Massachusetts Early College Pathway Initial Program Evaluation

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Submitted to:
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Submitted by:
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Executive Summary

Early College (EC) programs provide opportunities for high school students to take college-level courses while they are still in high school, providing a pathway to support student progression from high school to postsecondary education. EC programs depend on robust partnerships between high schools and institutions of higher education (IHE) and enable high school students to earn a significant number of college credits in a rigorous and supportive environment.

In January 2017, the Massachusetts Board of Elementary and Secondary Education (BESE) and Board of Higher Education (BHE) passed a joint resolution to launch an EC Initiative, intended to support the expansion of EC in Massachusetts and establish an EC Program Designation. In that same resolution, the Boards created the Early College Joint Committee (ECJC), a committee of both boards, to be ultimately responsible for approving the designation criteria and process.

Following an extensive application and review process, the ECJC is also the governing body tasked with ultimately approving designated Massachusetts EC programs as recommended by Department of Higher Education (DHE) and Department of Elementary and Secondary Education (DESE) staff. Designed as a two-phase application process, partnerships of school districts and IHEs were solicited to submit design details of their programs for official designation as a Massachusetts EC program. After the first round of applications, in April 2018, five programs (Cohort A) were selected to receive state designation for their EC programs. In July 2018, the ECJC subsequently granted designation to four additional programs (Cohort B). All designated programs received technical assistance and networking opportunities from the Commonwealth. In addition, Cohort A designees were also eligible for competitive New Skills for Youth (NSFY) grants from the Commonwealth (though designees from Cohorts A and B also received external funding to support their EC programs). Since July 2018, there have been additional rounds of applications and several more programs have been selected to receive state designation for their EC programs; as of June 2019, a total of 17 programs have been designated as a Massachusetts EC program.

In spring 2018, DESE hired ICF to conduct a study of the EC program specifically to include the Cohorts A and B designees. One of the EC programs in Cohort B was unable to participate, leaving eight programs for inclusion in the study. This report presents outcomes of the study.

General implementation trends are as follows:

- EC programs offered several **student support services**, including tutoring/mentoring, transitional college courses, a “stretch year,” study halls, and classrooms with co-teachers.
- Students and staff felt that the pathway was a **good introduction to college**, one which helped some students feel more confident pursuing a college degree after high school.
- Staff found **transportation and scheduling** to be two major challenges during implementation. Scheduling was difficult because it required staff to coordinate between multiple institutions with different rules, schedules, and procedures, while transportation was difficult because it was so costly.

- Survey data suggest that **Latinx[1] students**, despite comprising a large percentage of all EC students, may participate in the 14 specific EC activities asked about on the survey (e.g., participating in college or career advising, listening to guest speaker, participating in a job site visit, visiting a college campus) less often than students from other racial/ethnic groups.

Implementation trends associated with pathway components include:

- Most students surveyed (75%) reported **participating in college or career advising** (e.g., a college and career readiness class, an advising program), while roughly two-thirds of those surveyed (63%) reported having created a personalized college and career readiness plan.
- Most students surveyed did not know if their pathway was **connected to an industry or theme** (66%) while a similar number reported not conducting labor market research during the pathway (61%).
- Most students surveyed reported agreeing or strongly agreeing that the pathway activities they participated in **seemed related to one another** (77%).
- On average, 43% of students participated in an **internship or capstone** project in the 2018–19 school year, for an average of 45 hours over the course of the year.
- More than three-quarters of students surveyed reported participating in several **credential preparation and postsecondary awareness activities**, including learning about options after high school and visiting a college campus.

ICF evaluation staff also identified several facilitators and barriers to implementation. **Facilitators to implementation** included parent interest in the program, buy-in from district staff/officials, geographic proximity to an IHE, and buy-in from external partners and school staff. **Barriers to implementation** included some state regulations (e.g., 990-hour seat time requirement for high school students), aligning high school and IHE schedules and systems, funding, and physical space.

Although a formal outcomes study will be conducted as part of this evaluation in spring 2020, **preliminary outcomes** were identified through the collection and analysis of site visit, survey, and extant student participation data. These outcomes are as follows:

- Meeting various student needs in terms of college and career readiness
- Development of academic skills for students
- Development of employability skills for students[2]
- Exposure to different college and career opportunities
- Increased student confidence
- Decreased financial burden on students and families

Finally, evaluation staff identified promising practices, lessons learned, and recommendations for program improvement, summarized in Table ES.1.

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[1] Latinx is a gender-neutral term used to refer to Latin American racial identity.
[2] Employability skills refer to work-based learning skills such as professionalism, motivation, and time management. More information about work-based learning skills can be found at: Skills Pages Website: Massachusetts Work-Based Learning Sources, Retrieved 18 June 2019 from http://skillspages.com/masswbl/

ES.1. Promising Practices, Lessons Learned, and Recommendations

Promising Practices

- **Co-teaching** provides students with an extra resource in the classroom as they get used to the college course workload.
- Finding ways to incorporate **development of employability skills** into either the advising or academic curriculum is an important part of the program, according to pathway staff.
- Staff and students spoke highly of putting **additional supports in place for students in the transition from high school to college course loads**, including building a study hall into a student's schedule or extending students' first college course across a full academic year.
- Taking time to **plan the program** before implementing it gave staff the time they needed to manage logistics, recruit students, and choose curricula.
- Having one or more staff members with **dedicated time** to the implementation of the program ensures there is a point person handling pathway management and logistics.
- Partnering with IHEs that are **geographically close** makes scheduling easier and partnerships between teachers and staff stronger.

Lessons Learned

- Some programs expressed the importance of **intentionally recruiting students** for the EC who may not see themselves as college-bound.
- **Textbooks and transportation** can be costlier line items than anticipated.
- Staff recommended making sure that high school and college courses **align** in order to reduce the need for withdrawals or remedial coursework.
- Programs must remember to **plan for how students will spend their time** when high school and college schedules do not align.

Recommendations for Program Improvement

Recommendations for entities that are currently implementing state-recognized pathway programs:

- **Intentionally recruit and support diverse student populations** for participation, particularly historically underrepresented students.
- Align the **use of capstones more closely with employability skills**.
- Incorporate **hands-on activities** (e.g., field trips, project-based learning) into the program
- Offer students an opportunity to provide input on **college course selection**.
- **Set expectations** with students about workload, transferring credits, and program activities from the start.
- Provide specific supports for **first-generation college students**.

Recommendations for DESE and DHE regarding the best ways to support designees who are implementing pathway programs:

- Explore **potential disparities in levels of participation in EC activities between the Latinx students and students from other races/ethnicities**.
- Provide **liability and accountability** guidance.
- Provide guidance on **credit transfers**.
- Provide more **professional development** and/or collaborative opportunities for EC programs.
- Provide a **stable funding** mechanism for EC programs.

I. Introduction

Early College (EC) programs provide opportunities for high school students to take college-level courses while they are still in high school, providing a pathway to support student progression from high school to postsecondary education. EC programs depend on robust partnerships between high schools and institutions of higher education (IHE) and enable high school students to earn a significant number of college credits in a rigorous and supportive environment.

EC high schools became prominent in the last 17 years and have had noted impacts on high school graduation and postsecondary enrollment for participating students (Webb & Gerwin, 2014). One study found that EC students were more likely to graduate high school than their counterparts, with 90% of early college students receiving a diploma compared to 78% of students nationally (Webb & Gerwin, 2014). Another study found that EC students were significantly more likely to enroll in college than comparison students, with 80% of EC students enrolled in college compared to 71% of comparison students (Berger et al., 2013).

In January 2017, the Massachusetts Board of Elementary and Secondary Education (BESE) and Board of Higher Education (BHE) passed a joint resolution to launch an EC Initiative, intended to support the expansion of EC in Massachusetts and establish an EC Program Designation. In that same resolution, the Boards created the Early College Joint Committee (ECJC), a committee of both boards, to be ultimately responsible for approving the designation criteria and process. Reflecting significant leadership investment in the Commonwealth, the ECJC is comprised of the Secretary of Education, the Chairs of the BHE and the BESE, and one additional member each from the BHE and the BESE. The Commissioners of Higher Education and Elementary and Secondary Education serve as nonvoting members.

The ECJC is also the governing body tasked with ultimately approving designated Massachusetts EC programs as recommended by Department of Higher Education (DHE) and Department of Elementary and Secondary Education (DESE) staff following the extensive application and review process. Designed as a two-phase application process, partnerships of school districts and institutions of higher education (IHEs) were solicited to submit design details of their programs for official designation as a Massachusetts EC program. After the first round of applications, in April 2018, five programs were selected to receive state designation for their EC programs. These programs were provided technical assistance and networking opportunities from the Commonwealth regarding the implementation of their pathway programs. In addition, these first five designees were also eligible for competitive grants through the Commonwealth's New Skills for Youth (NSFY) grant, worth approximately $140,000 each, to support the development of their EC programs. All five of these programs received NSFY grants. In July 2018, the ECJC subsequently granted designation to four additional programs; these more recently designated programs were not funded through NSFY grants but received similar planning and implementation grant monies funded directly through the state. In addition, all of the designated programs in the study received technical assistance and networking opportunities from the Commonwealth. Since July 2018, there have been additional rounds of applications and several more programs have been selected to receive state designation for

their EC programs; as of June 2019, a total of 17 programs have been designated as a Massachusetts EC program.

In 2017, DESE hired ICF to conduct an external evaluation of its High-Quality College and Career Pathway initiative (HQCCP), which includes the EC Pathways as well as another initiative, Innovation Pathways. This evaluation focused on measuring planning, implementation, outcomes/impact, and sustainability of the first five EC programs to be designated as well as the first four programs that were designated as Innovation Pathways. In spring 2018, DESE amended its contract with ICF to conduct a study of the EC Pathways to include the five original EC programs designated in April 2018 (Cohort A designees) and the four EC programs designated in July 2018 (Cohort B designees). One of the EC programs in Cohort B was unable to participate. Table 1 includes the list of Cohort A and Cohort B designees that were included in the evaluation. This report presents the outcomes of this study.

Table 1. Overview of EC Designees Included in Evaluation

Cohort A Designees
▪ Bunker Hill Community College with Charlestown High School, Boston Public Schools ▪ Bunker Hill Community College with Chelsea High School, Chelsea Public Schools ▪ Salem State University with Salem High School, Salem Public Schools ▪ Massasoit Community College with New Heights Charter School of Brockton ▪ Holyoke Community College with Holyoke Public Schools
Cohort B Designees
▪ Northern Essex Community College with Lawrence Public Schools ▪ Merrimack College with Lawrence Public Schools ▪ Westfield State University with Springfield Public Schools and Westfield Public Schools

In total, there were eight designees across the Commonwealth that were included in the study.

While data collection from the Cohort A designees took place as part of the primary evaluation, from January to June 2019, data collection from the Cohort B designees was expedited, and took place from April to June 2019. Primary data sources included site visits, a student survey, and extant student participation data from school districts. The ICF team analyzed these data and triangulated findings across sources as applicable. Additional details regarding ICF's methodology may be found in Appendix A. This report presents findings from the analysis that are organized into the following topics:

- General implementation of the EC programs and specific implementation of program components—including a discussion of successes, challenges, and mid-course corrections;
- Facilitators and barriers to implementation;
- Feedback from designees regarding the role of DESE and DHE during the implementation phase; and
- Preliminary outcomes of the pathway programs.

This report concludes with promising practices, lessons learned, and recommendations for program improvement.

Program staff from DESE and DHE may use the findings and recommendations included in this report to improve programming and provide targeted technical assistance to designees and other districts and IHEs based on expressed needs as well as program successes, challenges, and promising practices. Recommendations include those which are applicable to current designees as they continue to implement their pathway programs as well as to any new designees or districts and IHEs who may implement pathway programs in the future.

II. Progress toward Program Implementation

The ICF evaluation team set out to measure how designees have implemented their EC programs to date. This section provides related findings on the following topics: implementation of five guiding principles and six pathway components, overall implementation trends, and facilitators and barriers to implementation.

1. Implementation of Pathway Components

As part of the January 2017 joint resolution to launch the EC initiative, BESE and BHE approved five guiding principles for EC programs: **(1) Equitable Access**, with the goal of targeting underrepresented students in higher education; **(2) Guided Academic Pathways**, including those that are well integrated with college and career; **(3) Enhanced Student Support** in both academics and advising; **(4) Connection to Career**, through workplace and experiential learning experiences; and **(5) Effective Partnerships** between high schools and colleges. In addition, using best practices from NSFY, DESE and DHE identified six components for the EC programs that aligned with the guiding principles. These components include: **Advising**, **Labor Market Demand**, **Integrated Instruction**, **Work-Based Learning**, **Credential Preparation**, and **Postsecondary Linkages**. In particular, the advising component supports the second, third and fourth guiding principles regarding guided academic pathways, enhanced student support, and connection to career. Labor market demand, while less prominently featured in EC programs, drives how partnerships choose guided academic pathways (principle 2), as well as how students are encouraged to make a connection to career (principle 4). Integrated Instruction also speaks to both guided academic pathways and connection to career. Work-based learning, while less stressed in the EC pathways (compared to the Innovation Pathways), has been recognized as one of the most effective ways for students to make a connection to career. Credential preparation and postsecondary linkages are the hallmark of the EC initiative as all partnerships must demonstrate that students have access to a minimum of 12 college credits. Postsecondary linkages also depend on effective partnerships (principle 5) between high schools and postsecondary education institutions. Finally, all the components at play support the most important principle of equitable access (principle 1) as well as demonstrate that effective partnerships have been achieved. The following subsections describe each program component in more detail, how the EC programs implemented that component, and student participation in and perceptions of that component.

1.1 Advising

Advising combines career advising with personalized college and career plans for each student in the pathway program. Advising includes career and college access training and education for students in pathway programs.

According to extant student participation data, EC programs offered a large variety of advising services. The most popular services offered by designees were individual (i.e., one-on-one) advising sessions (90%), workshops (75%), speakers (55%), and classroom lessons (50%). For additional information about how activities were broken out by Cohort A designees and Cohort B designees, see Table D.2 in Appendix D.

According to the student survey, nearly three-quarters (75%) of student respondents reported participating in college or career advising activities, including a college and career readiness class. While 9% of students were unsure if they had participated in advising activities, 17% believed they had not (see Figure 1 on page 11 and Table C.5, Appendix C).

Of those who did report participating in advising activities, 61% found general advising activities to be "very" or "mostly" helpful (see Figure 2 on page 12 and Table C.10, Appendix C). Similarly, 81% of survey respondents believed that the pathway program has provided them with enough advising opportunities to help them make choices after high school that are right for them (see Table C.11, Appendix C).

Although extant data demonstrated that a wide variety of advising services were offered by all designees, advising discussions during site visits focused largely on three main advising services: advisory classes, summer programs, and college and career readiness workshops. The following sections include detailed information about these three services as well as individual advising sessions.

Individual Advising Sessions: According to extant student participation data, students spent an average of 50 hours over the course of the school year in in-person career/academic advising sessions and 7 hours in online or virtual advising (see Table D.3, Appendix D).

Advising Courses: Designees supplemented their respective pathway's academic curricula with advisory courses that were either off-the-shelf or self-designed. Two schools used the Advancement via Individual Determination (AVID) program to help students develop employability skills[3] and other college and career readiness skills, while the others used local non-governmental organizations or school staff to design similar courses. Some teachers said that they felt that the AVID program was only useful for those students who did not have a high capacity for employability skills such as professionalism, organization, and leadership. In some instances, students used advisory sessions to study or finish their homework, while in others, coordinators and staff used advisory sessions to bring in guest speakers. In two instances, staff had difficulty keeping students' attention during advisory courses. In these cases, students

[3] Employability skills refer to the wide range of soft skills cited by NSFY grantees that align with the Massachusetts Work-Based Learning Plan. Grantees described that students developed the following employability skills: professionalism, speaking, writing, listening, motivation, time management, and leadership. For more information about employability skills or the Massachusetts Work-Based Learning Plan, please see http://skillspages.com/masswbl/ and http://skillspages.com/documents/masswblp.doc.

reported not taking these courses very seriously because they were pass/fail or because they were not seen as useful.

During site visits, students expressed mixed reviews on the advisory courses offered at their schools. Some students reported that the information they received during their advisory course was informational but uninteresting when unrelated to the college or career they wanted to pursue. One student appreciated the time that advisory courses allowed students to reflect on their goals for the week, while another student felt that the advisory support was useful for first-generation college students whose parents might not know how to approach the college search and application process.

Summer Programs: Summer programs were often free and voluntary sessions that took place during the summer and provided students with college and career readiness support. According to site visit data, several designees implemented some form of summer programming. For example, one school used a summer bridge program to introduce students to concepts such as professionalism by hosting mock-interviews and resume workshops. Three schools used summer programming as an opportunity to orient students to a college campus and/or college course loads, with one school giving students the opportunity to stay on campus overnight for an extended orientation to college life. Finally, one school began offering summer math courses after discovering that students were typically unprepared for college-level math. Following the implementation of this academic boot camp, student pass rates in college math increased from 60% to more than 90%. When asked about the summer bridge program, students from one school liked getting to tour the college campus and meet college professors but felt that the rest of the college and career readiness curriculum was long and unnecessary.

College and Career Readiness Workshops: Three schools reported hosting college and career readiness workshops, but very few discussed these workshops either in the student survey or during site visits. Those that did discuss such workshops often described them as opportunities for students to learn to write a resume or practice sitting for an interview.

Implementation of MyCAP

My Career and Academic Plan (MyCAP) is an online tool that school staff and students can use to create and monitor a student's personalized learning plan. While MyCAP is not required statewide, the use of the tool is required for designees. All participating schools that submitted extant data reported having individual career and academic plans for all students (see Table D.4, Appendix D). When asked if students believed they had received the opportunity to create a personalized college and career plan, 63% responded "yes" (see Table C.5, Appendix C). These student respondents found creating their personalized college and career readiness plan to be "very" or "mostly" helpful (see Figure 2 on page 12 and Table C.10, Appendix C). Site visit data suggest that only one designee used MyCAP for individual career and academic plans on a regular basis as of spring 2019.

1.2 Labor Market Demand

Designees are instructed to align their EC programming with career opportunities; however, they are not required to identify a specific industry sector.

Each school approached aligning their programming with labor market demand differently. Although not a requirement for EC programs, four designees aligned their EC programs specifically to industries such as technology, engineering, and health. The decision to align to these industries was driven largely by the expressed needs of local industry partners for students with those specific skillsets. The remaining four programs did not define their pathway specifically by industry.

Student survey data suggest that students were largely unaware of whether their pathway program had an industry or theme that was tied to labor market demand. Two-thirds of respondents (66%) selected “I don’t know” when asked if their pathway had an industry or theme, while only one-quarter (25%) said yes (see Table C.12, Appendix C).

When asked if students had learned information about the availability of jobs and employment related to one or more industries while participating in their pathway program, 65% of students surveyed said they had, while 24% of students said they had not. Fewer than one-fifth (17%) of student respondents reported that they had conducted labor market research, though (see Figure 1 on page 11and Table C.5, Appendix C). When asked how helpful these services were, students who had participated in the activities responded positively, with 62% of respondents finding the information about jobs and employment “mostly” or “very” helpful, while 56% felt the same about conducting market labor research (see Figure 2 on page 12 and Table C.10, Appendix C).

1.3 Integrated Instruction

Integrated instruction refers to the scope and sequence of courses and experiences that fit within the overall pathway program. Integrated instruction is a necessary component for EC designees in that they must offer dual-credit courses that lead to students obtaining a minimum of 12 college credits upon completion of the program.

