgeable about using technology to support social interaction but less skilled at using it for learning.”

Teachers and professors at Buffalo MECHS also use technology in support of teaching and learning, including the use of devices like calculators, computers, interactive whiteboards and document camera projectors. Additionally, the science department experimented with using a “flipped classroom” approach, where students watched videos of lectures or content outside of class so that when they came into class, they could engage in more hands-on activities.

Several teachers expressed that, historically, they had been reluctant technology adopters but that they had slowly moved away from their overhead projectors to devices like the interactive whiteboard and Elmo projectors (a type of overhead projector) that allowed for more student interaction. Additionally, the shift to fully remote instruction forced a change in their technology use.



4. PROVIDING COMPREHENSIVE STUDENT SUPPORTS

Providing comprehensive student supports to meet the academic, affective, and social needs of students is the second MCNC design principle. Multiple people at the high school, SUNY Erie, and Buffalo State University specifically referenced prioritizing support structures, as they believe that support is key to “setting the students up for success.” An administrator highlighted the connection between teaching and learning and supporting students:

Obviously teaching and learning is very important, but if those kids didn’t think people invested and cared about them, teaching and learning won’t come. You can be the smartest teacher in the world, but if you don’t have a relationship with your students, then I don’t think they’ll be successful.

Building Relationships

High school classes at MECHS typically range from 17 to 20 students, which is smaller than the district average. This small size allows teachers to provide a broader range of supports for students and to develop close relationships with them. One teacher described the culture at the school as one in which “the majority of our teachers know our students well and help them academically and socially.” Another teacher added, “The teachers create a bond and relationship with their cohort of students, especially the teachers who loop for three years with their students.”

As students transition to spending their days on the college campus in their senior year, they still report to the high school building for their “Seminar” classes (see section on Support Classes). The school also has extended supports by physically situating staff on each of the college campuses—either an academic liaison or a special educator, depending on the campus. At SUNY Erie, the special educator attends English, math, and social studies classes with students to be able to better provide assistance. These two staff members connect with the high school seniors on a daily basis and each has a college or university counterpart with whom they work to facilitate supports for students.”

While there are formal components to this partnership, the two college liaisons report developing friendships with their counterparts in the school, allowing for frequent and informal communication. The liaisons connect regularly with the high school guidance counselors, the school social worker, and the principal, allowing for open lines of communication about the progress of individual students.

College and Career Guidance

Members of the school faculty and administration aim to explicitly discuss the MECHS college academic program with students from the time they enter the school community. The founding principal elaborated on this message:

From day one of high school, I mean at freshman orientation here, the conversation about college is starting at the same time as the conversation on high school. The expectation is just built in from day one. It means something to kids when it's just an assumption that you will do this. We expect you to do this, and we believe that you can do this because we've done it before.

The high school guidance counselors and the school administrators meet with each individual student to discuss the student's individual goals and preferences in terms of career pathways and course options at the two partnering colleges. During these conversations, the students and the educators decide on whether the student will pursue courses at SUNY Erie or Buffalo State University during the senior and fifth years. As the coursework at Buffalo State, a four-year college, was described as "more challenging," students who struggle academically are more likely to attend SUNY Erie. Students also meet with the college liaisons to plan their course-taking; choices are guided by whether each course aligns with high school graduation and college matriculation requirements, as well as students' goals and interests.

Support Classes

Academic supports to ensure success in college coursework include college readiness support classes and tutoring. Notably, students engage in college readiness support classes across all four years at MECHS. As 9th and 10th graders, students take "Focus," which is a credit-bearing advisory class, and in 11th and 12th grades, they take "Seminar."

MECHS COLLEGE READINESS SUPPORT CLASSES (FOCUS AND SEMINAR)

- **9th grade:** MECHS 9th graders participate in Focus class twice a week. The Focus curriculum is based on Sean Covey's *The 7 Habits of Highly Effective Teens* and topics include an introduction to the school, an understanding of learning styles, and an exploration of careers and career paths.
- **10th grade:** 10th graders continue with Focus classes twice a week, with topics that include public speaking, organizational skills, and physical and mental health.
- **11th grade:** All students participate in Seminar classes two to three times a week. Seminar classes help students navigate their college classes and guide them as they complete college and career readiness tasks such as creating a professional email address, writing a college admissions essay, and writing a scholarship essay.
- **12th Grade:** 12th grade Seminar provides seniors with structured support and guidance in applying for college, scholarships, and financial aid, as well as career readiness tasks such as creating resumes and cover letters.

Focus: Focus is a credit-bearing course that every MECHS student in 9th and 10th grade is required to take, though the structure of the course differs at each grade level. The course meets twice a week for 40 minutes. As 9th graders, students follow a curriculum based on Stephen Covey's *The 7 Habits of Highly Effective Teens*. The school-wide expectations, outlined in the acronym KATS (for Be Kind and Respectful, Be Accountable, Be Timely, and Be Safe) are also introduced and reinforced in the 9th grade Focus curriculum.

