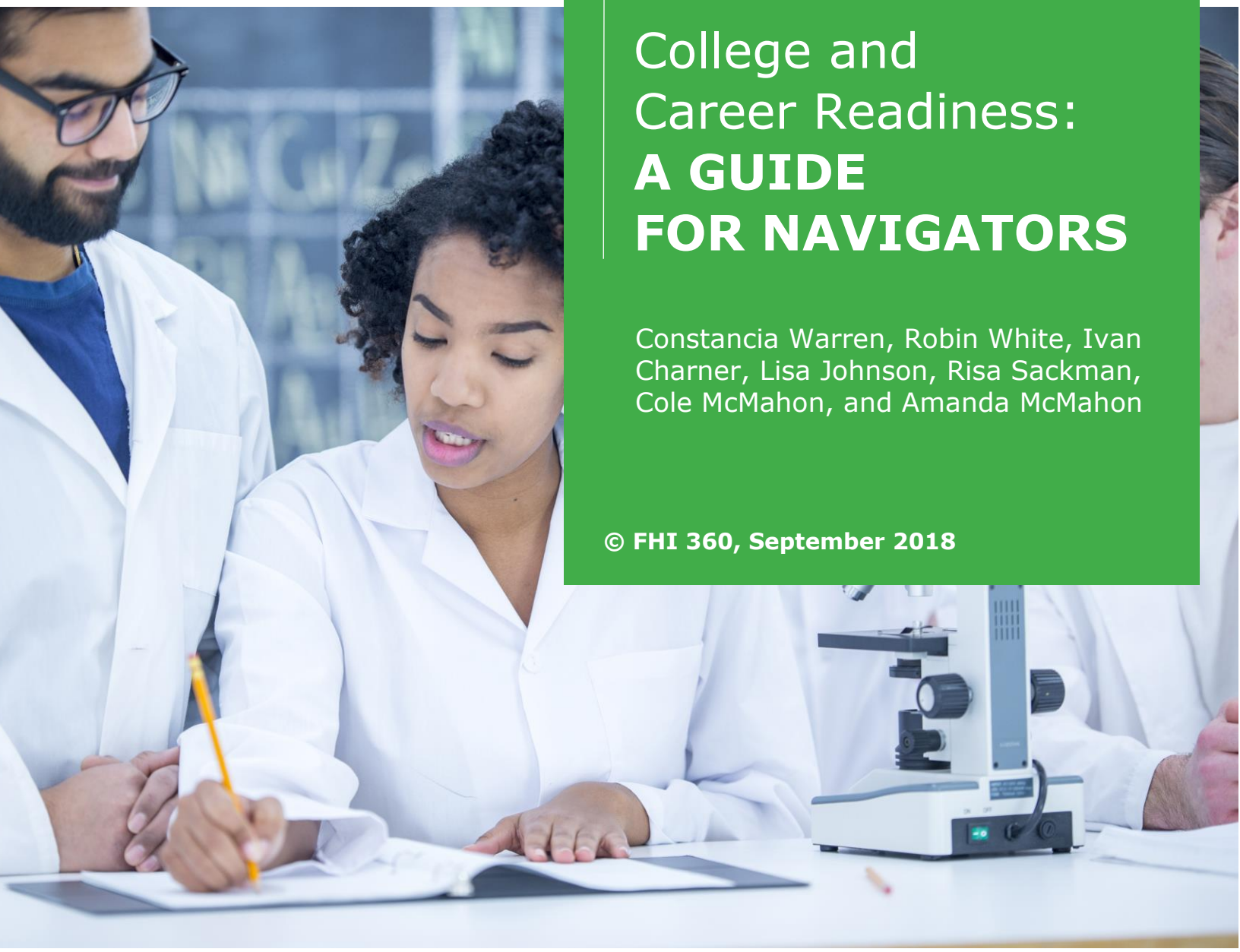

College and Career Readiness: **A GUIDE FOR NAVIGATORS**

Constancia Warren, Robin White, Ivan Charner, Lisa Johnson, Risa Sackman, Cole McMahon, and Amanda McMahon

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A GUIDE FOR NAVIGATORS

Constancia Warren, Robin White,
Ivan Charner, Lisa Johnson,
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and Amanda McMahon

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This guide was developed as part of the
North Dakota Succeed 2020 Education and Workforce Initiative funded by the Hess Corporation.

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FHI 360 is a nonprofit organization dedicated to improving lives by developing, implementing, and evaluating locally driven integrated solutions to health, education, economic development, environment and civil society challenges. Our domestic education work focuses on improving educational opportunities for youth through services that include program design (e.g., the creation of models, protocols, tools, and materials), project management, professional development, school-based coaching, creation of local and national networks, and collective impact and program evaluation. We have worked at the intersection of schools and communities for nearly 40 years, solving critical issues in education, health, and youth development through projects in 48 states and with more than 400 school districts. Our staff are experts in education, health services, youth development, gender, school improvement, nutrition, communications, research and evaluation, technology, and advocacy.