Course Sequence and Course Choice: All programs had a specific scope and sequence that guided students’ progression through the pathway. All schools offered students more choice in courses as they progressed through the program. One school allowed students to take whatever college courses they wanted as long as they met the prerequisites, while another paired each student with a guidance counselor who walked them through their course options.

Students from two focus groups expressed interest in more course choice. For example, one student expressed interest in the medical field, and therefore would like more opportunities to take related coursework. Similarly, another student wanted the opportunity to take more classes with college students, rather than college courses only with his high school peers. Student survey results suggest similar sentiments, with students from five schools stating that allowing for more choice in the fields of study or courses they can take would improve their EC program.

Staff from two schools were unclear how to feasibly and sustainably pay for students to have larger or unlimited choice in the college classes they can take. One stakeholder recommended

that DESE and DHE provide high schools and IHEs in participating EC programs with guidance on how to create policies that allow for more expansive dual-credit options.

Student Placement and Course Alignment: At least three programs used the ACCUPLACER exam to place students in the appropriate level of dual-credit English and math courses. All three programs either have or are in the middle of designing their own placement exam to replace ACCUPLACER, as staff explained that the ACCUPLACER results did not accurately reflect how students ultimately performed in college-level courses.

Similarly, staff from four programs formed collaborative high school and college teams to better align high school and college curricula. Doing so helped make sure students were learning what they needed to succeed in college, and it prevented the need for remedial coursework.

Interrelatedness of Pathway Activities: Integrated instruction not only requires a cohesive scope and sequence of courses, but also of activities in the pathway program. The student survey included a question asking students to rate their level of agreement that the pathway activities that they participated in seemed related to one another. More than three-quarters (77%) of the respondents agreed or strongly agreed with the statement (see Table C.13, Appendix C).

1.4 Work-Based Learning

Work-based learning refers to the opportunity for students to receive hands-on training. This hands-on learning can come in the form of an internship, an intensive project (e.g., capstone) that requires students to apply what they have learned throughout the pathway, or other similar activities. A range of activities apply as work-based learning in the case of EC programs.

Programs offered a variety of work-based learning activities for students. Students surveyed most commonly reported having listened to a guest speaker present on career information (69%), although students also reported attending a career day or job fair event (41%), participating in a job site visit or company tour (30%), participating in job shadowing (22%), participating in an internship (16%), and participating in a capstone project (35%) (Figure 1 on page 11 and Table C.5, Appendix C).

Extant student participation data show that 43% of students participated in internships and/or capstone projects in the 2018–19 school year; those that participated in this activity spent an average of 45.5 hours on internships and/or capstone projects (see Table D.5, Appendix D). When asked how helpful work-based learning activities were, students who reported participating in them felt largely positive. Between half and three-quarters of students reported feeling these activities were “mostly” or “very” helpful (see Figure 2 on page 12 and Table C.10, Appendix C) and each activity received a mean helpfulness rating between 3.45 and 4.07 (on a scale of 1–5). Of all activities that students rated, the activity with the lowest helpfulness score was the capstone project (mean score = 3.45) and the activity with the highest helpfulness score was the internship (mean score = 4.07) (see Table C.14, Appendix C).

Internships: Student survey data suggest that similar rates of students participated in internships across all grades, with seniors participating in internships at just slightly higher rates than students in other grades. Specifically, 22% of seniors, 12% of juniors, 15% of sophomores,

and 17% of freshman reported some level of participation in the activity (see Table C.6, Appendix C).

Site visit data suggest that more pathway programs were involved in connecting students to internship opportunities, with stakeholders from four out of eight programs suggesting that staff worked with external partners and/or other school staff to provide students with such opportunities. Stakeholders from two additional programs did not have or plan to have internship or capstone opportunities for students at the time of the site visit, while two other programs did have students participating in internships throughout the year, although it was unclear whether these internships were part of the pathway specifically.

During site visits, students from two programs emphasized how much they enjoyed the job shadowing and internship experiences they had as a result of the program. They described these experiences as challenging and as opportunities for personal growth. “I just saw simple [changes],” one student said of his friends in the program, “the way they would dress, the places they would have to go, I realized they were growing a new mentality of the work force.”

Capstones: Two programs had students participating in service-learning capstone projects that culminated at the end of the high school year, while another offered students the opportunity to complete a capstone project. In one example, students planned and hosted a food and clothing drive for members of their local community who were directly affected by a gas leak. At another school, students interviewed members of the local community and turned their stories into written projects. These same students also collaborated with an art class to turn the subjects of their stories into painted murals around the community.

When looking at participation data by grade level, the capstone project is the only activity with a noticeable disparity in rates of participation across grades. While 47% of the 108 seniors who responded to this question reported participating in a capstone, only 6% of the 17 freshmen did the same (see Table C.6, Appendix C). When those students who reported participating in a capstone were asked how helpful this activity was, students across all grade levels rated the program, on average, somewhat helpful (see Table C.10, Appendix C). Freshman and seniors rated capstones least helpful on average (3 and 3.18, respectively, on a scale of 1-5), while sophomores and juniors rated the activity most helpful on average (3.63 and 3.53, respectively) (see Figure C.1, Appendix C).

Development of Employability Skills: Stakeholders across all programs noted the importance of students developing employability skills either at high school or through their college courses. Staff most commonly cited employability skills such as professionalism and public speaking, while students most commonly cited time management and organization.

1.5 Credential Preparation and Postsecondary Linkages

Credential preparation allows students to pursue and obtain industry-recognized credentials. This can include certificates that are valued on the labor market (e.g., Cardiopulmonary Resuscitation [CPR] certification, Occupational Safety and Health Administration [OSHA] certification) or credit towards a long-term academic credential such as an Associate's or Bachelor's degree. Postsecondary linkages refer to an explicit link between the pathway program and postsecondary education institutions. Effective partnerships (the fifth guiding principle for EC programs) are essential for building the link between a high school pathway program and postsecondary education institution. In the EC program, a high school must be partnered with an IHE as all courses are offered through the IHE and must be transferrable and part of the MassTransfer pathway (or equivalent). Because credential preparation typically involves linkages with postsecondary institutions, findings for these two components are discussed together.

All eight programs allowed students the opportunity to obtain a minimum of 12 college credits by high school graduation. All eight programs also provided students with the opportunity to take classes on a college campus, although all but two had students begin by taking college courses at the high school.

One program helped students transition from high school to college not only by hosting college courses at the high school initially, but by stretching the students' first college course out so that it lasted an entire school year rather than just one semester. This course was co-taught by one high school and one college professor who worked together to make sure students built both the academic and socio-emotional skills necessary to take full college courses during their senior year.

Student Insights on Taking Courses on a College Campus

"I think, definitely, bringing us on campus shows us we're a lot more capable than what we think we are."

– EC Student

"There's so many resources to help you and being part of the actual campus has helped me a lot to realize that you can do college, and it's not just getting thrown out there. It's feasible. You can do it."

– EC Student

At least four programs provided students with the opportunity to take field trips to local colleges, and at least one program noted wanting to do so in the future. Extant data show that 35% of participating students went on at least one field trip during the 2018–19 school year. While both students and teachers would like their programs to offer more field trips throughout the year, one teacher noted that transportation and funding can be prohibitive.

High rates of student survey respondents reported participating in credential preparation and postsecondary awareness activities. For example, during the program, 78% of students reported learning about options after high school graduation (e.g., earning a certificate, Associate's, Bachelor's), while 84% learned about the costs of college and financial options (see Figure 1 on page 11 and Table C.5, Appendix C). Of those students who participated in these activities, 70% found learning about options after high school to be "mostly" or "very"

helpful, while 75% felt similarly about understanding college financials (see Figure 2 on page 12 and Table C.10, Appendix C).

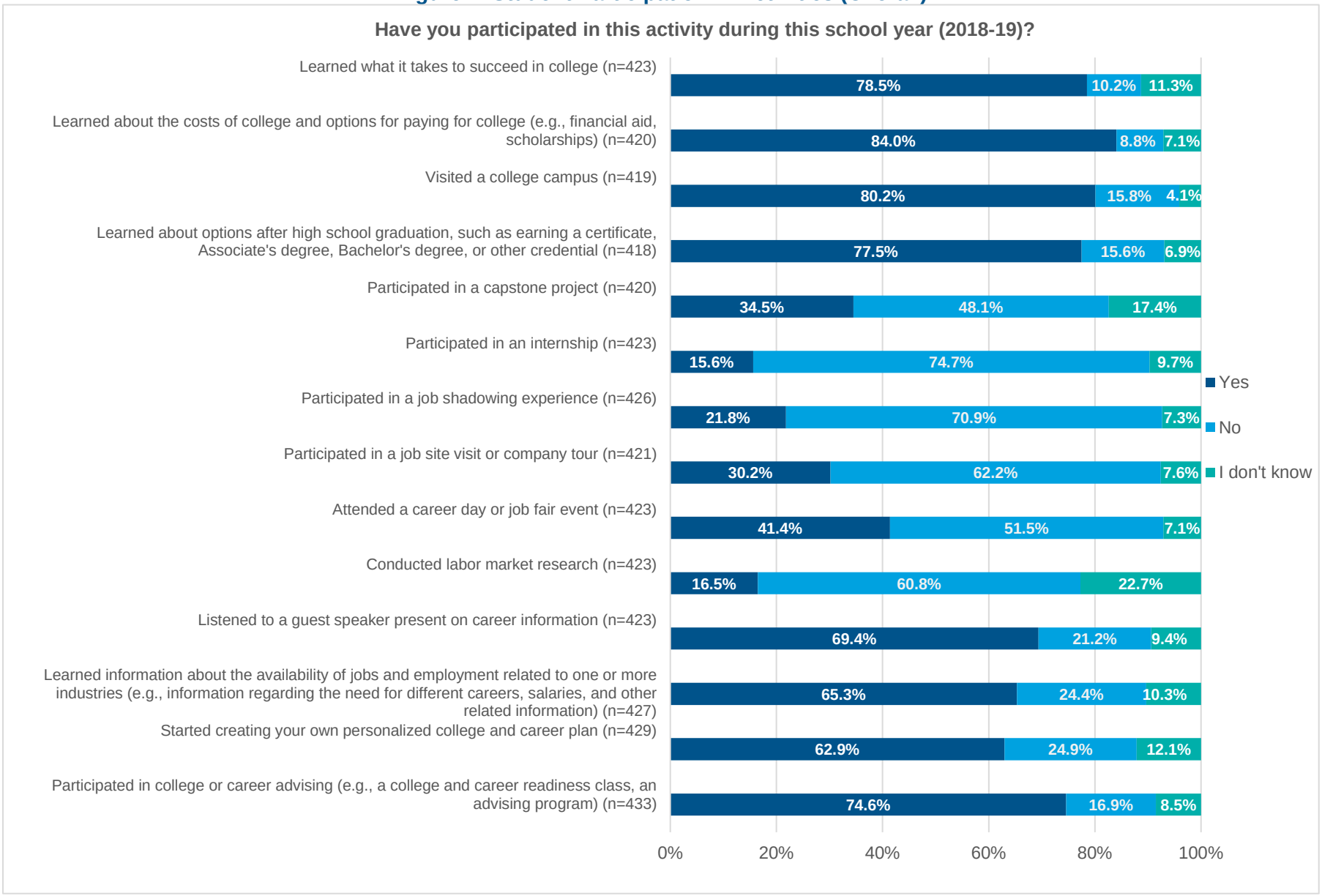
Approximately 80% of students also reported visiting a college campus (see Figure 1 on page 11 and Table C.5, Appendix C), with 70% of those students finding these visits "mostly" or "very" helpful (see Figure 2 on page 12 and Table C.10, Appendix C). Site visit data suggest that students particularly enjoy visiting and/or taking classes on a college campus, with multiple students expressing that these visits helped them get over their fear of college. As one student said,

> "I feel like it made me confident when I went. In the beginning, I was [kind of] scared that I was going to be in this totally new place and that I wasn't going to know anyone. But taking the classes with actual college students showed me that it's not that scary and that I will be fine in college."

Administrators from one school thought that learning on a college campus helped demystify the college process, while one professor believed that being on a college campus succeeded in showing—rather than telling—students that they could handle college.

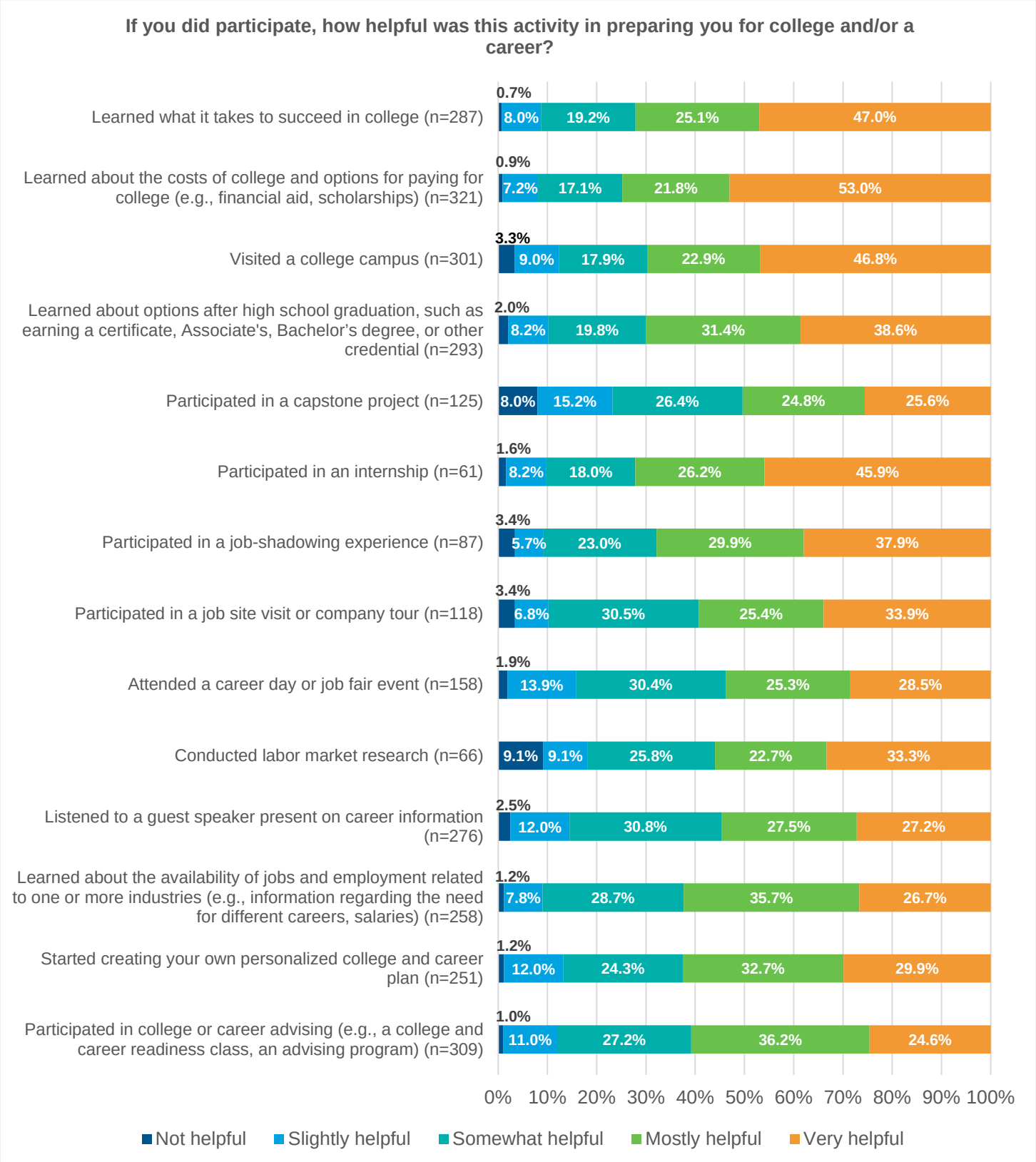
Finally, when asked if they had learned what it took to succeed in college as a result of the program, 79% of students responded "Yes" (see Figure 1 on page 11 and Table C.5, Appendix C). More than 72% of respondents surveyed reported that learning what it takes to succeed in college was "mostly" or "very" helpful (see Figure 2 on page 12 and Table C.10, Appendix C).

Figure 1. Student Participation in Activities (Overall)



Note: Percentages may not total 100% due to rounding.

Figure 2. Perceptions of Helpfulness of Pathway Activities (Overall)



Note: Percentages may not total 100% due to rounding.

2. Overall Implementation Trends

This section presents findings related to implementation more broadly, including serving students at a high need, support structures put in place to help EC students, feedback on support received from the Commonwealth, sustainability planning, and overall successes, challenges, and mid-course corrections.

2.1 Serving Underrepresented Students

Equitable access is a core principle for DESE's HQCCP initiative and the EC program specifically; designated programs are required to serve students who are traditionally underrepresented in higher education. All eight EC programs regularly served and worked hard to recruit traditionally underrepresented students in higher education.

Survey data indicate that at least 79% of respondents did not have a parent with at least a four-year degree (see Table C.2, Appendix C). Staff from all eight programs specifically mentioned working with English language learners, first-generation college students, students of color, and low-income students. Staff from one school hoped to increase the number of female students taking technology courses in the coming years, while staff from another noted that male students were slightly overrepresented in math classes. Additional details regarding the breakdown of findings according to gender and race/ethnicity are as follows.

Gender: Survey data indicate that more than half (57%) of pathway participants were female (see Table C.3, Appendix C). Student participation in and mean perception of helpfulness of activities by gender show relative parity between male and female students (see Table C.7 and Figure C.2, Appendix C). Female students reported participating in activities at slightly higher rates than their male counterparts in eight out of fourteen activities. Similarly, female students reported activities to be slightly more helpful than their male counterparts in eleven out of fourteen cases.

Race/Ethnicity: Although EC programs enroll many Latinx[4] students, there are some findings suggesting that Latinx students had lower rates of participation in specific EC activities than other race/ethnic groups (see Table C.8, Appendix C). Of the fourteen activities that students were asked about, Latinx students had the lowest rates of participation in eight activities and the second lowest rates of participation in another three.

Reasons for this finding are unclear and limited. First, this finding comes from survey data, which represents a subset of all students who participated in an EC program. Second, it could be that some schools with the largest percentage of Latinx students were simply not implementing some of these activities, and therefore Latinx students didn't have the opportunity to participate in them (see Table D.6, Appendix D and Table C.9, Appendix C). The evaluation team analyzed participation data reported in the survey by school and found that participation rates were relatively similar across schools. For example, the rates of participation in college and career advising activities are relatively high across all schools, while rates of conducting labor market research are relatively low for all schools. This analysis, therefore, does not

[4] Latinx is a gender-neutral term used to refer to Latin American racial identity.

suggest that schools with higher rates of Latinx students were incorporating certain activities into their program less often than schools with low rates of Latinx students. Ultimately, the evaluation team does not have enough information to conclude the exact reasons why Latinx students may be participating in EC activities at a lower rate; however, it is a topic worthy of further investigation.

Finally, on average, students who identified as two or more races tended to rate pathway activities as most helpful, with Black or African American students as well as Asian students finding most activities least helpful overall (see Figure C.3, Appendix C). Aside from two activities; however, students of all races/ethnicities rated pathway activities 3 or above on a scale of 1–5, meaning they felt the pathway activities were at least somewhat helpful.

2.2 Student Support Structures

The third guiding principle for EC programs, enhanced student support, is essential for helping students succeed in college courses. Site visit findings highlight the fact that EC programs offered students several academic and socio-emotional support structures to help them succeed.