At the 10th grade level, small groups of students engage with a teacher on a specific topic for ten sessions before rotating to a different teacher, who addresses another topic with them. This curriculum is collaboratively developed by the high school teachers and includes units on public speaking, college readiness, social emotional learning, and organizational skills. There is flexibility at each grade level to address topics of concern that arise with each particular group of students, including mental health or hygiene. Currently, there is an effort to shift the 10th grade Focus curriculum to address more social and emotional topics, including topics related to diversity, conflict resolution, and self-advocacy.

Seminar: In 11th and 12th grade, students shift to taking Seminar, which serves the dual purposes of helping students to be successful in the college courses they are taking as well as preparing students for the college-going process — preparing for and taking the SAT, completing the FAFSA (financial aid forms), and developing a professional resume and cover letter. The Seminar teachers can contact professors if there are any issues, and, especially at the start of each semester, they make sure that students read and understand their course syllabi. They also provide opportunities for students to collaboratively troubleshoot problems that may emerge, rehearse presentations, or work on assignments. One teacher described Seminar in the following way:

Seminar is a time for us to look at what's going on in their college courses and to discuss how are they feeling. It's an opportunity for us to not only look at it, but also talk about what is going on with them. Are they feeling comfortable; are they concerned or become stressed out? We look at some areas where they feel they need improvement—how to organize their work and study strategies that might be effective.

Teachers and administrators evaluate the successes and challenges of Focus and Seminar at the end of each year. Continuous, ongoing re-evaluation and flexibility has helped MECHS to meet the students' needs as well as keep the curriculum and teaching strategies fresh and relevant. As shared by the founding principal, "Each summer we reflect and make the necessary changes to the Focus curriculum to meet the students' needs better as well as address the world changes and better prepare the students for what they will be faced with at the college." A recent student alumnus shared, "I like the close learning that we have early on from Focus to Seminar. This really built a lot of close relationships between us and the teachers and even the principal."

Tutoring Supports

Buffalo MECHS students are able to access supports at the college as well. At Buffalo State University, the college liaison instituted a tutoring/mentoring program that uses MECHS student alumni as tutors. She remarked, "Who better to help them than a student that's already been through their situation, understands exactly what it feels like to be in high school but taking college classes." In order to formalize the use of tutoring, students have a specific time on their class schedule when they are expected to attend tutoring. There is a daily sign-in requirement at the support center, which also serves to hold students accountable for the high school daily attendance mandate. At SUNY Erie, students are able to use the tutoring center along with other students.

Social and Emotional Supports

For many years, MECHS had one counselor, a part-time psychologist, and part-time social worker. The social worker was brought on full-time, and currently, they have two counselors and also a full-time psychologist. The principal at Buffalo MECHS, a former special education teacher, prioritized supporting students' whole development. One way she communicated this priority was by using discretionary funds to enable a social worker to work full time at the school. The social worker is central to supporting the implementation of the school's Positive Behavioral Interventions and Supports (PBIS) program,¹⁵ from sharing the school-wide expectations (KATS – Be Kind and Respectful, Be Accountable, Be Timely, and Be Safe), to facilitating the student of the month nominations for each grade level, to holding the quarterly KATS assemblies that recognize perfect attendance and good student behavior. There is a tendency to be proactive, rather than reactive in providing affective support for students, which is evidenced through the Focus and Seminar curricula, as well as the PBIS initiatives.

¹⁵ PBIS or Positive Behavioral Interventions and Supports is a framework used by some schools to support students' academic, behavioral, social and emotional health. See <https://www.pbis.org/pbis/what-is-pbis>.

MECHS also provides opportunities for students to engage in typical high school extracurricular events, like sports teams, school dances, school trips, and prom. Several staff and student alumni reported that everyone—teachers, families, students, and administrators alike—attends these events, creating a strong sense of community. A teacher talked about the expectation of being involved with students outside of the classroom, sharing, “Teachers are involved in the community, doing more than just their teaching assignment. There is really kind of this expectation that you’re involved in these different ways and supporting kids outside the classroom.”

Teachers also regularly filled counseling and mentoring roles in “organic ways” because that expectation is engrained in the “culture of the school.” Teachers reported that it is common for the staff to stay after school for tutoring or helping with homework. Since the English, social studies, and math teachers loop, a teacher described becoming “emotionally attached to the kids and they get attached to us since we’re there to help them and we begin to become more than just a teacher to them.” Other teachers pointed to the hiring process, noting that the principal prioritized hiring teachers who “were nurturing and caring” due to the reality that students would need support in meeting the school’s rigorous expectations. The principal indicated that “everyone’s door was always open” and “everyone wore the hat of teacher-counselor.” The long-term impact of these supports was detailed by a student alumnae:

Just having that support I had at Middle Early College, I felt I could go further. I’m doing my Master’s right now, and I could just hear my old teachers’ voices in my head saying, ‘Just relax, take your time with this research paper. You’re doing great. You’re making progress.’ And that’s my goal to keep moving forward so I can be successful and I can be a leader for my babies. Having great teachers in my life has helped mold me into the person I am today.

Teachers are helped to understand this combined role by participating in professional development. A part of this was learning how to implement restorative practices, something that has been a part of the school culture since its inception. The founding principal shared, “I did a lot of this before it was you know, a big deal, even when I taught — we’re going to sit down and we’re solving the problem and it’s not going to happen again.”