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Acknowledgements

This publication was made possible with the generous support of the Hess Corporation. FHI 360 recognizes McMahon Consulting Group, LLC, for its research and preparation of the first draft of the guide. FHI 360 is also grateful for the expertise and offerings of the individuals interviewed for this guide:

- Maud Abeel, Education Consultant (NY)
- Lisa Bishop, Former Chief of Staff, Delaware Department of Education (DE)
- Janet Bray, Founder and CEO, Bray Strategies (VA)
- Joanne Ciezak, Director of Curriculum and Instruction, New Brunswick Public Schools (NJ)
- Stacy Duffield, Coordinator, Teacher Education, North Dakota State University (ND)
- Tifanie Gelinske, Vice President, Workforce Development, Greater Fargo Moorhead Economic Development Corporation (ND)
- Jennifer Grandalen, School Counseling Coordinator, Missouri River Education Cooperative (ND)
- Adrienne Grayson, Director, Special Populations and Equity Programs, Chaffey College (CA)
- Heather Jarvis, Student Loan Expert
- Karine Kanikkeberg, Resource Teacher, Kern High School District Career Resource Department (CA)
- Wayne Kutzer, Former Director and Executive Officer, North Dakota Department of Career and Technical Education (ND)
- Daniel Lozier, Professor, Cincinnati State Technical and Community College (OH)
- Mandy McNeff, College and Career Readiness Coordinator, North Central Education Cooperative (ND)
- Elliott Medrich, Consultant and Former Vice President, MPR Associates (CA)
- Jennifer Moore, Former Director of Programs, College Access Now, Seattle (WA)
- Tiffany Nesbey, Assistant Director, Office for Diversity and Academic Success in the Sciences, Division of Life Sciences, Rutgers, The State University of New Jersey (NJ)
- Marilyn Orgaard, Career Resource Network Supervisor, North Dakota Department of Career and Technical Education (ND)
- Elizabeth Pawlowski, Curriculum Coordinator, Taunton Public Schools (MA)

- Kristina Quezada, Guidance Counselor, San Diego High School (CA)
- Hector Rivera, Chief Operating Officer, Our Piece of the Pie (CT)
- Michael Robbins, Founder and Director, District of Learning (Washington, DC)
- Roland Selby, Executive Director, Year Up Baltimore (MD)
- Wayde Sick, Director and Executive Officer, North Dakota Department of Career and Technical Education and Former Director, Workforce Development Division, North Dakota Department of Commerce (ND)
- Erica Spangler, Coordinator of Dual Enrollment Grant Programs, Montgomery County Community College (PA)
- Beatrice Streitz, High School Counselor, New Town Public School District #1 (ND)
- Derrick Taliaferro, External Relations Manager, Year Up Baltimore (MD)

Introduction

Why is college *and* career readiness important for *all* young people?

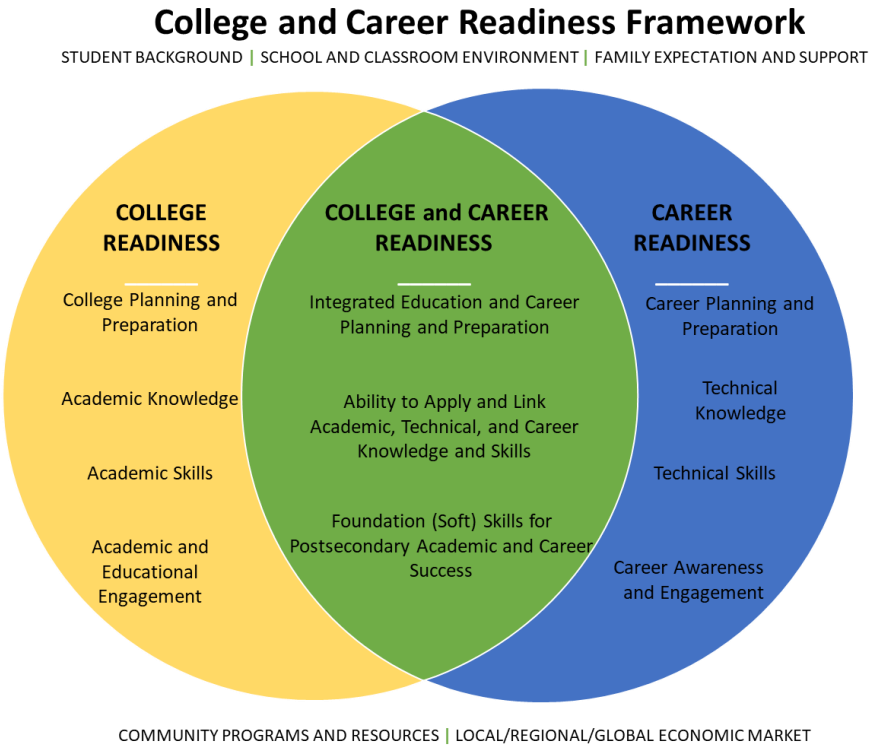
Technological innovation and globalization are changing the nature of work and transforming the employment sectors of the economy. Increasingly, successful transitions into careers require specialized knowledge, skills, and credentials that are typically obtained through some form of postsecondary education[1] and are connected to specific career goals. In this rapidly changing landscape, all young people[2] need to understand which types of postsecondary preparation are required to achieve their career goals and to integrate that understanding into their plans for future education and training.