Two high schools offered transitional college classes for those students who did not pass their first or second college credit-bearing courses and therefore needed extra support to become comfortable with a postsecondary academic and social environment. Similarly, a third program helped students transition from high school to college by implementing a "stretch year"—an extension of a semester-long course into an entire academic year. Students and staff felt that the stretch year was a good way to ease students into the college experience. As one student said,

> "If you just go [to college] right from high school, and you're from an underprivileged family, you might not be expecting the workload. A lot of people tend to drop out, so this slowly brings you into it…you get accustomed to it before you're fully thrown in, so you have more of a chance of being successful."

As mentioned previously, six schools had students begin the program by taking college courses at the high school. This, staff argued, gave students the opportunity to get used to the workload in an environment in which they were comfortable. As one administrator said,

> "Even the emotional phases of what it would be like to experience when you're 18, on your own, fall semester of college, they're going through that here with us. But now they have greater support around it, so they can learn the socio-emotional pieces when they go off to their respective schools, aside from just academics."

Multiple programs allowed students to fit a study hall into their schedules so that they had time to study and complete homework during the school day. This support was intended to prevent students from feeling too overwhelmed by the workload.

Finally, three programs used a co-teaching model, which provided extra adult support for students. For these programs, co-teaching meant that students had a high school teacher sit in on the classes taught by a college professor. As a result, these high school teachers were well

equipped to know which topics to review or discuss during regular high school hours. In describing a co-teaching model, an administrator said,

> "It's designed to sort of build in that additional time so that the students have a lot more face time with two faculty members. Whereas, in a regular college class, they might only meet a couple times a week and not see the professor all the time or have access to them all the time."

2.3 Helpfulness of EC Activities

When looking at how helpful students found the EC activities that they had participated in to be overall, the evaluation team found the mean helpfulness score to be 3.76 (mostly helpful).

Overall, an analysis of perceived helpfulness by grade level revealed that seniors tended to find a majority of activities the most helpful, while freshmen tended to find a majority of activities the least helpful. This was true for eight of the 14 EC activities (see Figure C.1, Appendix C). The five activities that freshmen found least helpful all received a mean helpfulness score of 3 or lower: conducting labor market research, participating in in a job site visit or company tour, starting to create a personalized college and career plan, participating in an internship, and participating in a capstone project. There were not obvious discrepancies by race/ethnicity or gender in terms of student respondents' perceived helpfulness of EC activities (see Figures C.2 and C.3, Appendix C).

2.4 Support from the Commonwealth

According to site visit data, six designees expressed appreciation of the opportunities they have had to collaborate and learn from their peers. Similarly, coordinators and administrators from two programs noted how important it is that the state is prioritizing early college, with one stakeholder noting that "the state has been an incubator of a really exciting new idea…. They are going about creating this in an entrepreneurial way."

When asked what additional support designees would like to see from DESE and DHE in the future, there were four common responses. First, four designees would like more professional development and/or collaborative opportunities regarding early college. Second, six designees would like DESE/DHE to put more monetary resources toward this program. One school expressed that the funding should go towards transportation, which is one of the highest program costs for all eight EC programs. Third, three designees would like more guidance on how credits earned during high school transfer after a student goes to college. These same stakeholders would also like assistance marketing and explaining this to students and their parents. Finally, four designees would like additional guidance from the state regarding issues of liability that might be specific to an early college program (e.g., should schools restrict access to dormitories and gyms with underage students on campus, and who is liable if something goes wrong or a student gets hurt while on campus).

2.5 Planning for Sustainability and Scaling

For most programs, sustainability is related to funding. Seven out of eight designees noted that they are looking for more sustainable sources of funding in order to keep their program going. While some would be able to sustain certain aspects of the program without additional funding, most would have to make large adjustments if more funding is not found. Still, others would have to stop implementing the pathway entirely. The one school that does not need additional funding receives EC funding from its external partners. Although this funding stream is currently reliable, the school remains reliant on these partners for the program to take place.

When asked about scaling the program, one program coordinator said the program's size will always be limited by high school staff capacity. Another administrator from this same school suggested using technology to help scale the program while there is still room to grow. For example, this administrator uses "Attendance2"—an application that automatically takes attendance by having students scan a Quick Response (QR) code when they arrive at the bus. The use of this application has prevented staff from spending too much time reading names off a clipboard in order to figure out which students are present. As the program has expanded, automatic attendance has allowed staff to continue getting students on the bus in time to arrive for their college classes.

2.6 Successes

Site visit data from all designees confirmed that students and teachers do believe the pathway provides students a good introduction to college—both because it introduces them to college life and because it helps some students figure out what subjects or career(s) they'd like to pursue in the future.

Six programs cited increased student interest in pathway enrollment as a major success as well. As EC programs have become more well-known and popular throughout participating schools, more students have expressed interest in participating in the programs. "The kids want to go," one teacher said. "It's a sad thing for them when they're here they're not [able to participate]."

Stakeholders from all eight programs cited student progress—both academic and socio-emotional—as a major success. Site visit participants said they have noticed that students are proud and more confident in their abilities.

Finally, students from four programs mentioned feeling supported and/or having a strong relationship with their pathway teachers and peers. "Everyone really says that high school teachers take more time [to assist students]," one student noted, "but through this experience, I have seen that my English professor, he helps us out a lot. Whenever we have questions, we just ask him, and he goes over our work with us….The teachers really help."

Student Success Stories

"I have one girl who couldn't even go to school on a day-to-day basis freshman year. She had to go straight to her counselor's room and then we had to ease her into the day because she had such anxiety. And we encouraged her to become a part of this program…she's a rock star. She has blossomed, she's coming here, she did great. She advocates for herself. She is amazing. But all these kids, they're just so proud."

– EC District Staff/Administrator

"I guess one of the biggest differences is just pride in their work, maybe feeling like it matters, whereas sometimes students in my other classes don't really see the value in what they're doing. I think that the professor I work with has been really good at making the assignments relevant to society, relevant to their lives. They just have a sense that their work matters."

– EC District Staff/Administrator

2.7 Challenges

Aside from funding, the most commonly cited challenges during site visit interviews were transportation, scheduling, transitioning from a high school to a college workload, communication, and transferring credits.

Seven programs found it difficult to schedule the pathway, having to navigate not only student schedules at the high school, but IHE and professor schedules as well. Transportation, on the other hand, was a challenge largely because it was extremely costly.

Students and teachers alike cited the workload learning curve as a challenge; however, none felt it was a barrier that students in the program could not overcome with time, hard work, and support.

Students from six programs believed the program could have been improved with better communication. For example, some students wished the administration had provided them with a program schedule at the beginning of the year, while others wished staff had advertised the program more realistically from the start. Some students felt that program did not meet their expectations as a result of poor communication and marketing during pathway recruitment.

Finally, stakeholders from five programs were concerned that they did not understand and/or did not accurately explain how college credits transferred after high school graduation. Until the program was already well underway, some stakeholders were not aware that the credits students earned while in high school would not necessarily transfer to any two- or four-year institution. This is particularly true if a student receives credit at a community college but ultimately chooses to enroll in a private school for their postsecondary education. As such, staff feared that they misled students and their parents regarding credit transfers. Some stakeholders were aware that community college credits do not automatically transfer to any postsecondary institution; however, these same stakeholders would still like more guidance from DESE and DHE regarding exactly what credits transfer, when, and how.

2.8 Mid-Course Corrections

Four programs reported not making many, if any, major adjustments to the program along the way. Any changes made, stakeholders said, were to "smooth" out logistics. That said, six programs did provide students with more college readiness support than they had initially intended. Some schools, for example, provided students with additional study halls and supplementary instruction, either during regularly scheduled classroom time, after school, or during the summer. Three programs rearranged pathway budgets to cover the higher-than-expected costs of student textbooks.

Four programs hoped to continue to provide additional academic and socio-emotional support to their students in the 2019–20 academic year. For example, one teacher hoped to implement early intervention strategies for those kids struggling with family dynamics, income, and other issues outside of school.

Finally, students from two designee programs expressed the desire for more field trips and college visits throughout the year.

3. Facilitators and Barriers to Implementation

Facilitators and barriers are those factors that either help or hinder program implementation according to EC stakeholders. These are different from successes and challenges in that they are inputs rather than outputs or outcomes that result from program implementation.

Stakeholder Insights on Parent Interest in Early College

"A lot of the parents are also very nervous about [the EC pathway], because they don't know what it's like to have a student go to college, and they don't know what the environment is like. And some are very hesitant because they don't want to admit that they don't know anything about going to college and [are not sure] if they're asking the right questions. So we try to lay out sort of just a welcoming environment right off the bat, that they can ask us any question and not to be afraid of not knowing something. Because that's what the whole point is."

– EC District Staff/Administrator

3.1 Facilitators

Site visit data suggest four major facilitators to program implementation: parent interest, district buy-in, partner and staff buy-in, and geographic proximity.

Parent interest in the program helped to facilitate implementation in that many parents encouraged their children to participate in the EC pathway. This helped pathway recruiting efforts. Students and school staff from five programs said that parents were interested in the program because it would help their child save time and money by accruing college credits for free while in high school.

Six programs noted that buy-in from high-level school and district administrators—such as a school principal or superintendent—helped make planning and implementing an EC program easier. When EC is a priority for district staff, schools had an easier time finding resources (both staff time and funding) to put the program into play. In one instance, the district provided a dedicated point person to get two programs up and running. This point person not only helped

think through what the program should and could look like, but also assisted with logistics such as scheduling, transportation, meetings, and more. “We wouldn’t have been able to do it without the district support,” one principal commented.

Stakeholders from four programs also noted the importance of staff and partner buy-in on top of administrator support. For these programs, the planning and implementation happened as a result of staff or external partners taking on pathway responsibilities on top of their usual workload. Without their support, stakeholders posited that the program would not have gotten started either at all or when it did.

Finally, five schools mentioned how helpful it was to be geographically close to their IHE partner(s). Not only did this allow for the “easy movement” of professors and students, but it made scheduling less difficult overall. In two cases, the high school’s geographic proximity to an IHE was part of the impetus for wanting to start an EC program in the first place.

3.2 Barriers

During site visit interviews and focus groups, stakeholders recounted several potential barriers to implementation.

One program cited community opposition to or skepticism of early college as a potential barrier to implementation. In this case, members of the local community were not convinced students were ready for an EC program and so did not support creation of the program. Although this ultimately did not stop the school from creating an EC program, staff cited political opposition as a potential barrier to implementation for others moving forward, as political opposition might ultimately prevent school boards and/or administrators from approving EC programs.

Two programs cited state regulations as a potential barrier to implementation as well. One program had trouble meeting the 990-hour seat-time requirement for high school students who spend most of their days at the local community college, while a second program found the regulation surrounding how state money can be spent after distribution to be limiting.

Some programs have struggled to align IHE grading systems and/or policies with the high school’s systems and policies. As such, high school staff did not have consistent access to students’ academic progress. This is something they expressed interest in having so that they can provide early academic and/or socio-emotional support to students as necessary. To mitigate the difference in when high schools and IHEs release student report cards, one high school adjusted its quarterly report card timeline to match when college students receive their midterm grades each semester. After the students received their final college course grade, the school adjusted the midterm grade to match.

Scheduling was a barrier to implementation. For all eight EC programs, the high school year did not match up with the IHE school year. As such, students had to adjust their schedules to attend college courses while on spring break, while schools had to find a way to work with students during the months when high school was in session, but college was not (e.g., January, June). Although some schools designed mini-courses or instituted study halls to fill students’ time during these periods when the school years did not overlap, others did not anticipate how much time they would need to fill. Those that did not feel as though they used this time well in the

2018–19 school year hoped to find a way to use this time more wisely in the 2019–20 school year.

Five programs were unsure where the funding will come from for this program in the future and felt this to be a barrier to implementation. “My hope,” one program coordinator said, “is that we move toward one system statewide that has solid support funding-wise so that we can focus on what we can provide to students with what resources we have at our disposal.”

Three programs anticipated the amount of physical space they have access to (either at the high school or the participating IHE) will be a barrier to implementation as they scale and grow. Finally, two programs found it difficult to fully engage students who have family or job obligations that take priority over academics.

III. Preliminary Program Outcomes

The following section includes several perceived outcomes highlighted by EC program coordinators, teachers, and students alike.

1. Meeting Various Student Needs

Student survey data suggest that a large majority of students felt the EC program met their needs. Nearly 90% of students indicated that the program had thus far met their needs either a little or a lot (see Table C.15, Appendix C). Students who identified as Black or African American reported that the pathway program did not meet their needs at the highest rate (17%). Conversely, zero percent of Asian students reported that the pathway program did not meet their needs (see Table C.16, Appendix C).

Open-ended survey responses also suggested high rates of satisfaction, with students citing work-based skill development and college and career preparation as the most common ways in which the program met their needs.

Site visit data provided some additional ways in which staff and students felt the program met student needs. First, students indicated that the program helped them become more comfortable with the idea of college and introduced them to a new, interesting subject.

Students were also asked whether the pathway program affected their future plans. More than two-fifths of student survey respondents (42%) believed their pathway program had affected their future plans (see Table C.17, Appendix C). This same data broken down by race suggests similar results, with all but White students (33%) agreeing at rates of 42–46% that the pathway affected their future plans (see Table C.18., Appendix C). Students were asked to elaborate on their response in an open-ended field in the survey. Of the students who responded accordingly, 81 students said the program helped them confirm or figure out what they wanted to do after high school.

2. Development of Academic Skills for Students

Extant data suggest that students were provided with tutoring/mentoring hours to help them improve or stay on track academically throughout the year. Overall, 99% of students received tutoring/mentoring; those who received these services received an average rate of 78.7 hours of tutoring/mentoring in a year (see Table D.5, Appendix D).

When asked if the pathway program helped students develop academically, 72% of student survey respondents "agreed" or "strongly agreed" that it has helped improve their grades, while 82% "agreed" or "strongly agreed" that it has helped them stay on track to graduate from high school (Table C.11, Appendix C). Similarly, nearly three-quarters of student survey participants (75%) believed that the pathway has been "helpful" or "very helpful" in keeping them on track to graduate on-time from high school (see Figure 3 and Table C.19, Appendix C).

Survey respondents shared additional related perspectives in the open-ended survey responses. Students from three programs said that the program helped them improve their grades or stay on track to graduate, while a handful of students from two programs cited academic rigor as the pathway's biggest success.

Students from six programs recognized teacher and professor support as the most successful aspect of the program, while more than 30 students suggested that academic rigor and support were reasons they decided to enroll in this program in the first place.

During site visits, staff and students alike discussed how successful the students were academically. Not one stakeholder expressed concern with the pass rates for EC students in college courses. At least six programs reported having a plan in place to withdraw a student from a college course early in the semester if it looks as though they are likely to fail the course. Staff from seven programs additionally commented on how the college courses are challenging yet motivational for students.

3. Development of Employability Skills for Students

Stakeholders suggested emphasizing employability skills to help students prepare for both college and a career. Some schools built this skill development into their advising courses, while others reviewed how to manage students' time and stay organized during college courses at the high school. Stakeholders at all eight schools saw a difference in their students' ability to present in front of others, stay organized, prioritize their tasks, and lead small groups. In addition, more than half (54%) of students

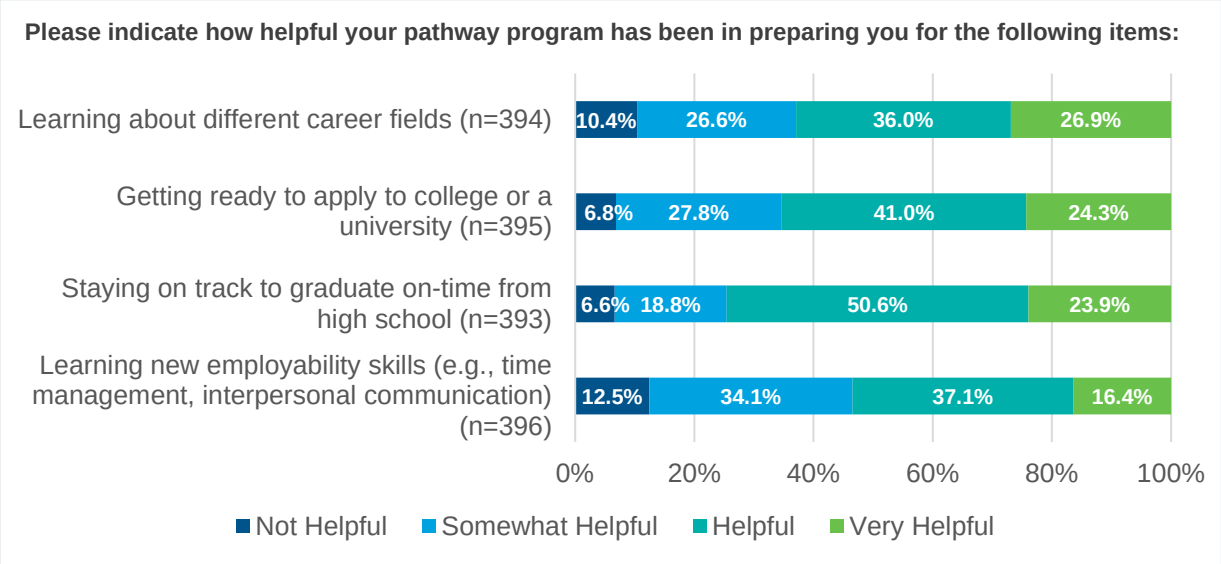
Student Insights on Employability Skills

"You have to work on time management, and I think that was a super good thing to have, especially if you have a job. When we go away, we're going to have a job too, and we're going to be going to college full-time. We're going to have to make our own time to go find things and go reach out and get help….You're 16, and it's scary. You're like, "Oh my gosh, this is my first college class. I don't want to mess it up." But I think it definitely is a trial and error type of thing, and it exposed us to something brand new that we were going to have to run into anyway."

– EC Student

surveyed believed that the program has been "helpful" or "very helpful" in teaching them employability skills such as time management and interpersonal communication (see Figure 3 and Table C.19, Appendix C). When asked if they felt more motivated to want to learn the skills necessary for a specific job or career, 79% agreed or strongly agreed that they do (see Table C.11, Appendix C). Responses in an open-ended survey field suggested similar findings, with nearly 20 students from three programs citing the development of employability skills as the pathway's biggest success. Additionally, nearly 25 students from three programs suggested improving the pathway program by providing more opportunities for hands-on activities to assist students in improving employability skills.

Figure 3. Helpfulness of Pathway in Preparing Students for Postsecondary Plans



Note: Percentages may not total 100% due to rounding.

4. Exposure to Different College and Career Opportunities

Exposure to college and career opportunities was an important outcome for the pathway program, as 86 students—according to survey data—cited college and career preparation as the number one reason they decided to enroll in the pathway program.

The majority of student survey respondents reported feeling encouraged by the pathway to enroll in an IHE, with 83% reporting that they "agree" or "strongly agree" with this statement, while 65% of students surveyed believed the pathway was "helpful" or "very helpful" in getting students ready to apply to college or a university (see Figure 3, and Tables C.19 and C.11, Appendix C). Similarly, 86% of students surveyed agreed or strongly agreed that the pathway raised their awareness of college opportunities that they had not been aware of previously (see Table C.11, Appendix C).

Stakeholder Insight on Program Exposure

"I think it's a model program because, again, it opens up opportunity, not narrows it."

– EC Coordinator

Qualitative survey data boasted similar results, with students from five programs noting that the

pathway's biggest success was its ability to prepare students for college and/or a career, while students from six programs said that college- and career-specific field trips and projects constituted the pathway's largest success. Importantly, students from all eight programs said that taking college courses and earning college credit was the program's greatest success, although students from five programs would improve the program by dedicating more resources to college preparation in general (e.g., how to pay for college, how to apply to college).