Parent and Family Engagement

Buffalo MCHES has a “family culture” and teachers see many of the students as part of their family and vice versa. The school also emphasizes close relationships with parents. To communicate the school’s expectations, administrators reported contacting families about everything, big or small, in the freshman and sophomore years. A student alumnae echoed the close communications between the school and student families: “I feel like everyone at Middle Early College were invested in us and they had a great partnership with the parents. They were definitely hands-on and also regularly contacting our parents.”

PARENT AND FAMILY ENGAGEMENT AT MECHS

- Mandatory freshmen orientation at the beginning of the school year for two days – first day with the parents and second day with the students.
- Matching families with local social service agencies for food and holiday expense assistance.
- Regular contact with parents and guardians using phone calls and the *Remind* app.
- Parent nights to discuss MECHS expectations for entering students, and college selection for 11th and 12th graders.
- Family conferences regarding college and career choices.
- Family engagement events such as raffles and cakewalks.

Teachers attempt to make initial contact with families positive rather than waiting until challenges arise. Several use technology like the *Remind* app in addition to email because it makes staying in contact with students simple. Communication about expectations as students approach their junior and senior years occurs through parent nights, where the school brings in speakers such as Buffalo State University and SUNY Erie administrators and/or faculty who talk to parents about their college courses and institutional programs.

Parents are also an integral part of the planning process as students are deciding which partner college they will attend in their 12th grade year. Parents, students, the college liaison, and the guidance counselors meet to collaboratively determine which next step is the best for each student.

Should families need additional support with securing food or being able to celebrate during the holidays, the school matches families with city agencies or provides resources. For example, a teacher shared, "At Thanksgiving time, we know that some families are struggling at home. We mention it at common planning time and pick two to three families to support at holiday time. We're a tight knit group. Kids trust us."

Focus group interviews with student alumni indicate that students value and appreciate the supportive environment at MECHS. They mentioned how the school "cares about us," "is proud of us," and "wants us to succeed." One alumnus shared, "They want you to do good, they want you to do better and grow and be the best that you could possibly be." The following quotes from two student alumni further elaborate how they felt supported:

The environment is they will support you from the teachers up to the principal. They are your best cheerleaders. They're your first mentors and they're your best disciplinarian because it's just a different way about the school mechanics and how they foster those relationships.

They see the potential in you and then they make the support relentless, but in a way that's new to a lot of us, obviously within my community to have that kind of affection, but also the disciplinary effort and motivation. I didn't have that; my family couldn't give it to me.

The sense of "family" fostered at MECHS was mentioned multiple times during focus group interviews with student alumni. For example, one former student stated, "The amount of love you feel from them people at that school is like indescribable. It's just a family. Family, that's it." Another added, "MECHS is a second family – a five-year commitment and beyond."



5. COLLABORATING WITH COLLEGE PARTNERS

MECHS partners with both a two-year community college (SUNY Erie) and a four-year institution (Buffalo State University). MECHS had always been physically located within walking distance to SUNY Erie until 2013 when the high school relocated to another site, within another high school building. However, Buffalo State University has always been located further away. As a result, MECHS students take shuttle buses organized by the school to participate in college courses on the college campus.

MECHS COLLEGE PARTNERS

SUNY Erie

- Two-year college (associate degree)
- Three campuses in Erie County, NY
- 8,140 enrollment, fall 2021
- MECHS partnership established in 2002

Buffalo State University

- Four-year college (bachelor's degree)
- Buffalo, NY
- 7,173 enrollment, fall 2021
- MECHS partnership established in 2015

Successful partnerships are perceived as beneficial to both the high school and the postsecondary institutions. Both postsecondary institutions appreciate that the partnerships lead to increased enrollment in their respective institutions, as well as better retention rates because MECHS students complete at higher rates than the traditional students who attend the college. For example, a college representative explained, "We do track the students that come from MECHS and graduate from Buffalo State. That information is shared with the provost so that he understands the role of Middle Early College and he can promote that to the cabinet."

Additionally, involvement with MECHS aligns with both colleges' larger goals related to community engagement. As a Buffalo State University representative said, "Our college president's mission and everything that she is prioritizing in terms of us being an urban-engaged campus, in terms of partnering with the community and becoming part of the community — this program is a big part of that."

There is a similar feeling at SUNY Erie, according to a college representative, "Besides enrollment, the partnership benefits professors because exposure to the non-traditional group opens their eyes a lot. It makes them rethink how they do things as far as being more kind, more compassionate."

The partnerships between MECHS and the partnering colleges have evolved over time, beginning as a result of formally articulated agreements but growing and changing in ways to best serve the students. The founding principal recalled meeting regularly with SUNY Erie when the school opened:

We did monthly meetings with [SUNY Erie]. It was an open meeting after school and anyone at the college could come and share, complain, whatever. At the beginning it was brutal — bad complaining of how kids were not prepared. I tried to stay positive and we took their suggestions. We thought we needed to be transparent and that all voices should be heard.