When asked about their exposure to career-related opportunities, 79% of respondents agreed or strongly agreed that the pathway helped raise their awareness of potential work-related certifications or credentials (see Table C.11, Appendix C). Similarly, nearly-two thirds (63%) of students surveyed believed the program gave them the opportunity to learn about different career fields (see Figure 3 and Table C.19, Appendix C).

Although stakeholders in every role noted how important the EC program was for exposing students to college and career opportunities, the students themselves were very vocal on this topic. Students from seven of the eight programs mentioned how helpful and/or informational the pathway was when it came to college and career exposure. In some cases, the pathway helped students figure out what they would like to major in in college. In other cases, students had a better understanding of careers or fields they did not want to pursue in the future.

5. Increased Student Confidence

Just more than four-fifths (81%) of student survey respondents agreed or strongly agreed that the program helped them build confidence about their ability to succeed in the future, and that same percentage felt similarly about the program helping them take ownership over their high school experience (see Table C.11, Appendix C).

Students and teachers from seven of the eight programs believed that the pathway helped make college a less daunting prospect for student participants. In addition to de-mystifying the college experience, the pathway helped make students more comfortable with the type and the amount of work that college students usually take on. One student mentioned joining her school's EC program so that she could earn credits for free and see if felt comfortable taking college courses. She said, "[Now] I think I could do it. I definitely think I can. It taught me…what work was going to be like in college, because I know it will be harder than high school."

Another student expressed a similar sentiment, saying "At the end of the day, it shows that many kids can do the impossible. Sometimes I really didn't believe in myself like that but taking this course I developed myself to be a better person overall."

6. Decreased Financial Burden on Students and Families

When asked in the student survey about how the program met student needs, three students from two programs said decreased financial burden was the most important way in which the program met their needs. In addition, when asked why they decided to enroll in the EC program, 35 students from six programs said it was to earn college credits and save money.

Site visit data corroborated these findings, with students and staff from all eight programs highlighting the benefits of free college credits. According to one district official,

> "One of the things that made this opportunity attractive to us…[is] that we have a hand in really positioning students that may come from marginalized backgrounds or students that may find it, for whatever reason, challenging to even think about going to college [be]cause of the financial burdens that they may have."

In addition to providing high school students with the opportunity to earn free college credits, some IHE partners provided pathway students with additional funding for continuing their education at that institution after high school. One IHE partner, for example, provided ten students with a full scholarship for a four-year degree on its campus.

IV. Conclusions and Recommendations

Based on the findings highlighted in this report, ICF has identified several promising practices, lessons learned, and recommendations for EC program improvement. While not necessarily a comprehensive list, these suggestions are useful indicators of what the eight EC designees might refer to as a strong or effective program.

1. Promising Practices

The following section contains those practices or program features that led to the success of some EC programs and could be helpful strategies for successful implementation in other programs as well.

Consider the Supportive Role of Co-Teaching

Co-teaching occurs when a high school and a college professor collaborate to teach to college courses. For two programs, co-teaching meant that high school teachers sat in with the students during their college courses so that the high school teachers would know what material is being covered and how to provide students with relevant academic support during non-college course hours. For two other programs, teachers could not always sit in on the college course because of scheduling challenges; however, they communicated with their college professor counterparts frequently in order to stay up to date on what students were learning and what they were struggling with.

Co-teaching appears to be built into EC programs when students are taking dual-credit courses that the pathway program requires them to take (e.g., math, biology). Co-teaching is not built into the program when students are given the freedom to choose from a variety of college courses.

Develop Employability Skills

Employability skills include organization, time management, leadership, and motivation. Multiple schools built employability skill development into advising or support courses run by staff and external partners. Those that did not initially build employability skill development into the

pathway program often decided partway through that it was important to spend time on these skills during college courses in order to help students pass their classes and/or keep up with their workloads.

Provide Support in the Transition from High School to College Course Loads

Although course placement tests and course alignment efforts helped make sure students were not in need of remedial coursework, staff and students spoke highly of putting additional supports in place for students during the transition from high school to college workloads. For some, this meant finding time in a student's schedule for a study hall, while for others it meant putting more resources towards extra tutoring. Still others eased students into college courses by extending a semester-long college course into a full year, or by keeping students within a high school cohort during their first or first few college courses.

Spend a Year Planning

All eight designees spent roughly a year planning for the implementation of the EC program. This planning time was crucial in garnering staff and district buy-in, recruiting students, choosing curricula, and handling logistics. Those who spent less than a year planning suggested that more time would have helped staff avoid feeling rushed or overwhelmed. In addition, all programs described using some financial resources to support the planning process (either from the NSFY grant or other sources). Designees did not comment on whether they would have been able to plan the pathway without financial resources.

Have a Point Person Dedicated to the Job

Having someone whose time is partially or fully dedicated to running the EC was important for nearly every program. Some staff members posited that the program could not have been planned and implemented within a year without someone specifically in an EC leadership or organizational role. While two programs had a primary point person at their school district, six programs had point persons from within the high school. Of these six, only one was given the task of running the EC without taking away any of that individual's existing responsibilities.

Work with IHEs that are Geographically Close

Geographic proximity mattered to staff when scheduling students for courses held at a high school and an IHE. One program was actually initiated because district leadership wanted to take advantage of the short distance between IHEs and the high school. Staff members from one program were not sure if their EC program would be feasible without the ease of going between the high school and the IHE in such a short amount of time. The close proximity between IHEs and partnering high schools also meant that students could take college courses during the regular high school day rather than after school or at night.

2. Lessons Learned

Designees identified a range of challenges and barriers to program implementation. In many cases; however, these same individuals gained insights about how to navigate these challenges and barriers accordingly. Their insights, or lessons learned, are as follows:

Intentionally Recruit and Support Students Who May Not See Themselves as College-Bound

While required for program designation, staff from four programs reported that it was important that EC programs be intentional about student recruitment in specific ways. For example, some believed it was important to recruit students who don't receive the best grades and/or students who are not necessarily college-bound. This might include students whose parents did not attend college as well as students who are unsure or do not think that they are college-ready. District administrators from one school emphasized the importance of recruiting those students who might not feel like college is for them. Without deliberate recruitment, one participant feared that the program "could very easily go lopsided into a particular demographic that…doesn't represent the school."

"If you...aren't intentional about it," one school district staff member said, "then this could yet be another program where...students are systematically being kept away or don't have access."

When asked what improvements they would make to the program, students from two schools suggested that the EC program be more intentional in this exact way. For example, one student felt that the program was most beneficial for those students who were not already taking Advanced Placement (AP) courses, noting that students who were in AP courses did not necessarily need or take full advantage of all of the extra supports provided in the EC program.

Plan for Unexpected Program Costs

Most program coordinators noted being able to stick to the budget they had initially set for the EC program. There were, however, two line items that staff repeatedly mentioned were more expensive than expected. The first was transportation. Staff from multiple programs noted that transportation was by far the largest line item in their budget. It was also the element that some of the programs feared they would not be able to pay for without additional funding in the future. The second line item was textbooks. Staff from three programs noted needing to adjust their budget for this line item, as textbooks were more expensive than expected. Some programs were thinking through how to deal with these costs in the future, given that they were so expensive and that college textbooks change on a regular basis.

Reduce the Need for Remedial Coursework

Students from three programs initially struggled to pass some of the college courses (most specifically, math courses) because staff believed the high school and college curricula were not well-aligned. As a result, three programs were either working to or had already aligned the curricula to reduce the need for remedial coursework. As other EC programs emerge, it may be useful for staff to determine if the curricula are aligned ahead of implementation to ensure students are well-prepared to begin college-level courses.

Fill the Scheduling Gaps

There are times during the school year when high school and college calendars do not align. For example, during the month of January, high school students are almost always back in high school before college begins. Similarly, some high schools end much later in the spring than the typical college semester. In these cases, program staff must figure out how pathway students

spend their time. One program developed a two-week course in civics to fill the time, while another program let students either stay home or study at school during this “free” period. Some programs, however, did not anticipate needing to fill in this scheduling gap, and therefore did not have a plan in place during the first year of implementation. Whether or not staff recognized the need to think through how students could spend their time while college was not in session, EC programs moving forward should be prepared to fill in these scheduling gaps before program implementation.

3. Recommendations for Program Improvement

The following recommendations have been divided into two categories: general recommendations for schools looking to start or improve an EC program, and recommendations for DESE and DHE based on interviews with EC program stakeholders.

3.1 Recommendations for EC Schools

Be Intentional about Student Recruitment

Students and staff alike suggested equitably recruiting students for EC programs by recruiting those who are historically underserved and/or first-generation college students. Doing so, these students and staff argued, helped to show students who did not consider themselves to be college-bound that they are capable of earning a postsecondary degree. Recruitment strategies need to support more equitable access to higher education by providing those students who may need extra support with the tools and resources to succeed in dual-credit programs.

Rethink the Use of Capstones to Bolster Employability Skills

Stakeholders stressed the importance of cultivating work-based learning and employability skills in students in the EC programs. While these skills may be achieved by the hands-on learning opportunities provided through internships, students frequently described not having enough time for internships during the school year. Capstones, particularly those ingrained in real world experiences (e.g., those involving project-based learning) may be helpful for supporting students’ development of employability and work-based learning skills, while at the same time resolving some of the logistical issues posed by internships. It is important to note, however, that those student survey respondents who participated in capstones during the 2018–19 school year rated capstones, on average, at the least helpful EC activity in which they participated. As such, it will be important for EC programs to consider ways of revising their capstones to ensure that students have a meaningful learning experience from these projects and are able to build needed skills in the process.

Provide Specific Supports for First-Generation College Students

Nearly every EC school mentioned recruiting and/or supporting first-generation college students. Indeed, 79% of students do not have a parent with a four-year college degree (see Table C.2, Appendix C). In addition, according to one site visit participant, many parents were unfamiliar with what it is like to have a student go to college and were apprehensive about the EC as a result. While the EC is designed to provide a range of supports to participating

students, perhaps additional EC program supports or information could be provided with the intention of increasing parent and student level of comfort with college-level courses. One program described interacting with parents using a welcoming tone. Orientations, informational meetings, and other activities/events could use a similar welcoming tone and be designed to specifically address any potential anxieties of first-generation college students and their families.

Incorporate Hands-on Activities

Students consistently requested more hands-on activities in their EC programs. Although very few elaborated on what this means, those that did provide detail mentioned wanting more field trips, internships, and project-based learning opportunities. Moving forward, EC programs may want to consider that these sorts of activities are the ones that draw students in and keep their attention the most.

Offer Students a Voice in Class Choice

Many students requested more choice in the college courses that they can take. While this can be difficult both logistically and financially, EC programs may want to take this into consideration when thinking about student enrollment. If, for example, they want to expand the program or keep students interested, they may want to consider giving students some voice and/or decision-making power during the program's course-selection process.

Set Expectations from the Start

Because this was the first year of implementation for many programs, staff were not necessarily sure how to market or sell the program to students during recruitment. As such, some students commented on the fact that staff did not prepare them appropriately for the realities of the program. For example, some students were not prepared for how much work it would be, while others were not expecting to have to take a full year of AVID before getting the opportunity to take college courses. Students across multiple schools asked that program staff set more realistic expectations and communicate more clearly and frequently with students throughout the year.

3.2 Recommendations for DESE and DHE

Explore Potential Disparities in Levels of Participation in EC Activities Between Latinx Students and Other Racial/Ethnic Groups

Despite being the largest racial/ethnic population to respond to the student survey, Latinx student respondents reported the lowest levels of participation in pathway program activities. While the evaluation team did not have enough information to conclude why this may be the case, it is recommended that DESE and DHE explore this issue further.

Provide Liability and Accountability Guidance

As requested by some EC program staff, DESE and DHE may want to consider providing guidance around liability and accountability regarding protecting high school students on IHE campuses. EC program staff expressed some uncertainty about which entity was responsible for setting policies to protect these students on college campuses.

Provide Guidance on Credit Transfers

Similarly, as requested by some EC program staff, DESE and DHE may want to consider providing EC programs with guidance regarding how and when college credits transfer—or do not transfer—to IHEs (including public and private IHEs). Some program staff began program implementation not knowing that credits do not always transfer automatically. As such, some staff regretted unknowingly misleading parents and students during pathway recruitment.

Provide More Professional Development and/or Collaborative Opportunities for EC Programs

Six designees cited the opportunities they received from DESE and DHE to collaborate with their EC peers as a program highlight. Staff appreciated hearing what other programs offer participating students as well as learning how other programs have dealt with challenges. Program staff have found these discussions to be especially useful in helping them determine how to resolve issues they are facing in their own programs. DESE and DHE may want to consider offering designees more opportunities to collaborate in this capacity either in-person or virtually.

Provide a Stable Funding Mechanism for EC Programs

Stakeholders across programs almost universally cited the need for a stable funding source for EC programs. Program staff felt that they could sustain their programs through the partnerships that they have established and their work to align schedules; however, they expressed needing dedicated funding to cover costs such as textbooks and transportation in order to maintain the programs as originally designed.

V. References

Berger, A., Turk-Bicakci, L., Garet, M., Song, M., Knudson, J., Haxton, C.,…Cassidy, L. (2013). *Early college, early success: Early college high school initiative impact study* [PDF file]. Retrieved from https://files.eric.ed.gov/fulltext/ED577243.pdf

Webb, M., & Gerwin, C. (2014). *Early college expansion: Propelling students to postsecondary success, at a school near you* [PDF file]. Retrieved from https://files.eric.ed.gov/fulltext/ED559689.pdf

Appendix A. Methodology

ICF collected EC program data from three sources: in-person site visits, an online student survey, and extant student participation data provided by the designees.

1. Site Visits

The ICF team conducted a one-day site visit for each of the eight EC programs. Cohort A site visits took place in December 2018 and January 2019, while Cohort B site visits took place in April–May 2019. ICF worked with points of contact at each site to finalize a schedule that included interviews and focus groups with relevant EC stakeholders, including:

- program coordinators;
- school and district administrators;
- teachers, professors, and other school staff;
- external partners; and
- students.

ICF developed a tailored interview/focus group protocol to use during interviews and focus groups with each of the five groups listed above (see Appendix B). Prior to conducting these visits, ICF staff met to review each protocol and discuss site visit logistics.

Any student under the age of 18 needed a parent permission form in order to participate in a focus group; all students—regardless of age—signed an assent form after learning more about the focus group and confidentiality from the interviewer.

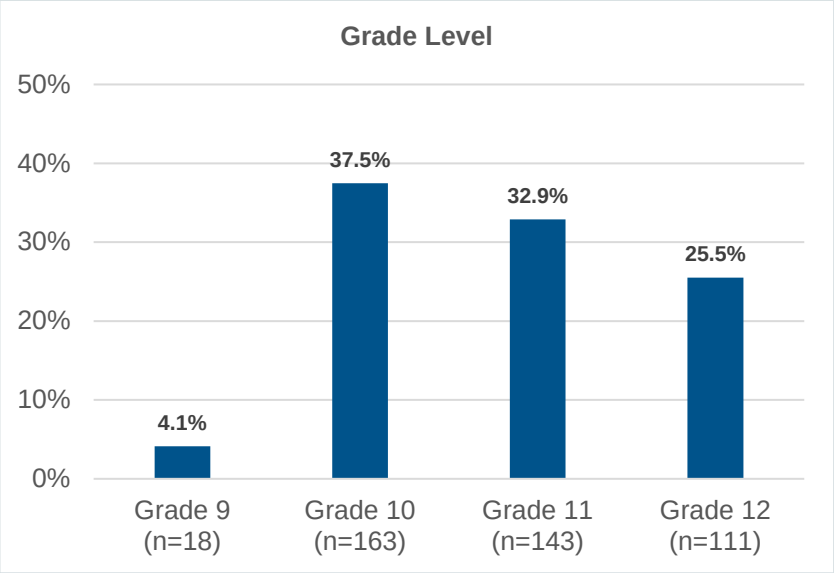
After receiving participant consent, all interviews and focus groups were recorded and transcribed. Analysts then used a qualitative coding software called Atlas.ti to analyze the data and identify common as well as individual themes or trends across all designees.

2. Survey

ICF developed a survey to learn more about EC programs from the student perspective. This survey included multiple choice as well as open-ended questions and gave students the opportunity to comment on the quality, effectiveness, and relevance of the program. Students took the survey over the course of five weeks in April–May 2019, and ICF estimates that it took students 15–20 minute to complete. Students from nine schools and all eight programs participated in the survey, with a little more than one-third in 10th grade, one-third in 11th grade, one quarter in 12th grade, and less than 5% in 9th grade (*n*=435 after cleaning) (see Figure A.1). See Table C.1 in Appendix C for response rates by school.

More than half of student respondents identified as Latinx (52%), while about a quarter identified as Black or African American (24%). The rest identified themselves as White (13%), two or more races/ethnicities (8%), and Asian (3%). Finally, more than half of student respondents were female (57%) (see Tables C.3 and C.4, Appendix C).

Figure A.1 Respondent Grade Levels During the 2018–19 School Year



Note: Percentages may not total 100% due to rounding. Total *n*=435.

After closing the survey on May 10th, researchers first cleaned the data and then analyzed the closed-ended responses using a quantitative coding software called SPSS. All open-ended responses were coded for common themes by hand. Each participating school received individual school-level reports containing anonymized quantitative and coded qualitative results from the ICF team on Friday, May 31st.

3. Extant Student Participation Data

ICF asked each school participating in an EC program to fill out a data collection template with extant student participation information for the 2018-2019 school year (see Appendix B). Each school sent these data to the ICF team in May or June 2019, providing information only for those students who participated in the EC program. The data tracker asked schools to include the following information:

- student ID number;
- school name;
- number of college applications submitted;
- number of hours of student participation in in-person career/academic advising sessions;
- number of hours of student participation in online career/academic advising sessions;
- types of advising available to students;
- existence of individual career/academic plans (Yes/No);
- number of hours of student participation in internships and/or capstone projects; and
- number of tutoring/mentoring hours to support students in the pathway program.

ICF received data for students in all designee programs (*n*=1,007) (see Table D.1, Appendix D).

ICF then ran the analysis comparing data. Researchers calculated the total number of responses, response rates, and averages using Excel. Students who did not submit any college

applications were left out of the calculation for average number of college applications submitted for EC students.

Appendix B. Data Collection Protocols

1. Site Visit Protocols

Final Designation Site Visits
Interview/Focus Group Protocol: Program Coordinators

Introduction

- Briefly discuss the purpose of the focus group: *The Department of Elementary and Secondary Education would like to learn about grantees' experiences implementing the Early College Program/Innovative Pathway Program grant. The purpose of this interview/focus group is to learn about your perceptions of the new pathway programming, how your program serves students, and key successes and major challenges encountered during the final designation phase. This session will take approximately 45–60 minutes.*

- Discuss relationship between this interview/focus group and grant application process: *Please note that as independent evaluators, we have no role in deciding or distributing funding.*

- Convey to each participant our confidentiality policy: *(1) the interview/focus group is voluntary; (2) you can decline to answer any questions, or you can stop participating in the interview/focus group at any time; (3) the information will be held in confidence to the extent permitted by law by the study team who have signed confidentiality agreements ensuring the protection of data; (4) interview/focus group data will be maintained in secure areas; and (5) please respect others' privacy by not sharing any information outside of the interview/focus group.*

- Ask permission to record the interview/focus group: *In order to capture the discussion, I would like to record the session. Only the study team members will have access to the recording. If at least one person chooses not to have the interview/focus group recorded, we will not record the session but will take notes. We will not include your name(s) in these notes.*

- Describe plan to keep interview to designated time limits: *In order to keep our session within the timeframe provided, 45–60 minutes, we may need to interrupt the discussion, on occasion, and move on to the next question. Should this occur, we apologize in advance for being abrupt. We greatly value your feedback, though want to ensure we are respectful of your time.*

- Ask if they have any questions for you before you begin.

****

Notes to Interviewer:

- Guidance has been provided regarding the approximate amount of time that each section should take. While you are not required to adhere to this guidance exactly, please be mindful of the time—ensuring that you cover all key topics without going over the allotted time (45–60 minutes).
- Be sure to keep interviewees on track, making sure that their answers refer only to the final designation phase—not the planning phase.

- *Italicized blue text in the protocol is lower priority—please skip if short on time.*

Introduction (~5 minutes)

1. Let's begin with some brief introductions. Please tell me a little bit about yourself, including your name, job title, role as grant manager, and how long you have been in this role.

Program Structure (~15 minutes)

2. Briefly describe the main elements of your program. *[If the grantee was interviewed during the planning phase by our team, acknowledge this, but ask them to please repeat.]*
    a. *How did you tailor the pathway program to your local circumstances?*
        i. *Process (e.g., needs assessment)*
        ii. *Elements (e.g., industry sector,…)*
    b. *How has the structure of your program changed from what was developed during the planning phase, if at all?*
3. What have been the key successes so far during program implementation?
    a. How have you been able to adapt the pathway program at all to build on those successes?
4. What challenges have you encountered during program implementation?
    a. How have you addressed those challenges?

Meeting Student Needs (~10 minutes)

5. From your perspective, to what extent is the pathway program meeting the needs of students as articulated in the grant application?
    a. *What student needs are not yet being met?*
    b. *How do you anticipate that this program, as it matures and progresses, will meet additional student needs that are not being met currently?*
6. What underrepresented student groups did your team target for representation in the pathway program?
    a. How successfully has your team engaged targeted underrepresented student groups in the first year of implementation? To what extent are underrepresented student groups enrolled in the pathway program?
    b. What challenges has your team faced in engaging those groups?
7. How are students at high need (e.g., students with disabilities, economically disadvantaged students, English Language Learners) performing in your pathway program, so far?
    a. Describe any particular obstacles that students at high need have faced in the pathway.
    b. What supports have been put in place to help students at high need overcome those obstacles?

Perceptions of the Pathway (~5 minutes)

8. From your perspective, how would you assess the quality of your pathway program thus far?
    a. To what degree is the pathway program engaging students in learning?
    b. How effective is the pathway program in preparing students for college and career?
    c. How effectively has your team been able to implement MyCAP, to date?

Facilitators and Barriers (~8 minutes)

9. To what extent and in what ways has the school or district leadership been supportive of the pathway program?
    a. What additional support you would hope to receive from the school or district in order to successfully implement the pathway program?
10. In what ways have parent/families demonstrated an interest in the pathway program?
    a. How have parents been engaging in MyCAP, if at all?
11. What school or community elements have helped to facilitate program implementation?
12. What school or community elements have hindered program implementation?

Sustainability (~3 minutes)

13. How is your team planning for program sustainability after the conclusion of grant funding?

Potential Best Practices (~5 minutes)

14. If there was a community similar to yours that also wanted to implement an Early College/Innovation Pathway program, what advice would you give to them as they entered the program implementation phase?
    a. *What elements/strategies would you suggest implementing, specifically?*

External Support (~5 minutes)

15. DESE is interested in learning more, from your perspective, about the true cost of implementing the pathway program and how grant resources have been used to support the work.
    a. Specifically—and we know you've given DESE information on this, but now that time has passed—what percentage of total anticipated program funding does the grant cover (e.g., 20%? 100%?)?
    b. Your team put together a plan for how you would dedicate grant funds. What departures from that plan or unforeseen expenses has your team encountered?
16. What supports, if any, have you received from the Department of Elementary and Secondary Education and/or the Department of Higher Education during the program implementation phase?
    a. How helpful were these supports?
    b. Are there other supports you wished you had?

Final Designation Site Visits
Interview/Focus Group Protocol: Student Leaders

Introduction

- Briefly discuss the purpose of the focus group: *The Department of Elementary and Secondary Education would like to learn about grantees' experiences implementing the Early College Program/Innovative Pathway Program grant. The purpose of this interview/focus group is to learn about student perceptions of the new pathway programming and how this program serves students. This session will take approximately 30-45 minutes.*

- Discuss relationship between this interview/focus group and grant application process: *Please note that as independent evaluators, we have no role in deciding or distributing funding.*

- Convey to each participant our confidentiality policy: *(1) the interview/focus group is voluntary; (2) you can decline to answer any questions, or you can stop participating in the interview/focus group at any time; (3) the information will be held in confidence to the extent permitted by law by the study team who have signed confidentiality agreements ensuring the protection of data; (4) interview/focus group data will be maintained in secure areas; and (5) please respect others' privacy by not sharing any information outside of the interview/focus group.*

- Ask permission to record the interview/focus group: *In order to capture the discussion, I would like to record the session. Only the study team members will have access to the recording. If at least one person chooses not to have the interview/focus group recorded, we will not record the session but will take notes. We will not include your name(s) in these notes.*

- Describe plan to keep interview to designated time limits: *In order to keep our session within the timeframe provided, 30-45 minutes, we may need to interrupt the discussion, on occasion, and move on to the next question. Should this occur, we apologize in advance for being abrupt. We greatly value your feedback, though want to ensure we are respectful of your time.*

- Ask if they have any questions for you before you begin.

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Notes to Interviewer:

- Guidance has been provided regarding the approximate amount of time that each section should take. While you are not required to adhere to this guidance exactly, please be mindful of the time—ensuring that you cover all key topics without going over the allotted time (30–45 minutes).
- *Italicized blue text in the protocol is lower priority—please skip if short on time.*

Introduction (~5 minutes)

1. Let's begin with some brief introductions. Please tell me a little bit about yourself, including your name, what grade you're in, and your involvement in the pathway program.

Program Structure (~10 minutes)

2. Please describe the pathway program.
    a. What is the overall purpose of the pathway program?
    b. What are the different program components or elements?
3. Why did you decide to participate in the pathway program?
    a. How does the program support your college or career goals?
4. From your perspective, what has been successful so far about the pathway program?
5. Are you aware of any challenges with the pathway program so far? (e.g., transportation unable to take students to nearby campuses to take courses; course scheduling issues; inability to access new advising tools…)

Meeting Student Needs (~5 minutes)

6. How is the pathway program meeting your college and career access needs?
    a. How could the pathway program be improved to better meet your college and career access needs?

Perceptions on Pathway Elements (~10 minutes)

7. From your perspective, how would you describe the quality of each of the following elements of the pathway program:
    a. College and career advising
        i. MyCAP
    b. Alignment with labor market demands (i.e., the pathway will prepare you for high demand jobs in your region)
    c. Integration of hands-on and academic instruction
        i. Early College: opportunities to take dual-credit courses
        ii. Innovation: opportunities to take technical courses aligned with your career pathway
    d. Work-based learning opportunities (e.g., internship, apprenticeship, capstone projects)
    e. Credential preparation and postsecondary links (i.e., pathways provide opportunities to work towards certificates and degrees related to field of study and are connected to colleges or other institutions that provide those certificates or degrees)
8. Focusing on MyCAP more specifically, please describe any activities you've participated in related to MyCAP.
    a. Where did these activities take place (e.g., in class or advisory)?

Program Improvement (~5 minutes)

9. What would you do to improve this program?
    a. *What do you hope to see this program accomplish in the coming years*?

Final Designation Site Visits
Interview/Focus Group Protocol: School Staff

Introduction

- Briefly discuss the purpose of the focus group: *The Department of Elementary and Secondary Education would like to learn about grantees' experiences implementing the Early College Program/Innovative Pathway Program grant. The purpose of this interview/focus group is to learn about your perceptions of the new pathway programming, how your program serves students, and key successes and major challenges encountered during the final designation phase. This session will take approximately 45–60 minutes.*

- Discuss relationship between this interview/focus group and grant application process: *Please note that as independent evaluators, we have no role in deciding or distributing funding.*

- Convey to each participant our confidentiality policy: *(1) the interview/focus group is voluntary; (2) you can decline to answer any questions, or you can stop participating in the interview/focus group at any time; (3) the information will be held in confidence to the extent permitted by law by the study team who have signed confidentiality agreements ensuring the protection of data; (4) interview/focus group data will be maintained in secure areas; and (5) please respect others' privacy by not sharing any information outside of the interview/focus group.*

- Ask permission to record the interview/focus group: *In order to capture the discussion, I would like to record the session. Only the study team members will have access to the recording. If at least one person chooses not to have the interview/focus group recorded, we will not record the session but will take notes. We will not include your name(s) in these notes.*

- Describe plan to keep interview to designated time limits: *In order to keep our session within the timeframe provided, 45–60 minutes, we may need to interrupt the discussion, on occasion, and move on to the next question. Should this occur, we apologize in advance for being abrupt. We greatly value your feedback, though want to ensure we are respectful of your time.*

- Ask if they have any questions for you before you begin.

****

Notes to Interviewer:

- Guidance has been provided regarding the approximate amount of time that each section should take. While you are not required to adhere to this guidance exactly, please be mindful of the time—ensuring that you cover all key topics without going over the allotted time (45–60 minutes).
- Be sure to keep interviewees on track, making sure that their answers refer only to the final designation/program implementation phase—not the planning phase.
- *Italicized blue text in the protocol is lower priority—please skip if short on time.*

Introduction (~5 minutes)

1. Let's begin with some brief introductions. Please tell me a little bit about yourself, including your name, job title, role in the school and/or the pathway program, and how long you have been in this role.

Program Structure (~20 minutes)

2. Briefly describe the main elements of the pathway program that you are aware of.
    a. *Which of these pathway elements do you interact with either regularly or somewhat regularly? In what ways?*
    b. *How did your team tailor the pathway program to your local circumstances?*
        i. *Process (e.g., needs assessment)*
        ii. *Elements (e.g., industry sector,…)*
    c. *How has the structure of this program changed from what was initially developed during the planning phase, if at all?*
3. What have been the key successes so far during program implementation?
    a. How has the team been able to adapt the pathway program at all to build on those successes?
4. What challenges has the team or school encountered during program implementation?
    a. How has the team addressed those challenges?
    b. What improvements still need to happen?

Meeting Student Needs (~10 minutes)

5. From your perspective, to what extent is the pathway program meeting the needs of students as articulated in the grant application?
    a. *What student needs are not yet being met?*
    b. *How do you anticipate that this program, as it matures and progresses, will meet additional student needs that are not being met currently?*
6. What underrepresented student groups did your team target for representation in the pathway program?
    c. How successfully has your team engaged targeted underrepresented student groups in the first year of implementation? To what extent are underrepresented student groups enrolled in the pathway program?
    d. What challenges has your team faced in engaging those groups?
7. How are students at high need (e.g., students with disabilities, economically disadvantaged students, English Language Learners) performing in your pathway program, so far?
    c. Describe any particular obstacles that students at high need have faced in the pathway.
    d. What supports have been put in place to help students at high need overcome those obstacles?

Perceptions of the Pathway (~5 minutes)

8. From your perspective, how would you assess the quality of the pathway program thus far?
    a. To what degree is the pathway program engaging students in learning?
    b. How effective is the pathway program in preparing students for college and career?
9. What has been your involvement with MyCAP to date?
    a. What is your perception of MyCAP implementation so far?

b. How has MyCAP been improved by the pathway structure, if at all?

10. How has the implementation of the pathway program shaped the culture of the school, if at all?

Facilitators and Barriers (~5 minutes)

11. To what extent and in what ways has the school or district leadership been supportive of the pathway program?
    a. How has the school or district leadership been supportive of your work, specifically?
    b. What additional support would you hope to receive from the school or district in order to successfully implement the pathway program?
12. In what ways have parent/families demonstrated an interest in the pathway program?
    a. How have parents been engaging in MyCAP, if at all?
13. What school or community elements have helped to facilitate program implementation?
14. What school or community elements have hindered program implementation?

Potential Best Practices (~5 minutes)

15. If there was a community similar to yours that also wanted to implement an Early College/Innovation Pathway program, what advice would you give to them as they entered the program implementation phase?
    b. What elements/strategies would you suggest implementing, specifically?

External Support (~5 minutes)

16. What supports, if any, have you received from the Department of Elementary and Secondary Education and/or the Department of Higher Education during the program implementation phase?
    c. How helpful were these supports?
    d. Are there other supports you wished you had?

Final Designation Site Visits
Interview/Focus Group Protocol: School/District Administrators

Introduction

- Briefly discuss the purpose of the focus group: *The Department of Elementary and Secondary Education would like to learn about grantees' experiences implementing the Early College Program/Innovative Pathway Program grant. The purpose of this interview/focus group is to learn about your perceptions of the new pathway programming, how the program serves students, and key successes and major challenges encountered during the final designation phase. This session will take approximately 45–60 minutes.*

- Discuss relationship between this interview/focus group and grant application process: *Please note that as independent evaluators, we have no role in deciding or distributing funding.*

- Convey to each participant our confidentiality policy: *(1) the interview/focus group is voluntary; (2) you can decline to answer any questions, or you can stop participating in the interview/focus group at any time; (3) the information will be held in confidence to the extent permitted by law by the study team who have signed confidentiality agreements ensuring the protection of data; (4) interview/focus group data will be maintained in secure areas; and (5) please respect others' privacy by not sharing any information outside of the interview/focus group.*

- Ask permission to record the interview/focus group: *In order to capture the discussion, I would like to record the session. Only the study team members will have access to the recording. If at least one person chooses not to have the interview/focus group recorded, we will not record the session but will take notes. We will not include your name(s) in these notes.*

- Describe plan to keep interview to designated time limits: *In order to keep our session within the timeframe provided, 45–60 minutes, we may need to interrupt the discussion, on occasion, and move on to the next question. Should this occur, we apologize in advance for being abrupt. We greatly value your feedback, though want to ensure we are respectful of your time.*

- Ask if they have any questions for you before you begin.

****

Notes to Interviewer:

- Guidance has been provided regarding the approximate amount of time that each section should take. While you are not required to adhere to this guidance exactly, please be mindful of the time—ensuring that you cover all key topics without going over the allotted time (45–60 minutes).
- Be sure to keep interviewees on track, making sure that their answers refer only to the program implementation phase—not the planning phase.
- *Italicized blue text in the protocol is lower priority—please skip if short on time.*

Introduction (~5 minutes)

1. Let's begin with some brief introductions. Please tell me a little bit about yourself, including your name, job title, role in the school and/or pathway program, and how long you have been in this role.

Program Structure (~20 minutes)

2. Briefly describe the main elements of the pathway program that you are aware of.
    a. *Which of these pathway elements do you interact with either regularly or somewhat regularly? In what ways?*
    b. *How has the structure of this program changed from what was initially developed during the planning phase, if at all?*
3. What have been the key successes so far during program implementation?
    a. How has the team been able to adapt the pathway program at all to build on those successes?
4. What challenges has the team encountered during program implementation?
    a. How has the team addressed those challenges?

Meeting Student Needs (~10 minutes)

5. From your perspective, to what extent is the pathway program meeting the needs of students as articulated in the grant application?
    a. *What student needs are not yet being met?*
    b. *How do you anticipate that this program, as it matures and progresses, will meet additional student needs that are not being met currently?*
6. What underrepresented student groups did your team target for representation in the pathway program?
    a. How successfully has your team engaged targeted underrepresented student groups in the first year of implementation? To what extent are underrepresented student groups enrolled in the pathway program?
    b. What challenges has your team faced in engaging those groups?
7. How are students at high need (e.g., students with disabilities, economically disadvantaged students, English Language Learners) performing in your pathway program, so far?
    a. Describe any particular obstacles that students at high need have faced in the pathway.
    b. What supports have been put in place to help students at high need overcome those obstacles?

Perceptions of the Pathway (~5 minutes)

8. From your perspective, how would you assess the quality of the pathway program thus far?
    a. To what degree is the pathway program engaging students in learning?
    b. How effective is the pathway program in preparing students for college and career?
    c. How effectively has your team been able to implement MyCAP, to date?
9. To what extent has the school or district leadership supported of the pathway program?
10. How has the implementation of the pathway program shaped the culture of the school, if at all?

Facilitators and Barriers (~5 minutes)

11. To what extent and in what ways have school and district leaders been supportive of the pathway program?
12. In what ways have parent/families demonstrated an interest in the pathway program?
13. What school or community elements have helped to facilitate program implementation?
14. What school or community elements have hindered program implementation?

Potential Best Practices (~5 minutes)

15. If there was a community similar to yours that also wanted to implement an Early College/Innovation Pathway program, what advice would you give to them as they entered the program implementation phase?
    c. *What elements/strategies would you suggest implementing, specifically?*

Sustainability (~3 minutes)

16. How is your team planning for program sustainability after the conclusion of grant funding?

External Support (~5 minutes)

17. DESE is interested in learning more, from your perspective, about the true cost of implementing the pathway program and how grant resources have been used to support the work.
    c. Specifically—and we know you've given DESE information on this, but now that time has passed—what percentage of total anticipated program funding does the grant cover (e.g., 20%? 100%?)?
    d. Your team put together a plan for how you would dedicate grant funds. What departures from that plan or unforeseen expenses has your team encountered?
18. Are you aware of any support that the school or the pathway leadership team have received from the Department of Elementary and Secondary Education and/or the Department of Higher Education during the program implementation phase?
    a. If so, from your perspective, how helpful were these supports?
    b. Are there other supports you wished you had?

Grant Implementation Site Visits
Interview/Focus Group Protocol: External Partners

Introduction

- Briefly discuss the purpose of the focus group: *The Department of Elementary and Secondary Education would like to learn about grantees' experiences implementing the Early College Program/Innovative Pathway Program grant. The purpose of this interview/focus group is to learn about your perceptions of the new pathway programming, how the program serves students, and key successes and major challenges encountered during the final designation phase. This session will take approximately 30–45 minutes.*

- Discuss relationship between this interview/focus group and grant application process: *Please note that as independent evaluators, we have no role in deciding or distributing funding.*

- Convey to each participant our confidentiality policy: *(1) the interview/focus group is voluntary; (2) you can decline to answer any questions, or you can stop participating in the interview/focus group at any time; (3) the information will be held in confidence to the extent permitted by law by the study team who have signed confidentiality agreements ensuring the protection of data; (4) interview/focus group data will be maintained in secure areas; and (5) please respect others' privacy by not sharing any information outside of the interview/focus group.*

- Ask permission to record the interview/focus group: *In order to capture the discussion, I would like to record the session. Only the study team members will have access to the recording. If at least one person chooses not to have the interview/focus group recorded, we will not record the session but will take notes. We will not include your name(s) in these notes.*

- Describe plan to keep interview to designated time limits: *In order to keep our session within the timeframe provided, 45–60 minutes, we may need to interrupt the discussion, on occasion, and move on to the next question. Should this occur, we apologize in advance for being abrupt. We greatly value your feedback, though want to ensure we are respectful of your time.*

- Ask if they have any questions for you before you begin.

****

Notes to Interviewer:

- Guidance has been provided regarding the approximate amount of time that each section should take. While you are not required to adhere to this guidance exactly, please be mindful of the time—ensuring that you cover all key topics without going over the allotted time (30–45 minutes).
- Be sure to keep interviewees on track, making sure that their answers refer only to the program implementation phase—not the planning phase.
- *Italicized blue text in the protocol is lower priority—please skip if short on time.*

Introduction (~5 minutes)

1. Let's begin with some brief introductions. Please tell me a little bit about yourself, including your name, job title, role in supporting the pathway program, and how long you have been in this role.
2. What was your organization's motivation for serving as a partner on the pathway program?