There were more meetings in the beginning of the partnerships. As the relationships developed, communication, while still regular and ongoing, became less formal. During regular meetings with Buffalo State University, all aspects of the partnership were addressed, like how to arrange for tutoring at the college, getting the high school students access to the cafeteria since they were on campus all day, figuring out how to register them for their classes, and determining which courses and which faculty would be best for the high school students. The Buffalo State University liaison described the relationship between herself and the founding principal as built on “robust communication and a high level of trust.” This allowed them to “problem-solve around the inevitable challenges” that occur in a venture like a MECHS.

While communications have become more informal over time, it appears that the high school principal's communication initiative and advocacy for the program have been essential to the success of the college partnerships. College liaisons from the two partnering colleges elaborated on the effective communication of the MECHS leadership:

[The MECHS founding principal] is really good at advocating for her students and then advocating for what she needs to have in place and then just in terms of logistics, she is good at sharing that information.

[The principal's] ability to communicate clearly and regularly about MECHS has led to a better partnership because needs and expectations are explicitly stated and shared, and therefore are more easily met.

A district representative reflected on the challenging nature of college partnerships and emphasized the school leadership and staff's persistence and positivity: “Partnerships aren't always perfect and blissful, right? But the unique thing about Middle Early College is that they always found a way to work through it. They always found a way to stay positive.”

Early College Liaison

MECHS has a designated Early College liaison for each of its college partners. At SUNY Erie, a case manager at the community college performs the role of liaison. At Buffalo State University, the liaison's official role is at the executive director level of one of the college's offices. Thus, at both colleges, the Early College liaison role is only a percentage of a staff member's job responsibility. One of the college liaisons stated that the MECHS partnership role has involved “a lot of meetings and a lot of legwork,” but also is “the best thing that has happened to me.”

The liaison, in many ways, functions as a champion of MECHS on the college campus. One liaison described herself as being “totally Middle College — the advocate, liaison, go-to person.” If something needed to be done to support the students, she was the one to make sure it gets done. A second key aspect of the liaison role is being able to understand and negotiate between the high school and the higher education worlds so that there is empathy and understanding for the needs of both institutions, in a practical and realistic way. Being able to translate the high school's priorities into language that makes sense to the postsecondary institution is key, especially with top leaders like the college president and/or provost. Having access to these upper administrators and the ability to frame the MECHS program in ways they will appreciate is essential for the liaison.

The liaisons are also the point people for communication between college faculty and the high school, especially when students are struggling in their college classes. One liaison stated, "Professors are really supportive and know to come to me if there's any issues." She added, "I think the trust I built with the faculty is really important."

The college liaison on each campus also takes the lead on gathering and monitoring data on student attendance and achievement. This information is typically shared with the school principal and college leadership at the mid-semester point, and close to the end of the semester. This responsibility is closely related to the communication with faculty members about students and their success.

In the case of SUNY Erie, the liaison continues relationships with students who attend the college after graduating from MECHS. As one teacher shared, "They're still a liaison of MECHS. It's a college staff but somebody who they can go and ask questions. All the kids know that they have no problem going and asking her for help if they need it." A student alumnus shared, "[The liaison] will help any of us that's on campus. I used to be in her office all the time." Two other alumni added:

[The liaison] knew every MECHS student that goes to SUNY Erie. She knows what classes they take and how they're doing. She makes sure that we're staying on top of our stuff, basically. It's really nice to have somebody there because it can get overwhelming.

A real plus is that MECHS has people that work with our school that are on campus at Buffalo State and SUNY Erie so they're there to help you. The reason why we're successful is because we also have that support system at the college.



Campus Home Bases

Both Buffalo State University and SUNY Erie have a MECHS office on the campus. Students can use this space as home base and they are designed to be places where students can feel “completely comfortable.” Buffalo State has a suite that is staffed by both college personnel and an MECHS high school staff person who is at the college a few times a week to check in on students and connect with college faculty and staff. SUNY Erie has an office space for the MECHS special education teacher who is there full-time to work with her students. The college liaison from SUNY Erie is there all the time in an attached office. These offices also function as the hub for student supports and tutoring so that students always have a place to go if they need help or have questions.

In addition, traditional academic and student supports are offered in the designated spaces. A Buffalo State University representative talked about using this space on their campus for multiple purposes:

Buffalo State has invested a lot into this partnership in terms of creating this academic and tutoring center that is specific to MECHS students. We have a computer lab for the students and a conference area space where we can do workshops. We just have space for them where they can come and they can eat their lunch and they can just charge their phones, sit down, take a breather.

Faculty Engagement

While there was some initial resistance from certain college faculty members about teaching high school students, that resistance appears to have mostly disappeared. As mentioned earlier, collaborative efforts have been put forth to find faculty members at both postsecondary institutions who are excited to have MECHS students in their classes. As a school staff person commented, “Some of those professors will tell you, they’re the best kids, they’re the most well behaved. They’re the ones that are there all the time [and] they’re engaged in the class.” One professor explained his commitment to the program:

Having worked in outreach programs, having worked as a classroom teacher, I immediately knew the benefit of creating a space and the opportunity for young people to visit college campuses, take college courses, and begin to see themselves as those intellectuals and emerging scholars as I see them. So, it wasn’t much of a hard sell to me when they invited me to take part in Middle Early College.