Program Structure (~15 minutes)

3. Which of these pathway elements do you interact with or support? What is the nature of your support or interaction?
    a. *Are you aware if the structure of this program has changed at all from what was initially developed during the planning phase? How so?*
4. From your perspective, what have been the key successes so far during program implementation?
    a. How has the team been able to adapt the pathway program to build on those successes, if at all?
5. What have been the key challenges encountered thus far during program implementation, if any?
    a. How were those challenges addressed and by whom?

Meeting Student and Community Needs (~3 minutes)

6. From your perspective, to what extent is the pathway program meeting the college and career readiness needs of students?
    a. *What about the college and career readiness needs of students at a high need (e.g., students with disabilities, economically disadvantaged students, English Language Learners)?*
7. To what extent is the pathway program meeting community needs related to the pathway (e.g., need to create a pipeline for jobs in a certain industry, need to provide greater college opportunities for target populations)?

Perceptions of the Pathway (~5 minutes)

8. How would you assess the quality of the pathway program thus far?
    a. How effective is the pathway program in preparing students for college and career?
9. *What are your perspectives on working with the other stakeholders to develop the pathway program?*
    a. *What is the nature of the working relationship?*
    b. *Has your organization's contribution/involvement in the pathway program been worthwhile so far? How so?*

Facilitators and Barriers (~5 minutes)

10. What school or community elements have helped to facilitate your role in program implementation?
11. What school or community elements have hindered your role in program implementation?

Potential Best Practices (~3 minutes)

12. What advice would you give to other organizations interested in serving as partners of this or another similar pathway program?

Massachusetts New Skills for Youth Grant Evaluation

Adult Interview/Focus Group Consent, Winter 2018/2019

The Massachusetts Department of Elementary and Secondary Education (DESE) has contracted with ICF to evaluate statewide performance on the New Skills for Youth Grant. As part of this effort, we are hoping to learn about grantees' experiences encountered implementing their Early College Pathway/Innovative Pathway program. The purpose of this interview/focus group is to learn about the activities and strategies implemented in the 2018–19 school year, as well as key successes and major challenges encountered during the implementation phase. This session will take approximately 30–60 minutes. Please consider the details below prior to deciding to participate in this interview:

• **Confidentiality**: The session will be recorded either by audio files or written notes. The recordings of what you share will only be used by the researchers. Data will be stored in a secure area accessible only to the researchers. Your answers to these questions will be kept confidential to the extent permitted by law and all findings will be reported in an aggregate manner to preserve participant identity. Summary reports may indicate particular organizations or individuals by the roles they describe but challenges and successes will be reported confidentially to the extent permitted by law. *For focus group participants*: Please keep in mind that what individuals talk about during the focus group is confidential and you should not discuss it with anyone after the session is finished.

• **Risks**: The study presents minimal risk to you. You will not be required to answer any questions that you do not wish to answer and reports will not identify you by name. *For focus group participants:* While we will ask all focus group participants to not discuss any of the information after the session is finished, we cannot guarantee that information will be kept confidential by others participating in the group.

• **Benefits**: Study participation helps build knowledge in the state and nationally about best practices and lessons learned for establishing college and career pathway programs. Where appropriate, other program grantees can use the information learned to adjust their programming.

• **Voluntary Participation**: Your participation is voluntary meaning that you do not have to participate in this interview if you do not want to; you can stop participating at any time. We hope you will participate in the conversation, but you do not have to share information that makes you feel uncomfortable. Your decision to participate or withdraw from the study at any time will not affect your relationship with ESE, your school district/organization, your employment status or performance review. By answering questions, you are consenting to participate.

If you have any questions about the study or your rights as a study participant, you can call Samantha Spinney at (703) 272-6681.

Massachusetts New Skills for Youth Grant Evaluation

Parent Permission Slip for Student Focus Groups, Winter 2018/2019

<Date>, 2018

Dear Parent or Guardian:

Your child's school has received New Skills for Youth grant funding from the Massachusetts Department of Elementary and Secondary Education (DESE) to develop and implement a college and career pathway program, referred to as either an Early College Pathway or an Innovation Pathway. DESE hired an external evaluator, ICF, to measure the implementation and impact of the pathway programs at all participating schools. As part of the evaluation, ICF will be conducting a focus group (i.e., a group interview) with student leaders participating in the pathway program at your child's school to learn more about the program from a student perspective. Specifically, in this focus group, ICF staff will ask questions about how the pathway program is working, whether the pathway is meeting student needs, and how the program could be improved.

Please consider the details below prior to deciding to allow your child to participate in the focus group:

- **Confidentiality**: All information about your child will remain confidential to the extent permitted by law. The focus group discussion will be recorded either by audio files or written notes. All recordings and notes will only be used by the ICF research team. Any transcripts or notes from the focus group will only refer to your child by their first name or initials only. In written reports, the data collected by researchers will be reported in a manner that summarizes across students. We will not include student names or any other personally identifiable information about you or your child in written reports.
- **Risks**: The study presents minimal risk to your child. Researchers will not identify specific children in order to maintain confidentiality. Data will be stored in a secure area accessible only to the researchers during the study. While we will ask all focus group participants to not discuss any of the information after the session is finished, we cannot guarantee that all focus group participants will keep information private.
- **Benefits**: Study participation helps build knowledge in the state about best practices for implementing college and career pathway programs as well as the impact of these programs.
- **Voluntary Participation**: Participation in this study is voluntary. If a student does not participate in the study, he or she will not be impacted. If you agree that your child may participate in the focus group, your child will still have the chance to decide if they want to participate. Your child will be able to decline to answer any question that he or she does not wish to answer and withdraw at any time.

If you have any questions about the study, please contact Samantha Spinney at ICF at (703) 272-6681 or samantha.spinney@icf.com.

Please complete the form on the following page and turn in the completed form to *<School Designee>* by *<date>.* **Your child will not be able to participate in the focus group without your signed consent to do so.**

Sincerely,
Samantha Spinney

Massachusetts New Skills for Youth Grant Evaluation

Parent Permission Slip for Student Focus Groups, Winter 2018/2019

To indicate your consent to have your child participate in this student focus group in winter 2018/2019, please sign your name below in black/blue ink pen.

☐ YES, I will allow my child, _____,
[Please Print Full Student Name]
to participate in this student focus group.

☐ NO, I do not want my child, _____,
[Please Print Full Student Name]
to participate in this student focus group.

Your name (Please Print): _____

Your signature: _____ Date: _____

Massachusetts New Skills for Youth Grant Evaluation

Student Focus Group Assent, Winter 2018/2019

Dear Student,

Your school has received New Skills for Youth grant funding from the Massachusetts Department of Elementary and Secondary Education (DESE) to develop and implement a college and career pathway program, referred to as either an Early College Pathway or an Innovation Pathway. DESE hired an external evaluator, ICF, to measure the implementation and impact of the pathway programs at all participating schools. You are being asked to participate in a focus group (i.e., group interview) with approximately 6–8 other high school students to share your experiences as a student leader participating in the pathway program. A focus group involves you participating in a classroom-like discussion with other students led by questions from the ICF evaluation team. The focus group discussion will include questions about your overall opinions and experiences with the pathway program, how the pathway program is working, whether the pathway is meeting student needs, and how the program could be improved. The focus group is expected to take approximately 30–45 minutes.

Please consider the details below prior to deciding to participate in the focus group:

• **Confidentiality**: Your answers during the focus group will be kept confidential to the extent permitted by law. The focus group discussion will be recorded either by audio files or written notes. The recordings of what you share will only be used by our research team. In written reports, the data collected by researchers will be reported in a manner that summarizes across students. We will not include student names or any other personally identifiable information about you in written reports. Please keep in mind that what individuals talk about during the focus group is private and you should not discuss it with anyone after the session is finished.

• **Risks**: The study presents minimal risk to you. You will not be required to answer any questions that you do not wish to answer and reports will not identify you by name. If at any time you feel uncomfortable while answering questions or want to talk with someone after the discussion please let the focus group leader know or see your guidance counselor. While we will ask all focus group participants to not discuss any of the information after the session is finished, we cannot guarantee that focus group participants will keep information private. We will be working with your school to establish an appropriate time and place at the school for the focus group.

• **Benefits**: Study participation helps build knowledge in the state about best practices for implementing college and career pathway programs as well as the impact of these programs.

• **Voluntary Participation**: Your participation is voluntary meaning that you do not have to participate in this focus group if you do not want to. If you decide to participate then change your mind, you can stop participating at any time. We hope you will participate in the conversation, but you do not have to share information that makes you feel uncomfortable. Your decision to participate or withdraw from the study, at any time, will not affect you at school or in your pathway program. By answering questions and signing below, you are assenting to participate.

If you have any questions about the study or your rights as a study participant, you or your parent/legal guardian may contact Samantha Spinney at ICF at (703) 272-6681 or samantha.spinney@icf.com. In

order to participate in the student focus group, we must also have signed consent from your parent/legal guardian agreeing to your participation.

To indicate your consent to participate in this focus group, please sign your name below in black/blue ink pen and return the form to the ICF focus group leader.

_____ _____

Sign your name here **Date**

_____

Clearly print your name here

2. Student Survey Instrument and Parent Permission

MA New Skills for Youth Student Survey

Student Survey (Spring 2019)

1) By selecting "I agree to take this survey," you agree that you understand the purpose of the study and agree to take the online survey. If you select "I do not agree to take this survey," you will not be presented with the option to take the survey. If you need to stop the online survey before completing it and return to it later, you will be able to do so.*

( ) I read the above instruction and agree to take this survey.

( ) I do not agree to take this survey.

Introduction

2) In the space below, please include your student ID code.*

_____

3) Please indicate which school you are enrolled in during the 2018–19 school year.*

( ) Burncoat Senior High School

( ) Charlestown High School

( ) Chelsea High School

( ) Claremont Academy

( ) Doherty Memorial High School

( ) High School of Commerce

( ) Holyoke High School

( ) Lawrence High School

( ) Nantucket High School

( ) New Heights Charter School of Brockton

( ) North High School

( ) Northampton High School

( ) Roger L. Putnam Vocational Technical High School

( ) Salem High School

( ) South High Community

( ) University Park Campus

( ) Uxbridge High School

( ) Westfield High School

( ) Westfield Technical Academy

( ) Worcester Technical High School

Introduction

4) Please select the pathway program in which you are participating:*

( ) Innovation Pathway

( ) Early College Pathway

Introduction

5) What is your current grade?

( ) 9th grade

( ) 10th grade

( ) 11th grade

( ) 12th grade

6) Does your pathway program have an industry or other theme?

( ) Yes

( ) No

( ) I don't know

Introduction

7) If so, what is the industry or theme?

_____

Participation In and Perceptions Of Pathway

8) For the following activities, first indicate whether you participated in the activity by using the drop-down menu to select Yes, No, or I don’t know. If you did participate in the activity, use the second drop-down menu to indicate how effective it was in preparing you for college and/or a career.

	Have you participated in this activity during this school year (2018–19)?			If you did participate, how helpful was this activity in preparing you for college and/or a career?				
	Yes	No	I don't know	Not helpful	Slightly helpful	Somewhat helpful	Mostly helpful	Very helpful
Participated in college or career advising (e.g., a college and career readiness class, an advising program, etc.)	___	___	___	___	___	___	___	___
Started creating your own personalized college and career plan	___	___	___	___	___	___	___	___
Learned information about the availability of jobs and employment related to one or more industries (e.g., information regarding the need for different careers, salaries, and other related information)	___	___	___	___	___	___	___	___
Took one or more technical courses (related to an industry)	___	___	___	___	___	___	___	___
Took one or more college-level courses (AP, IB, or dual credit)	___	___	___	___	___	___	___	___
Took one or more dual-credit courses	___	___	___	___	___	___	___	___

(courses offering both high school and college credit)								
Listened to a guest speaker present on career information	___	___	___	___	___	___	___	___
Conducted labor market research	___	___	___	___	___	___	___	___
Attended a career day or job fair event	___	___	___	___	___	___	___	___
Participated in a job site visit or company tour	___	___	___	___	___	___	___	___
Participated in job shadowing experience	___	___	___	___	___	___	___	___
Participated in an internship	___	___	___	___	___	___	___	___
Participated in a capstone project	___	___	___	___	___	___	___	___
Learned about options after high school graduation, such as earning a certificate, Associate's degree, Bachelor’s degree or other credential	___	___	___	___	___	___	___	___
Visited a college campus	___	___	___	___	___	___	___	___
Learned about the costs of college and options for paying for college (e.g., financial aid, scholarships)	___	___	___	___	___	___	___	___

Learned what it takes to succeed in college	___	___	___	___	___	___	___	___

Participation In and Perceptions Of Pathway

9) For the following activities, first indicate whether you participated in the activity by using the drop-down menu to select Yes, No, or I don't know. If you did participate in the activity, use the second drop-down menu to indicate how effective it was in preparing you for college and/or a career.

	Have you participated in this activity during this school year (2018–19)?			If you did participate, how helpful was this activity in preparing you for college and/or a career?				
	Yes	No	I don't know	Not Helpful	Slightly Helpful	Somewhat Helpful	Mostly Helpful	Very Helpful
Took one or more technical courses (related to an industry)	___	___	___	___	___	___	___	___
Took one or more college-level courses (AP, IB, or dual credit)	___	___	___	___	___	___	___	___
Took one or more dual-credit courses (courses offering both high school and college credit)	___	___	___	___	___	___	___	___

Participation In and Perceptions Of Pathway

10) Please rate the degree to which you agree with the following statement:

All of the pathway activities that I participated in seem to be related to one another.

( ) Strongly Disagree

( ) Disagree

( ) Agree

( ) Strongly Agree

11) Based on your experience with your pathway program and the support services you have received, please indicate your level of agreement for each of the items listed.

My pathway program has…

	Strongly Disagree	Disagree	Agree	Strongly Agree
…helped me improve my grades.	( )	( )	( )	( )
…helped me stay on track to graduate from high school.	( )	( )	( )	( )
…encouraged me to enroll in a two-year or four-year college, technical school, or certificate program.	( )	( )	( )	( )
…raised my awareness of college opportunities that I was not aware of previously.	( )	( )	( )	( )
…raised my awareness of potential work-related certifications or credentials.	( )	( )	( )	( )
…provided me with enough advising opportunities to help me	( )	( )	( )	( )

make choices after high school that are right for me.				
…motivated me to want to learn the skills needed for a specific job/career.	( )	( )	( )	( )
…helped me build confidence about my ability to succeed in the future.	( )	( )	( )	( )
...helped me take ownership over my high school experience.	( )	( )	( )	( )

12) Please rate the degree to which your pathway program overall has met your individual needs as a student. (Individual needs could be related to the types of courses offered, the types of supports available [like tutoring or mentoring], the resources and information that you have received, the certifications that are available, or anything else.)

The pathway program has…

( ) …not met my needs.

( ) …met my needs a little.

( ) …met my needs a lot.

13) Please explain your answer in the field below.

_____

_____

_____

_____

14) Please indicate how helpful your pathway program has been in preparing you for the following items.

	Not Helpful	Somewhat Helpful	Helpful	Very Helpful
Learning new employability skills (e.g., time management, interpersonal communication, etc.).	( )	( )	( )	( )
Staying on track to graduate on-time from high school.	( )	( )	( )	( )
Getting ready to apply to college or a university.	( )	( )	( )	( )
Learning about different career fields.	( )	( )	( )	( )

Participation In and Perceptions Of Pathway

15) Please indicate how helpful your pathway program has been in preparing you for the following items.

	Not Helpful	Somewhat Helpful	Helpful	Very Helpful
Gaining work experience in an industry I am interested in.	( )	( )	( )	( )

16) What do you like most about your pathway program?

_____

_____

_____

_____

17) What would you like to see improved in your pathway program?

_____

_____

_____

_____

18) Why did you enroll in the pathway program?

_____

_____

_____

_____

19) Has your pathway program affected your plans for your future?

( ) Yes

( ) No

( ) I don't know

20) Please explain your answer.

_____

_____

_____

_____

Background

21) What is your gender?

( ) Male

( ) Female

( ) Other

( ) I do not wish to share

22) What is the highest level of education achieved by your parent(s)/guardian(s)? (Please answer this question for the parent/guardian who achieved the highest level of

education. For example, if your mother has a four-year college degree and your father has a high school diploma, select "four-year college degree.")

( ) Some high school

( ) High school diploma/GED

( ) Some college (less than a two- or four-year degree, e.g., a certificate)

( ) Two-year college degree (Associate's)

( ) Four-year college degree (Bachelor's)

( ) Master's degree

( ) Ph.D. or higher

( ) Don't know

23) If you have brothers or sisters, how many have attended college in the past or are in college now?

( ) 0

( ) 1

( ) 2

( ) 3 or more

( ) My brothers or sisters are too young to attend college

( ) I don't have brothers or sisters

24) What is your race/ethnicity?

( ) American Indian or Alaska Native

( ) Asian

( ) Black or African American

( ) Native Hawaiian or other Pacific Islander

( ) White

( ) Hispanic or Latino

( ) Two or More

( ) Other

( ) I do not wish to share

Thank You!

Massachusetts New Skills for Youth Grant Evaluation

Parent Permission Slip for Student Focus Groups, Winter 2018/2019

<Date>, 2018

Dear Parent or Guardian:

Your child's school has received New Skills for Youth grant funding from the Massachusetts Department of Elementary and Secondary Education (DESE) to develop and implement a college and career pathway program, referred to as either an Early College Pathway or an Innovation Pathway. DESE hired an external evaluator, ICF, to measure the implementation and impact of the pathway programs at all participating schools. As part of the evaluation, ICF will be conducting a focus group (i.e., a group interview) with student leaders participating in the pathway program at your child's school to learn more about the program from a student perspective. Specifically, in this focus group, ICF staff will ask questions about how the pathway program is working, whether the pathway is meeting student needs, and how the program could be improved.

Please consider the details below prior to deciding to allow your child to participate in the focus group:

- **Confidentiality**: All information about your child will remain confidential to the extent permitted by law. The focus group discussion will be recorded either by audio files or written notes. All recordings and notes will only be used by the ICF research team. Any transcripts or notes from the focus group will only refer to your child by their first name or initials only. In written reports, the data collected by researchers will be reported in a manner that summarizes across students. We will not include student names or any other personally identifiable information about you or your child in written reports.

- **Risks**: The study presents minimal risk to your child. Researchers will not identify specific children in order to maintain confidentiality. Data will be stored in a secure area accessible only to the researchers during the study. While we will ask all focus group participants to not discuss any of the information after the session is finished, we cannot guarantee that all focus group participants will keep information private.

- **Benefits**: Study participation helps build knowledge in the state about best practices for implementing college and career pathway programs as well as the impact of these programs.

- **Voluntary Participation**: Participation in this study is voluntary. If a student does not participate in the study, he or she will not be impacted. If you agree that your child may participate in the focus group, your child will still have the chance to decide if they want to participate. Your child will be able to decline to answer any question that he or she does not wish to answer and withdraw at any time.

If you have any questions about the study, please contact Samantha Spinney at ICF at (703) 272-6681 or samantha.spinney@icf.com.

Please complete the form on the following page and turn in the completed form to *<School Designee>* by *<date>.* **Your child will not be able to participate in the focus group without your signed consent to do so.**

Sincerely,
Samantha Spinney

To indicate your consent to have your child participate in this student focus group in winter 2018/2019, please sign your name below in black/blue ink pen.

☐ YES, I will allow my child, _____,
[Please Print Full Student Name]
to participate in this student focus group.

☐ NO, I do not want my child, _____,
[Please Print Full Student Name]
to participate in this student focus group.