Another important feature of the partnership with each college is the collaborative work done by college and high school faculty to make sure that students are well-prepared for their college classes, especially in English and math. During the early years of this partnership, the SUNY Erie English Department chair met once or twice a month with the high school English teachers to discuss ways to better prepare students for college level writing. Coming out of these conversations, the high school teachers complemented the Regents preparatory 11th grade English curriculum with extra opportunities for rigorous writing. They would then share writing samples with the college department chair for review and discussion. Similar work was done in math. College and high school faculty met to incorporate material from the first college-level math class into the 11th grade Algebra II course. According to the MECHS leadership and teachers, student performance in college classes markedly improved after these changes.

6. PRACTICING A CULTURE OF CONTINUOUS IMPROVEMENT

The fourth MCNC design principle is a culture of continuous improvement. This design principle has two main components: 1) professional development, particularly in terms of improving instruction, and 2) the use of data for the continuous improvement of school structures and practices. The basis for the enactment of these components is the presence of a school culture that is conducive to learning and growing.

School Culture

The family-like culture at the school allowed for many formal and informal collaborative professional development opportunities to occur, frequently in connection with improving outcomes or the schooling experience for students. In general, teachers and staff members at the school described a culture of collaboration and a commitment to continuous improvement that was modeled by the principal and then emulated by the school community. A college representative described the “small community” at MECHS school:

MECHS is a small community-oriented school. The teachers all know each other extremely well. Then as a result of that, it models the kind of community that they expect students to have as a student body. And so the students know each other, extremely well. And the students get along with each other well.

Members of the MECHS staff describe a culture of collaboration permeating the school. One teacher explained that “we’re a family and that part makes it a lot easier. It’s a lot easier to work with people when you feel that connection with them and you want to see them be successful and you’ll be successful.” Another noted that “the principal had us have ownership and it was like a pride thing like, when we saw that it was working, we actually got to say, ‘Hey, I was part of this.’”



Professional Development

The school also prioritizes school-based planning and professional development for teachers, including common planning periods built into the weekly schedule and a school-based peer-review process that celebrates the strengths teachers bring to the school community.

MECHS uses the “Middle College National Consortium 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. Other teachers engage in a question-and-answer time with the peer-reviewed teachers. A 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.”

MECHS PROFESSIONAL DEVELOPMENT OPPORTUNITIES

- Weekly common planning periods
- Peer observations and feedback
- Staff literacy team, guided by a literacy specialist
- Schoolwide weekend and summer professional development sessions
- Buffalo Public Schools district professional development
- Participation in the Middle College National Consortium conference

In addition, a literacy specialist worked with the staff during the first year of MECHS’ opening and for several years afterward, supporting the development of a school-based literacy team. The team was made up of teachers from multiple disciplines who made recommendations, in consultation with the literacy specialist, about shared next steps the whole school would take. The principal explained, “The literacy team was key; we had a focus point and built upon it as a team. It never had been a mandate; it was decided as a team.”

More recently, MECHS staff transitioned to collaborating with a literacy specialist with a grounding in the Common Core. Biannual visits allowed the literacy specialist to spend time in classrooms of interested teachers prior to a day-long professional development session. One teacher described the value of this practice, noting, “I find that so beneficial because [the literacy specialist] takes the time to go into our classrooms. He’s pulling out examples from our actual classroom. So it’s not like you’re learning the research behind it; you’re learning the practical!”

The literacy specialist initially focused the professional development on the Common Core Standards, particularly the argumentation standard and then the others that can be used as a way to support arguments. Since teachers agreed that college-ready students needed to be able to complete writing tasks that show that they can find and use evidence effectively, it was “relatively easy” to get teacher buy-in for this emphasis. The development of a school-wide writing rubric was an essential component of this writing initiative.

Over time, the literacy specialist began including an emphasis on growth mindset. This change reflected a combination of district priorities, school values, and national attention to the importance of growth mindset in student learning. During the spring of 2020, the emphasis shifted again. Due to the global COVID-19 pandemic, the professional development focused on using technology to support literacy.

Teachers also reported participating in district-offered opportunities. Topics included in these sessions were perceived as being helpful. For example, one teacher described professional development focused on trauma to better understand their students:

Some of our kids face trauma every single day. So, going through that training was really helpful to realize what some of these kids may be coming from and how do we help them and make sure that our classrooms are good places for them to come to.

Participation in the national Middle College National Consortium conferences also supports the school in engaging in continuous improvement. These conferences are designed for school teams to spend time learning about emerging practices from peers and national experts, followed by time working together on ways to continuously improve student experiences and outcomes. Buffalo MCEHS regularly sends large teams to these events.



Staff Meetings

The MECHS staff meets as a whole at the beginning and end of each year to discuss major changes to schedules, processes and curriculum. Periodic all-staff meetings are also held throughout the year to revisit and update expectations, discuss district initiatives, and handle issues that arise with students or college partners.