Your name (Please Print): _____

Your signature: _____ Date: _____

3. Student Participation Data Collection Template

Student ID Number (Required)	School Name	Number of College applications submitted by students participating in the pathway (this may be available in Naviance via the Common Application)	Number of hours of student participation in in-person career/academic advising sessions	Numbers of hours of student participation in online career/academic advising sessions	Types of advising available to students (e.g., workshops, one-on-one, etc.).	Existence of individual career/academic plans (Yes/No)	Number of hours of student participation in internships and/or capstone projects	Number of tutoring/mentoring hours to support students in the pathway program.
12345	Example High School	5	100	0	Workshops, speakers, class	Yes	40	30

Appendix C. Survey Analysis Technical Detail

Respondent Demographics

Table C.1 Survey Response Rates by School

School	(*n*=436)
Charlestown High School	7.1%
Chelsea High School	25.0%
High School of Commerce	3.0%
Holyoke High School	15.8%
Lawrence High School	12.2%
New Heights Charter School of Brockton	22.9%
Roger L. Putnam Vocational Technical High School	5.3%
Salem High School	6.7%
Westfield High School	0.0%
Westfield Technical Academy	2.1%

Note: Percentages may not total 100% due to rounding.

Table C.2 Parent Level of Education

(*n*=377)	Don't Know (*n*=55)	Some High School (*n*=100)	High School Diploma or GED (*n*=77)	Some College (*n*=39)	Two-Year College (*n*=28)	Four-Year College (*n*=49)	Master's Degree (*n*=22)	Ph.D. or Higher (*n*=7)
What is the highest level of education achieved by your parent?	14.6%	26.5%	20.4%	10.3%	7.4%	13.0%	5.8%	1.9%

Note: Percentages may not total 100% due to rounding.

Table C.3 Student Gender

Gender	(*n*=436)
Male	40.7%
Female	56.6%
Other	0.5%
I do not wish to share	2.1%

Note: Percentages may not total 100% due to rounding.

Table C.4 Student Race/Ethnicity

Gender	(*n*=355)
Asian	3.1%
Black or African American	23.9%
Latinx	52.1%
White	13.2%
Two or More	7.6%

Note: Percentages may not total 100% due to rounding.

Student Participation in Activities

Table C.5 Student Participation in Activities (Overall)

Have you participated in this activity during this school year (2018–19)?	Yes	No	I don't know
Participated in college or career advising (e.g., a college and career readiness class, an advising program) (*n*=433)	74.6%	16.9%	8.5%
Started creating your own personalized college and career plan (*n*=429)	62.9%	24.9%	12.1%
Learned information about the availability of jobs and employment related to one or more industries (e.g., information regarding the need for different careers, salaries, and other related information) (*n*=427)	65.3%	24.4%	10.3%
Listened to a guest speaker present on career information (*n*=425)	69.4%	21.2%	9.4%
Conducted labor market research (*n*=423)	16.5%	60.8%	22.7%
Attended a career day or job fair event (*n*=423)	41.4%	51.5%	7.1%
Participated in a job site visit or company tour (*n*=421)	30.2%	62.2%	7.6%
Participated in a job-shadowing experience (*n*=426)	21.8%	70.9%	7.3%
Participated in an internship (*n*=423)	15.6%	74.7%	9.7%
Participated in a capstone project (*n*=420)	34.5%	48.1%	17.4%
Learned about options after high school graduation, such as earning a certificate, Associate's degree, Bachelor's degree, or other credential (*n*=418)	77.5%	15.6%	6.9%
Visited a college campus (*n*=419)	80.2%	15.8%	4.1%
Learned about the costs of college and options for paying for college (e.g., financial aid, scholarships) (*n*=420)	84.0%	8.8%	7.1%
Learned what it takes to succeed in college (*n*=423)	78.5%	10.2%	11.3%

Note: Percentages may not total 100% due to rounding.

Table C.6 Student Participation in Activities by Grade

Have you participated in this activity during this school year (2018–19)?	Grade 9	Grade 10	Grade 11	Grade 12
Participated in college or career advising (*n*=323)*	66.7%	87.1%	70.2%	63.6%
Started creating your own personalized college and career plan (*n*=270)*	38.9%	69.6%	62.0%	58.9%
Learned information about the availability of jobs and employment related to one or more industries (*n*=279)*	47.1%	78.3%	60.8%	56.0%
Listened to a guest speaker present on career information (*n*=294)*	72.2%	83.4%	58.6%	62.4%
Conducted labor market research (*n*=70)*	11.1%	21.3%	14.9%	13.0%
Attended a career day or job fair event (*n*=174)	50.0%	45.2%	37.7%	38.5%
Participated in a job site visit or company tour (*n*=127)	22.2%	33.1%	29.0%	29.0%
Participated in a job-shadowing experience (*n*=93)	27.8%	24.7%	16.4%	23.9%
Participated in an internship (*n*=66)	16.7%	14.7%	11.5%	22.0%
Participated in a capstone project (*n*=145)*	5.9%	31.8%	31.4%	47.2%
Learned about options after high school graduation, such as earning a certificate, Associate's, Bachelor's degree, or other credential (*n*=324)	77.8%	80.8%	77.7%	73.1%
Visited a college campus (*n*=336)*	100.0%	89.7%	75.2%	69.9%
Learned about the costs of college and options for paying for college (*n*=353)	77.8%	84.0%	87.1%	82.1%
Learned what it takes to succeed in college (*n*=332)	88.9%	80.3%	81.4%	71.0%

Note: Percentages are analyzed within student-indicated grade level, and therefore do not add up to 100% within each row. For items marked with an asterisk, it was found that student responses differed significantly across grade: Participated in college or career advising: $X^2(6)=28.85$, p<001; Started creating your own personalized college and career plan: $X^2(6)=15.99$, p>.05; Learned information about the availability of jobs and employment related to one or more industries: $X^2(6)=22.27$, p<.01; Listened to a guest speaker present on career information: $X^2(6)=38.82$, p<.001; Conducted labor market research: $X^2(6)=12.89$, p>.05; Participated in a capstone project: $X^2(6)=16.57$, p>.05; Visited a college campus: $X^2(6)=27.97$, p<.001.

Table C.7 Student Participation in Activities by Gender

Have you participated in this activity during this school year (2018–19)?	Female (n=207–213)	Male (n=151–154)
Participated in college or career advising (*n*=278)	77.4%	74.0%
Started creating your own personalized college and career plan (*n*=237)	68.1%	59.7%
Learned information about the availability of jobs and employment related to one or more industries (*n*=242)	61.8%	72.5%
Listened to a guest speaker present on career information (*n*=251)	64.8%	75.7%
Conducted labor market research (*n*=60)	17.3%	15.7%
Attended a career day or job fair event (*n*=150)	44.3%	37.5%
Participated in a job site visit or company tour (*n*=108)	30.4%	29.4%
Participated in a job-shadowing experience (*n*=75)	22.2%	18.3%
Participated in an internship (*n*=55)	15.7%	14.4%
Participated in a capstone project (*n*=125)	36.5%	32.2%
Learned about options after high school graduation, such as earning a certificate, Associate's, Bachelor's degree, or other credential (*n*=279)	74.0%	82.2%
Visited a college campus (*n*=288)	77.9%	82.9%
Learned about the costs of college and options for paying for college (*n*=306)	81.9%	88.7%
Learned what it takes to succeed in college (*n*=285)	77.1%	80.9%

Note: Percentages are analyzed within student-indicated gender, and therefore do not add up to 100% within each row.

Table C.8 Student Participation in Activities by Race/Ethnicity

Have you participated in this activity during this school year (2018–19)?	Asian	Black or African American	White	Latinx	Two or More
Participated in college or career advising (*n*=268)*	90.9%	82.1%	80.9%	67.9%	96.3%
Started creating your own personalized college and career plan (*n*=229)*	90.9%	64.7%	78.7%	57.1%	84.6%
Learned information about the availability of jobs and employment related to one or more industries (*n*=234)*	90.9%	81.7%	74.5%	56.0%	73.1%
Listened to a guest speaker present on career information (*n*=240)*	81.8%	78.3%	73.9%	61.5%	76.9%
Conducted labor market research (*n*=57)	0.0%	15.9%	11.1%	16.5%	34.6%
Attended a career day or job fair event (*n*=143)*	45.5%	57.8%	29.5%	33.9%	57.7%
Participated in a job site visit or company tour (*n*=104)	36.4%	31.7%	36.4%	26.4%	38.5%
Participated in a job-shadowing experience (*n*=73)	36.4%	22.9%	15.2%	19.6%	26.9%
Participated in an internship (*n*=53)*	9.1%	14.5%	15.2%	14.8%	23.1%
Participated in a capstone project (*n*=120)*	18.2%	35.8%	19.6%	38.5%	38.5%
Learned about options after high school graduation, such as earning a certificate, Associate's, Bachelor's degree, or other credential (*n*=266)	80.0%	80.7%	80.0%	71.8%	96.2%
Visited a college campus (*n*=278)*	81.8%	95.2%	80.4%	71.7%	92.3%
Learned about the costs of college and options for paying for college (*n*=292)	100%	89.0%	82.6%	81.2%	88.5%
Learned what it takes to succeed in college (*n*=273)	81.8%	88.0%	71.7%	75.7%	80.8%

Note: Percentages are analyzed within student-indicated race/ethnicity, and therefore do not add up to 100% within each row. For items marked with an asterisk, student responses differed significantly across race/ethnicity: Participated in college or career advising: $X^2(8)=16.74$, $p<.05$; Started creating your own personalized college and career plan: $X^2(8)=18.00$, $p<.05$; Learned information about the availability of jobs and employment related to one or more industries: $X^2(8)= 23.20$, $p<.01$; Listened to a guest speaker present on career information: $X^2(8)=19.91$, $p<.05$; Attended a career day or job fair event: $X^2(8)=20.66$, $p<.01$; Participated in an internship: $X^2(8)=15.85$, $p<.05$; Participated in a capstone project: $X^2(8)=21.03$, $p<.01$; Visited a college campus: $X^2(8)=27.13$, $p<.01$.

Table C.9 Student Participation in Activities by School

	All Schools (*n*=418–433)	Charlestown (*n*=30–31)	Chelsea (*n*=103–108)	High School of Commerce (*n*=13)	Holyoke (*n*=65–68)	Lawrence (*n*=49–52)	New Heights (Brockton) (*n*=95–99)	Roger L. Putnam (*n*=22–23)	Salem (*n*=26–29)	Westfield Technical (*n*=8–9)
Participated in college or career advising (e.g., a college and career readiness class, an advising program) (*n*=323)	74.6%	80.6%	48.6%	53.8%	91.3%	88.7%	83.0%	63.6%	86.2%	77.8%
Started creating your own personalized college and career plan (*n*=270)	62.9%	54.8%	49.5%	38.5%	76.5%	90.0%	65.7%	34.8%	62.1%	77.8%
Learned information about the availability of jobs and employment related to one or more industries (e.g., information regarding the need for different careers, salaries, and other related information) (*n*=279)	65.3%	90.3%	48.1%	46.2%	62.7%	73.1%	74.7%	43.5%	86.2%	77.8%
Listened to a guest speaker present on career information (*n*=295)	69.4%	90.3%	40.6%	61.5%	80.6%	82.7%	78.1%	47.8%	100.0%	55.6%
Conducted labor market research (*n*=70)	16.5%	23.3%	13.9%	23.1%	13.8%	12.0%	20.6%	8.7%	28.6%	0.0%

	All Schools (*n*=418–433)	Charlestown (*n*=30–31)	Chelsea (*n*=103–108)	High School of Commerce (*n*=13)	Holyoke (*n*=65–68)	Lawrence (*n*=49–52)	New Heights (Brockton) (*n*=95–99)	Roger L. Putnam (*n*=22–23)	Salem (*n*=26–29)	Westfield Technical (*n*=8–9)
Attended a career day or job fair (*n*=175)	41.4%	83.9%	24.3%	38.5%	18.2%	62.7%	49.5%	21.7%	53.8%	77.8%
Participated in a job site visit or company tour (*n*=127)	30.2%	77.4%	15.1%	15.4%	24.2%	66.7%	21.6%	9.1%	30.8%	44.4%
Participated in a job-shadowing experience (*n*=93)	21.8%	74.2%	19.8%	15.4%	7.5%	34.6%	16.5%	0.0%	17.9%	33.3%
Participated in an internship (*n*=66)	15.6%	40.0%	18.9%	23.1%	3.0%	19.6%	14.4%	0.0%	10.7%	22.2%
Participated in a capstone project (*n*=145)	34.5%	6.5%	74.3%	0.0%	24.6%	15.4%	37.2%	8.7%	10.7%	11.1%
Learned about options after high school graduation, such as earning a certificate, Associate's degree, Bachelor's degree, or other credential (*n*=324)	77.5%	77.4%	60.2%	76.9%	78.8%	94.0%	83.3%	69.6%	89.3%	100.0%
Visited a college campus (*n*=336)	80.2%	90.3%	52.4%	92.3%	83.3%	82.0%	97.9%	82.6%	85.7%	100.0%
Learned about the costs of college and options for paying for college (e.g., financial aid, scholarships) (*n*=353)	84.0%	71.0%	70.5%	84.6%	84.8%	100.0%	88.5%	87.0%	96.4%	100.0%

	All Schools (*n*=418–433)	Charlestown (*n*=30–31)	Chelsea (*n*=103–108)	High School of Commerce (*n*=13)	Holyoke (*n*=65–68)	Lawrence (*n*=49–52)	New Heights (Brockton) (*n*=95–99)	Roger L. Putnam (*n*=22–23)	Salem (*n*=26–29)	Westfield Technical (*n*=8–9)
Learned what it takes to succeed in college (*n*=332)	78.5%	77.4%	62.9%	69.2%	80.3%	82.4%	85.6%	87.0%	96.4%	88.9%

Note: Percentages may not total 100% due to rounding. The *n*s reported in each row indicate the total number of respondents across all schools who reported that they participated in the activity. In each school column, the *n*s represent the total number of respondents who answered either “Yes,” “No,” or “I don’t know” for the activity. This fluctuated slightly among the schools depending on the activity being observed. Westfield High School had a 0% survey response rate, which is why findings are not presented.

Student Perceptions of Pathway Program and Activities

Table C.10 Helpfulness of Activities

How helpful were the following activities?	Not Helpful	Slightly Helpful	Somewhat Helpful	Mostly Helpful	Very Helpful	M
Participated in college or career advising (e.g., a college and career readiness class, an advising program) (*n*=309)	1.0%	11.0%	27.2%	36.2%	24.6%	3.72
Started creating your own personalized college and career plan (*n*=251)	1.2%	12.0%	24.3%	32.7%	29.9%	3.78
Learned information about the availability of jobs and employment related to one or more industries (e.g., information regarding the need for different careers, salaries, and other related information) (*n*=258)	1.2%	7.8%	28.7%	35.7%	26.7%	3.79
Listened to a guest speaker present on career information (*n*=276)	2.5%	12.0%	30.8%	27.5%	27.2%	3.65
Conducted labor market research (*n*=66)	9.1%	9.1%	25.8%	22.7%	33.3%	3.62
Attended a career day or job fair (*n*=158)	1.9%	13.9%	30.4%	25.3%	28.5%	3.65
Participated in a job site visit or company tour (*n*=118)	3.4%	6.8%	30.5%	25.4%	33.9%	3.80
Participated in a job-shadowing experience (*n*=87)	3.4%	5.7%	23.0%	29.9%	37.9%	3.93
Participated in an internship (*n*=61)	1.6%	8.2%	18.0%	26.2%	45.9%	4.07
Participated in a capstone project (*n*=125)	8.0%	15.2%	26.4%	24.8%	25.6%	3.45
Learned about options after high school graduation, such as earning a certificate, Associate's degree, Bachelor's degree, or other credential (*n*=293)	2.0%	8.2%	19.8%	31.4%	38.6%	3.96
Visited a college campus (*n*=301)	3.3%	9.0%	17.9%	22.9%	46.8%	4.01
Learned about the costs of college and options for paying for college (e.g., financial aid, scholarships) (*n*=321)	0.9%	7.2%	17.1%	21.8%	53.0%	4.19
Learned what it takes to succeed in college (*n*=287)	0.7%	8.0%	19.2%	25.1%	47.0%	4.10
Across all activities (*n*=399)	**0.5%**	**13.5%**	**37.6%**	**41.4%**	**7.0%**	**3.76**

Note: Percentages may not total 100% due to rounding. The values of each item originally used the following scale: 1-*Not Helpful*, 2-*Slightly Helpful*, 3-*Somewhat Helpful*, 4-*Mostly Helpful*, 5-*Very Helpful*. When calculating the overall mean helpfulness across all activities, the values of response options across all activities participated in by each student was grouped into the following scale: 1 through 1.99=1, 2 through 2.99=2, 3 through 3.99=3, 4 through 4.99=4, and 5=5.

Table C.11 Student Perception of Program Outcomes

My pathway program has…	Strongly Disagree	Disagree	Agree	Strongly Agree	M
Helped me improve my grades (*n*=399)	5.8%	22.3%	57.4%	14.5%	2.81
Helped me stay on track to graduate from high school (*n*=398)	4.0%	13.8%	63.1%	19.1%	2.97
Encouraged me to enroll in a two-year or four-year college, technical school, or certificate program (*n*=397)	3.0%	13.6%	56.7%	26.7%	3.07
Raised my awareness of college opportunities that I was not aware of previously (*n*=400)	3.0%	11.1%	55.0%	30.9%	3.14
Raised my awareness of potential work-related certifications or credentials (*n*=398)	3.3%	17.4%	58.7%	20.7%	2.97
Provided me with enough advising opportunities to help me make choices after high school that are right for me (*n*=398)	4.8%	14.5%	58.0%	22.8%	2.99
Motivated me to want to learn the skills needed for a specific job/career (*n*=398)	3.5%	17.3%	53.3%	25.9%	3.02
Helped me build confidence about my ability to succeed in the future (*n*=397)	3.5%	15.3%	57.5%	23.6%	3.01
Helped me take ownership over my high school experience (*n*=395)	4.5%	14.6%	58.4%	22.4%	2.99
Across all outcomes (*n*=401)	3.5%	36.4%	53.4%	6.7%	3.00

Note: Percentages may not total 100% due to rounding. The values of each item originally used the following scale: 1-*Strongly Disagree*, 2-*Disagree*, 3-*Agree*, and 4-*Strongly Agree*. When calculating the overall mean agreement across all activities, the values of response options across all activities participated in by each student was then grouped into the following scale: 1 through 1.99=1, 2 through 2.99=2, 3 through 3.99=3, 4=4.

Table C.12 Student Knowledge of Pathway Program Industry or Theme

Does your pathway program have an industry or other theme?	(*n*=436)
Yes	25.3%
No	8.3%
I don't know	66.4%

Note: Percentages may not total 100% due to rounding.

Table C.13 Student Perception on Interrelatedness of Pathway Program

All of the pathway activities that I participated in seem to be related to one another.	(*n*=389)
Strongly disagree	4.4%
Disagree	18.5%
Agree	61.4%
Strongly agree	15.7%

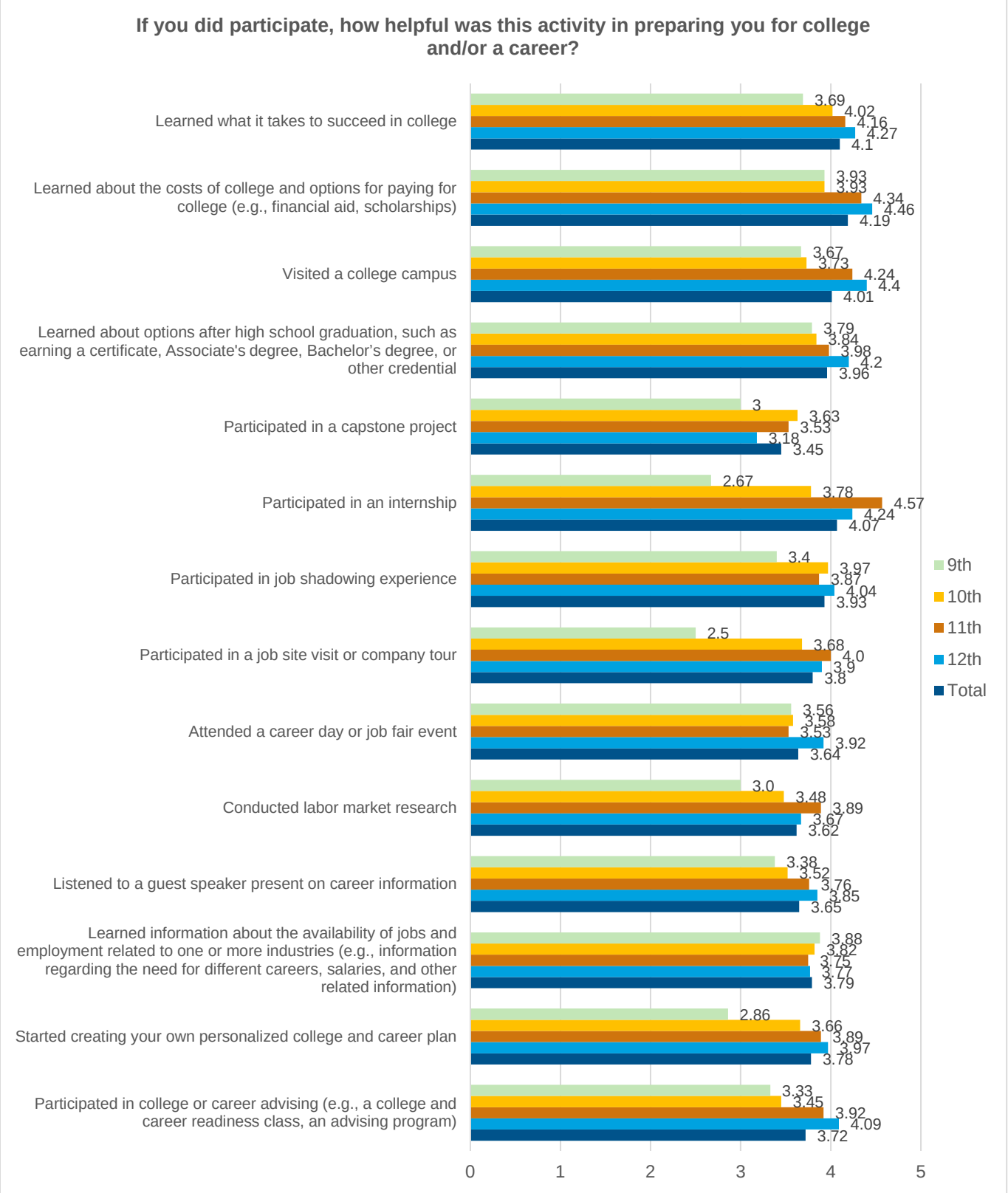
Note: Percentages may not total 100% due to rounding

Table C.14 Overall Mean Helpfulness of Activities

How helpful were the following activities?	Mean
Participated in college or career advising (e.g., a college and career readiness class, an advising program) (*n*=309)	3.72
Started creating your own personalized college and career plan (*n*=251)	3.78
Learned information about the availability of jobs and employment related to one or more industries (e.g., information regarding the need for different careers, salaries, and other related information) (*n*=258)	3.79
Listened to a guest speaker present on career information (*n*=276)	3.65
Conducted labor market research (*n*=66)	3.62
Attended a career day or job fair (*n*=158)	3.65
Participated in a job site visit or company tour (*n*=118)	3.80
Participated in a job-shadowing experience (*n*=87)	3.93
Participated in an internship (*n*=61)	4.07
Participated in a capstone project (*n*=125)	3.45
Learned about options after high school graduation, such as earning a certificate, Associate's degree, Bachelor's degree, or other credential (*n*=293)	3.96
Visited a college campus (*n*=301)	4.01
Learned about the costs of college and options for paying for college (e.g., financial aid, scholarships) (*n*=321)	4.19
Learned what it takes to succeed in college (*n*=287)	4.10

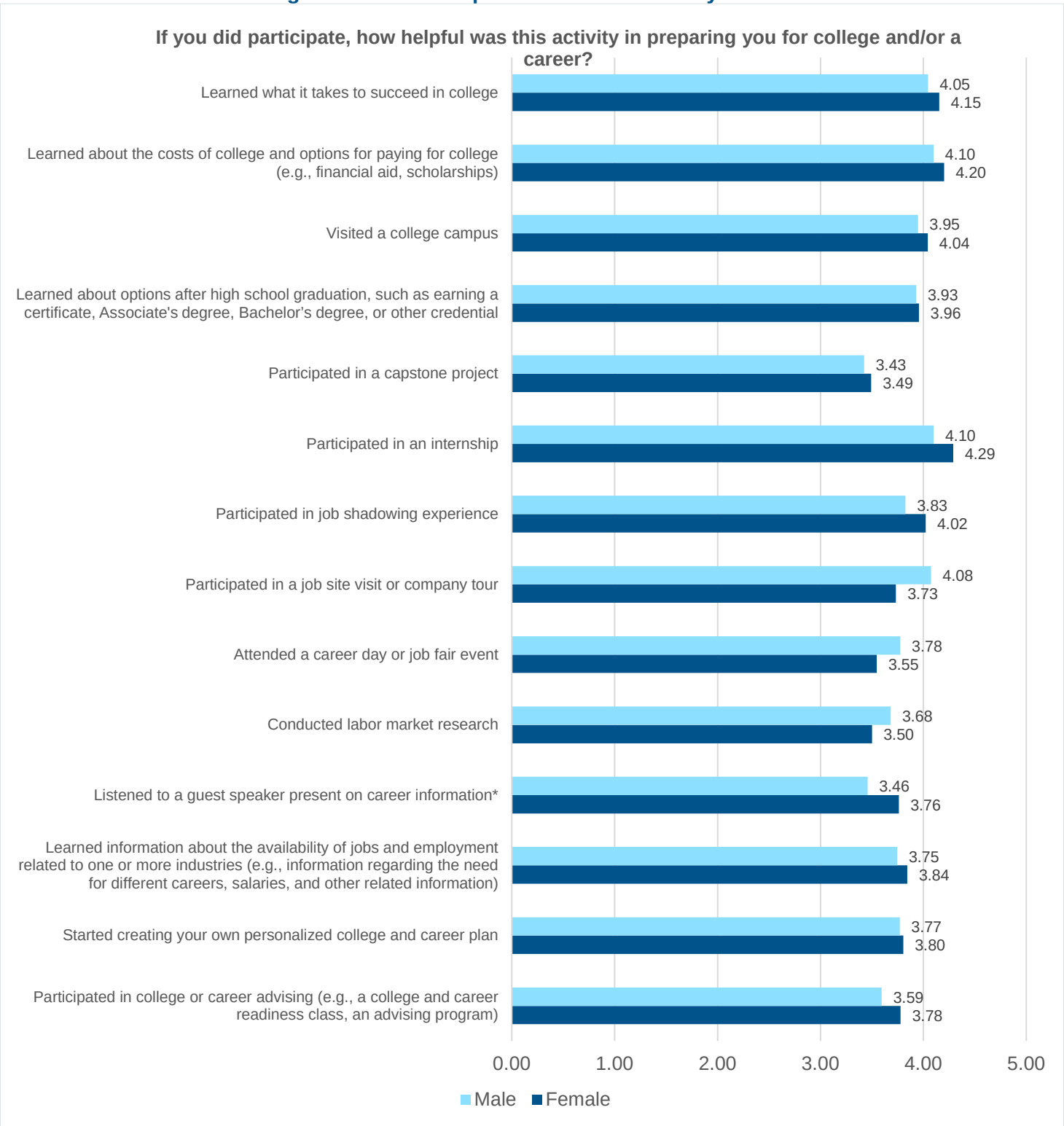
Note: For these items, the mean was calculated based on the assigned values for each of the helpfulness response options: 1-*Not helpful*, 2-*Slightly helpful*, 3-*Somewhat helpful*, 4-*Mostly helpful*, 5-*Very helpful*.

Figure C.1 Mean Helpfulness of Activities by Grade



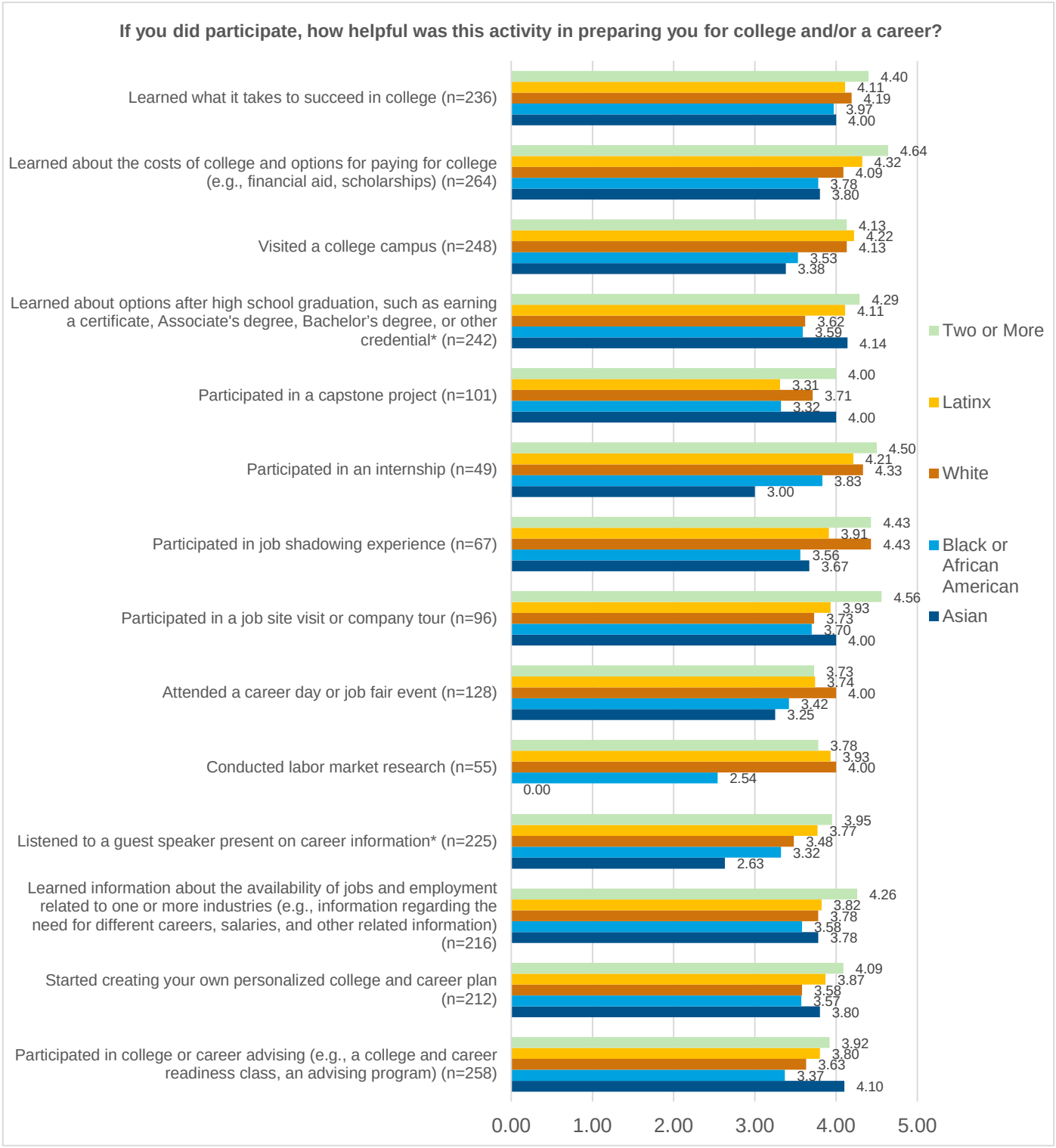
Note: For these items, the mean was calculated based on the assigned values for each of the helpfulness response options: 1-*Not helpful*, 2-*Slightly helpful*, 3-*Somewhat helpful*, 4-*Mostly helpful*, 5-*Very helpful*.

Figure C.2 Mean Helpfulness of Activities by Gender



Note: For these items, the mean was calculated based on the assigned values for each of the helpfulness response options: 1-*Not helpful*, 2-*Slightly helpful*, 3-*Somewhat helpful*, 4-*Mostly helpful*, 5-*Very helpful*.
*Statistical significance at the $p<.05$ level.

Figure C.3 Mean Helpfulness of Activities by Race/Ethnicity



Note: For these items, the mean was calculated based on the assigned values for each of the helpfulness response options: 1-*Not helpful*, 2-*Slightly helpful*, 3-*Somewhat helpful*, 4-*Mostly helpful*, 5-*Very helpful*. Original response options included the following: "American Indian or Alaska Native," "Asian," "Black or African American," "Native Hawaiian or other Pacific Islander," "White," "Hispanic or Latino," "Two or more," "Other," or "I do not wish to share." While the "Other" and "I do not wish to share" options were removed from analysis, there were no students who indicated that they were either "American Indian or Alaska Native" or "Native Hawaiian or other Pacific Islander."
*Statistical significance at the p<.05 level.

Table C.15 Met Overall Needs

The pathway program has…	(*n*=395)
Not met my needs.	12.2%
Met my needs a little.	57.2%
Met my needs a lot.	30.6%

Note: Percentages may not total 100% due to rounding.

Table C.16 Met Overall Needs by Race

The pathway program has…	Asian (*n*=11)	Black or African American (*n*=84)	White (*n*=47)	Latinx (*n*=63)	Two or More (*n*=14)
Not met my needs.	0.0%	16.7%	14.9%	10.6%	11.1%
Met my needs a little.	63.6%	70.2%	53.2%	54.4%	37.0%
Met my needs a lot.	36.4%	13.1%	31.9%	35.0%	51.9%

Note: Percentages may not total 100% due to rounding. Original response options included the following: "American Indian or Alaska Native", "Asian", "Black or African American", "Native Hawaiian or other Pacific Islander", "White", "Hispanic or Latino", "Two or more", "Other", or "I do not wish to share". While the "Other" and "I do not wish to share" options were removed from analysis, there were no students who indicated that they were either "American Indian or Alaska Native" or "Native Hawaiian or other Pacific Islander".

Table C.17 Perceived Effect of Pathway Program on Students' Future Plans

Has your pathway program affected your plans for your future?	(*n*=358)
Yes	42.2%
No	33.2%
I don't know	24.6%

Note: Percentages may not total 100% due to rounding.

Table C.18 Perceived Effect of Pathway Program on Students' Future Plans by Race

Has your pathway program affected your plans for your future?	Asian (*n*=11)	Black or African American (*n*=75)	White (*n*=46)	Latinx (*n*=174)	Two or More (*n*=26)
Yes	45.5%	45.3%	32.6%	43.7%	42.3%
No	9.1%	20.0%	34.8%	38.5%	50.0%
I don't know	45.5%	34.7%	32.6%	17.8%	7.7%

Note: Percentages may not total 100% due to rounding. Original response options included the following: "American Indian or Alaska Native," "Asian," "Black or African American," "Native Hawaiian or other Pacific Islander," "White," "Hispanic or Latino," "Two or more," "Other," or "I do not wish to share." While the "Other" and "I do not wish to share" options were removed from analysis, there were no students who indicated that they were either "American Indian or Alaska Native" or "Native Hawaiian or other Pacific Islander."

Table C.19 Helpfulness of Pathway in Preparing Students for Postsecondary Plans

How helpful has your pathway program been in preparing you for the following items?	Not Helpful	Somewhat Helpful	Helpful	Very Helpful	M
Learning new employability skills (e.g. time management, interpersonal communication) (*n*=396)	12.4%	34.1%	37.1%	16.4%	2.58
Staying on track to graduate on time from high school (*n*=393)	6.6%	18.8%	50.6%	23.9%	2.92
Getting ready to apply to college or a university (*n*=395)	6.8%	27.8%	41.0%	24.3%	2.83
Learning about different career fields (*n*=394)	10.4%	26.6%	36.0%	26.9%	2.79
Across all pathway preparation topics (*n*=401)	9.3%	41.8%	38.8%	10.1%	2.78

Note: Percentages may not total 100% due to rounding.

Appendix D. Extant Student Data Analysis Technical Detail

Student Participation Data

Table D.1 Extant Student Participation Data Response Rates

School	Percentage of Overall Responses (*n*=1,007)
Charlestown High School	6.6%
Chelsea High School	38.6%
Holyoke High School	13.1%
New Heights Charter School of Brockton	34.0%
Salem High School	7.8%
High School of Commerce – Westfield Promise Program	8.7%
Holyoke High School – Westfield Promise Program	8.7%
Lawrence High School – Northern Essex Community College	29.5%
Lawrence High School – Merrimack College*	34.0%
Roger L. Putnam Vocational Technical High School – Westfield Promise Program*	0.0%
Westfield High School – Westfield Promise Program*	9.8%
Westfield Technical Academy – Westfield Promise* Program	9.4%

Source: School-provided extant participation data

*Did not provide extant student participation data.

Table D.2 Types of Advising

Types of advising available to students (e.g., workshops, one-on-one)	Overall (*n*=1,007)
One-on-one advising	89.6%
Small group counseling	25.9%
Field trips	35.1%
Classroom lessons	49.9%
Workshops	75.0%
Unique opportunities with college advising and college visits to meet college administrators and current students	19.6%
Speakers	55.4%
Mini-internships	3.8%
Job shadows	3.8%
Financial aid	1.6%
Info sessions	3.8%
Project-based learning	19.6%
Grade-level assemblies	22.1%
Career inventory	27.6%

Source: School-provided extant participation data

Table D.3 Participation in Advising

Average number of hours of student participation in…	Overall (*n*=1,007)
In-person career/academic advising sessions.	49.5
Online career/academic advising.	7.3

Source: School-provided extant participation data

Table D.4 Individual Career/Academic Plans

	Overall (*n*=1,007)
Existence of individual career/academic plans (Yes/No)	100.0%

Source: School-provided extant participation data

Table D.5 Work-based Learning and Social Supports

Percent of students who participated in…	Overall (*n*=1,007)
Internships and/or capstone projects.	42.6%
Tutoring/mentoring to support students in the pathway program.	98.8%
Average number of hours students participated in…	**Overall (*n*=1,007)**
Internships and/or capstone projects.	45.4
Tutoring/mentoring to support students in the pathway program.	78.7

Source: School-provided extant participation data

State Ethnicity Data

Table D.6 Percent of Students Identified as Latinx by School

School	Yes	No
Charlestown High School (*n*=910)	43.5%	56.5%
Chelsea High School (*n*=1,545)	85.0%	15.0%
High School of Commerce (*n*=1,250)	69.3%	30.7%
Holyoke High School (*n*=1,285)	72.1%	27.9%
Lawrence High School (*n*=3,295)	93.1%	6.9%
New Heights Charter School of Brockton (*n*=313)*	8.3%	91.7%
Roger L. Putnam Vocational Technical High School (*n*=1,442)	65.5%	34.5%
Salem High School (*n*=933)	43.0%	57.0%
Westfield High School (*n*=1,269)	11.1%	88.9%
Westfield Technical Academy (*n*=540)	6.3%	93.7%

Source: Institute of Education Sciences, National Center for Education Statistics, 2016–17.
Note: The total number of students at each school (*n*) includes students in grades 9, 10, 11, and 12.
* Grades 6–9 only