MECHS teachers within the same department share a common period when they are able to plan, discuss curriculum, and look at data. For example, teachers described reviewing an assessment and student responses, to doing data analysis of student grading to ensure “we’re all seeing the same thing.”

The school also has regularly scheduled after-school grade-team meetings, which allow for all teachers in a single grade to meet with the school social workers and guidance counselors to discuss concerns about particular students. While these meetings are not mandated, they are highly recommended and the school has used Smart Scholars funding (mentioned previously in the Summer Enrichment section) to compensate teachers for their time outside of the school day. The conversations about students are seen as particularly valuable because they allow an alignment between what teachers see inside the classroom and the supports provided outside of that space.

Common planning time during the summer is used to review and revise the curriculum for Focus and Seminar. Teachers consider their lived experiences in implementing the curriculum, areas of student success and challenge, and any social or contextual shifts that should be addressed in the curriculum and make changes accordingly.

Data Collection and Analysis

Teachers, the guidance counselors and social workers, and the school administrators all monitor student achievement data regularly. This occurs in relation to both the high school and college classes students are taking. A particularly clear example was the decision to focus professional development on literacy. This decision was rooted in reviews of student achievement on eighth-grade standardized assessments and then on student writing tasks in high school. Attendance and achievement data in the college classes are also reviewed by the college liaisons and shared back with the high school teachers so students can be supported when struggles occur.

STUDENT DATA COLLECTION AT MECHS

- Student high school assessments and grades
- State test results
- College attendance and coursework data
- High school graduation rates
- Associate degree completion rates
- Student surveys to collect student opinions and perspectives

Data were also pivotal in telling the school's story to district and external stakeholders who may not "fully understand" the work MECHS was doing to equip underserved students with college courses. Both the school administrators and faculty mentioned the pressure to "regularly share and present" outcomes and student support services to external stakeholders. According to the principal, "We were saved by our data many, many times." A student alumnus mentioned a similar sentiment:

The school has faced so many challenges throughout the years because people didn't really get us. Or maybe value it. I remember kids went to board meetings to defend our school. Knowing the opportunity it offers, even if it's just one kid, that's one more kid who needs it in the city of Buffalo — to have an opportunity to taste the college experience, college level classes and really mature in an environment on a college campus.

7. CONCLUSION AND LESSONS LEARNED

This report aims to describe how Buffalo Middle Early College High School (MECHS) created a school that leads to successful experiences and outcomes for students traditionally underserved in society. As has been seen in national research on Early College High Schools, Buffalo MECHS student outcomes are impressive. The vast majority (91%) of students at MECHS are non-white with African Americans (73%) making up the largest racial minority group, and 75% of MECHS students are economically disadvantaged. Yet, graduation rates for MECHS have been consistently higher than that of the Buffalo City School District. Since the school opened, each 12th grade class has earned an average of 30 to 52 college credits upon graduating from high school. Over the years, the majority of MECHS students who continue on to SUNY Erie for a fifth year earned their associate degree at the end of that school year.

But how was this done? In collaboration with the Middle College National Consortium (MCNC), the founding principal and her school staff, along with their college partners, developed a series of practices aligned with the four MCNC design principles, as described in chapters 3-6. They understood that it would take time to refine each approach and have championed continuous improvement to keep refining their practice over time.

The school was designed from day one to meet the needs of traditionally underserved students, especially those from racially minoritized backgrounds. Other Early Colleges have struggled with how to enroll the students who could most benefit from dual enrollment experiences, while also making sure that the students and the school would be successful. Buffalo MECHS has achieved this. Some key takeaways and lessons for other Middle and Early Colleges are summarized below.

Students Served

- Schools should be clear about what students they want to serve from the beginning and organize their offerings to meet their needs.
- Recruiting targeted students requires being intentional about the selection criteria. MECHS seeks students with middle-range grades and a desire to participate in college coursework starting in high school.
- It should be expected that college faculty will be concerned about whether high school students can handle college coursework and behave appropriately. These concerns can be overcome by collaborating on student supports and rapidly addressing any concerns that arise.



Academic Program

- Students with greater academic need can be successful in college classes with the right on-ramps such as a strong high school curriculum, teachers who understand college expectations, and opportunities to learn college readiness skills.
- Summer enrichment programs give students a chance to receive focused attention in areas that will prepare them well for subsequent high school grades and ultimately, college.
- Strong literacy skills are foundational and should be an explicit focus within the academic program.
- Students should have access to a clear “map” or academic plan that lays out what courses they will take to graduate from high school with substantial college credits earned, or even an associate degree.
- Students’ first college courses should be carefully selected to give them a true college experience while being reasonably sure of success.
- Career-focused classes and hands-on learning help students to find education relevant. They also provide students with skills and credentials that will allow them to enter good jobs after high school, if they wish.



Student Supports

- A family-like atmosphere encourages teachers to be at their best. This, in turn, helps students to feel comfortable and supported.
- Students should be assisted to take full advantage of supports at both the high school and the college. This may involve explicitly connecting them to available services, keeping in mind that some handholding may be involved at the beginning.
- Systems are needed to identify students who are struggling in college classes and to make sure that someone follows up with them (and their instructors) to offer help.
- Students are often facing life challenges as well as academic ones. They need regular opportunities to interact with caring adults through regular support classes (Focus or Seminar) or other structures, or through conversations with counselors or social workers.
- Times set aside for adults to talk about the needs of, and how to best support, individual students can be productive.

College Partnerships

- Finding the right people to be involved in the high school-college partnership is critical. This includes identifying leaders, faculty, liaisons, and advisors who understand the school design and the students served.
- Regular meetings between college and high school partners, especially early in the relationship, are key to working out expected (and unexpected) issues.
- Regular meetings and planning sessions between high school and college faculty in the same subject areas, especially math and English, allow for better preparation of students and their smoother transition into college coursework.
- Sharing data across institutions enables productive discussions about how to improve student experiences and outcomes.

Continuous Improvement

- Having a positive school culture creates an atmosphere where change and continuous improvement are embraced.
- Offering the right professional development at the right time is important. Changes in approach and area of focus may be beneficial in response to specific needs identified—which may evolve over time.
- School teachers and other staff need regular times to meet for collaboration, planning, and resolving issues that arise.
- A regular system for collection and reporting of relevant data can become the basis for internal discussions about what is going well and what needs improvement. This also allows a school to make the case for support to relevant stakeholders.
- Data collected should include the outcomes that are of high importance, such as student accumulation of college credits and completion of credentials.
- Being a member of a national Middle Early College organization, such as the Middle College National Consortium, fosters organizational growth and development.

APPENDIX A.

TECHNICAL NOTES

To capture the story of how Buffalo Middle Early College High School (MECHS) provides and supports college course-taking opportunities to low-income and racially minoritized students, we used a case study approach and relied primarily on interviews and document review analysis. We used the Middle College National Consortium design principles — 1) college-focused academic program, 2) comprehensive student support, 3) dynamic high school and college partnerships, and 4) a culture of continuous improvement — as a framework to examine the school's key features and practices, and how MECHS implemented these.

We conducted 22 individual interviews with administrators, faculty, and staff from MECHS and their two partnering colleges, as well as representatives from external organizations. We also conducted three focus group interviews with eight MECHS student alumni. The MECHS student alumni focus groups were organized to include students who graduated in the first two classes of the school (2007 and 2008), those who graduated mid-way through the school's history, and those who graduated most recently in 2019 and 2020 at the time of data collection. Altogether, we interviewed 30 individuals:

School:

- Two administrators
- One counselor
- The social worker
- The data coordinator
- Seven teachers (including two who additionally provide support at the college site)
- Eight student alumni

College partners:

- Three college administrators (including two college liaisons)
- Four college faculty (two from SUNY Erie, and two from Buffalo State University)

External organizations:

- The director of the Middle College National Consortium
- A senior administrator from the Buffalo City School District
- A literacy coach

We created interview protocols aligned with the four MCNC design principles and refined them to examine the implementation of the design features and elements, as well as perceptions of impact. All the interviews were conducted via Zoom during the latter half of 2020 and ranged in duration from 60 to 90 minutes.

Written consent was obtained from all participants to allow for recording of the interviews. Interview transcripts were auto-generated by Zoom and then we formatted the data for organization and analysis. We removed names from the transcripts and assigned a code number to each interviewee. Transcripts were read and coded by the research team with attention to topics, structures, and details that provided insights in relation to the designs, features and practices of MECHS. We discussed themes that emerged in order to establish reliability of coding. Follow-up checks with participants were also conducted to confirm the validity of our data analysis and interpretation.

We also collected and reviewed the following documents provided by MECHS to complement our interview data and get a more detailed description of the school's core features and practices:

- Faculty handbook
- Bell schedule
- Five-year academic plan
- Parent communication letters
- Support classes (Focus and Seminar) syllabi
- College course syllabi
- Summer enrichment agendas
- PowerPoint presentations made to the Board of Education
- College coursework data reports
- Student survey reports
- Data compilation reports
- Middle College National Consortium design principles assessment tool
- Middle College National Consortium Critical Friends Review summary
- News articles

Additionally, to obtain further information about MECHS, we reviewed the school website and the New York State Education Department data website. We created a table to organize the names of the documents or files and developed bulleted notes aligned to the features and elements of the Middle College National Consortium design principles we were examining at MECHS.

APPENDIX B. FIVE-YEAR ACADEMIC PLAN

	Grade 9 Fall	Grade 9 Spring	Grade 9 Summer	Grade 10 Fall	Grade 10 Spring	Grade 10 Summer	Grade 11 Fall	Grade 11 Spring	Grade 11 Summer	Grade 12 Fall	Grade 12 Spring	Grade 12 Summer	Grade 13 Fall	Grade 13 Spring
English	English I (1)	Same	English Enrichment (0)	English II (1)	Same	English Enrichment (0)	English III [R] (1)	Same		College Comp EN 100 (3) OR Coll Writing I CWP 101 (3)	Comp for Humanities EN 101 (3) OR Comp for Stem Disciplines EN 102 (3) OR Coll Writing II CWP 102 (3)		College Major (9-12)	College Major (9-12)
Math	Algebra Year 1 of 2 (1) OR Algebra I [R] (1)	Same	Math Enrichment (0)	Algebra Year 2 of 2 (1) OR Geometry [R] (1)	Same	Math Enrichment (0)	Geometry [R] (1) OR Algebra 2 [R] (1)	Same						
Science	Liv Env [R] (1) AND Liv Env Lab	Same		Earth Sci [R] (1) AND Earth Sci Lab	Same		Env Bio BIO 104 (3)	Contemp Sci SCI 100 (3)						
Social Studies, History & Government	Global 9 (1)	Same		Global 10 [R] (1)	Same		US Hist. & Gov't [R] (1)	Same	Gov't & Politics PSC 100 (3) OR Economics EC 100 (3)					
Physical Education	PE 01 (.5)	Same	PE 02 (.5)	Same	PE 03 (.5)	Same	PE 04 (.5)	Same						
Language	Spanish 1 (1)	Same												
Art/Elective	Computer Literacy (1)	Same		Drawing FA 205 (3) AND Chorus (.5)	Design FA 210 (3) AND Same	College Success UNC 100 (3)	Adv Reading & Study Strat UNC 150 (3) OR Habits for Success UNC 189 (3)			College Major (9-12)	College Major (9-12)	College Major (9-12)		
Seminar	Focus (2x week) (.5)	Same		Focus (2x week) (.5)	Same		Seminar (2x-3x week) (.5)	Same		EC Seminar (2x-3x week) (.5)				
Other	HS Health (.5)	Same												
TOTAL CREDITS		CC: 0 Total HS: 7	HS: 0.5 CC: 0	CC: 3 Total HS: 5.5 Total CC: 6	CC: 3 Total HS: 5.5 Total CC: 6	HS: 0.5 CC: 0	CC: 6	CC: 6 Total HS: 5 Total CC: 12	CC: 6 Total HS: 1 Total CC: 6	CC: 12-15 Total HS: 2 Total CC: 12-15	CC: 12-15 Total HS: 2 Total CC: 12-15	Overall HS: 22 Overall CC: 40-50	CC: 12-15 Total CC: 60-67 Varies based on student's major	CC: 12-15 Total CC: 60-67 Varies based on student's major
Standardized HS Tests	Living Environment & Spanish State Assessments						English III, Geometry, US History & Gov't State Assessments							
Entrance/Exit College Tests	Final Assessments are given after each course; Accuplacer						Final Assessments are given after each course; Accuplacer							

APPENDIX C. LITERACY PLAN TIMELINE

2004	- Decided as a staff that our first step would be to help students identify and correctly utilize complex words both formally and informally - Actively involved all students and staff in developing word walls and created a reward system with the use of Vocab Bucks
2005	- Formed a Literacy Committee with teachers from each core area - Completed a Literacy Weekend Conference with Ruth Vinz, who provided teachers with numerous activities to promote literacy in every classroom and discipline - The Literacy Committee developed an in-service for the teachers to initiate additional steps to the Literacy plan: » Initiated the use of schoolwide editing marks to be utilized by all teachers » Modeled and established the use of Timed-Writing activities in all disciplines
2006	- Gathered teacher samples of timed-writing activities - Held a 2nd in-service to help teachers create optimal timed-writing activities - Developed a Sustained Silent Reading day to promote the importance of reading on a regular basis
2007	- Created a poster with common editing marks, which was developed by staff and placed in every classroom - The Literacy Committee collected timed-writing examples quarterly from each teacher to assess its effectiveness and provide teachers with feedback - The staff identified a list of the most common errors seen across the curriculum in students' writing
2008	- Created a poster with common errors in writing to be placed in every classroom - In order to strengthen students' ability to read aloud and comprehend complex texts, a variety of reading strategies will be introduced, which can be used in every classroom » Think-Pair-Share, Cloze activities, Popcorn reading, and Active reading strategies such as summarizing main ideas, predicting, visualizing and evaluating
2009	- Identifying common complex vocabulary and confusing terminology repeated across the curriculum and on Regents exams - Development of a school-wide rubric for student writing to be used across the curriculum - Initiate Timed-Writing Feedback for teachers
2010	- Continuing growth in vocabulary instruction: Identifying the different tiers of vocabulary: tier 1 (monosyllabic, sight words), tier 2 (high frequency words across the curriculum), tier 3 (content specific vocabulary); uncapitalize following word --> focusing Focusing on introducing tier 2 words to our students and instructional methods - Expansion of the school-wide rubric to include paragraph development/organization
2011	- Vocabulary through morphemes - Expansion on speaking skills and reading fluency skills
2012	- Revisiting the School-Wide Rubric - Focus on writing mechanics and sentence structure - Assessing the students' ability to write "on topic"
2013	- Requiring more "evidence-based" writing from our students, providing feedback with focus on specific rubric categories - Including timed-writing as a grade across the curriculum in every classroom - Select specific categories prior to timed-writing administration so students know what we are looking for - Assigning specific due dates to collect timed-writings from each teacher for ALL students on their rosters