[1] FHI 360 uses the term postsecondary education in its broadest sense to include two- and four-year colleges as well as specialized technical schools, apprenticeships, certificate programs, and the military.

[2] FHI 360 uses young people, students, and youth as interchangeable terms because this framework can be applied in community-based settings where young people are working with adults to plan their futures.

What does it mean to be college *and* career ready?

Young people need support as they develop their college and career readiness. To be both college and career ready means that a young person has the knowledge and skills to gain access to and complete postsecondary education and to secure an entry level position that begins a rewarding career progression. The college and career readiness framework below, based on a review of research and interviews with experts, identifies 11 essential components of college and career readiness.



The two interlocking circles define college readiness[3] (on the left), career readiness (on the right), and the intersection where college *and* career readiness come together (in the middle) and need to be addressed in an integrated manner. Focusing on the center of the diagram — the knowledge and skills that prepare students for access to and success in both postsecondary education and entry level career opportunities — will better position youth for lifelong success. Key contextual factors that may influence young people's attainment of college and career readiness are identified above and below the interlocking circles.

For many young people, the linkage between college and career readiness is often weak or overlooked. It is not enough to advise students on how to gain entrance to college or to help them land particular jobs. All young people need to develop education and career plans

[3] FHI 360 uses college readiness here as an umbrella for the full range of postsecondary education options.

that lead them to productive lives.

This framework is designed to help students set goals and make both short- and long-term plans that link their education and career planning. The process of attaining college and career readiness takes time and needs to start early. Connecting college and career preparation throughout middle school and high school enables students to make informed decisions about career goals, coursework, and postsecondary options. For example, beginning this process in middle school helps students select the most appropriate ninth grade courses for their targeted career paths. This is the best way to ensure that their high school education positions them for the postsecondary options they most want to pursue.

What are the navigators' roles?

To plan effectively for both college and careers, all young people will need help navigating the process. This guide is a resource for "navigators" — the teachers, counselors, advisors, youth workers, mentors, and other advocates who guide youth through the twists and turns on the road to becoming college and career ready. Whether playing a formal or informal role, these college and career readiness navigators are critical to helping young people map out the journeys toward the futures they want for themselves.

A college and career readiness navigator's essential responsibility is to guide and support youth as they: 1) explore options and plan for potential career choices and opportunities and 2) develop the knowledge, skills, and abilities to succeed in their chosen postsecondary paths.

How does this guide support navigators?

While there are many websites and resources that provide students with college and career information, most focus on achieving short-term success — college admission or finding work — rather than the critical connections between college *and* career readiness.

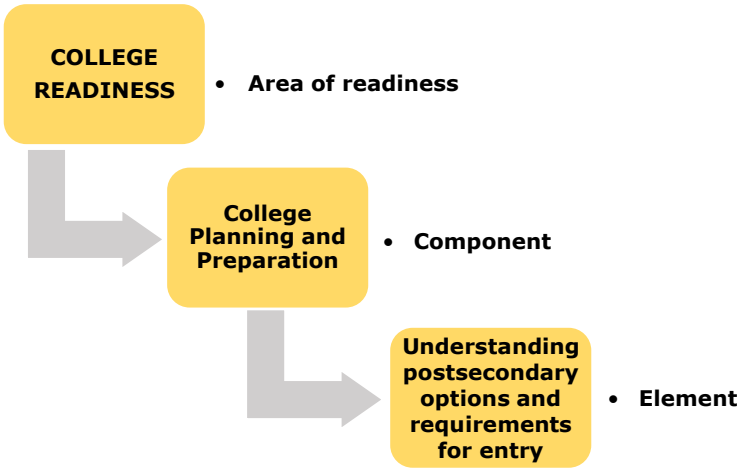
This guide is different. It highlights what navigators can do to nurture the critical connections young people must make between college *and* career readiness. Planning for future success requires an integrated approach that helps students understand their education and career options and what they must do to become prepared. This guide identifies action steps that young people can take to achieve their college and career goals. The knowledge and skills outlined in it are specific and teachable.

The guide is divided into three sections, each of which corresponds to one of the three areas of the framework: college readiness; career readiness; and college *and* career readiness. Simple concept maps and readiness charts help navigators understand the skills and knowledge students need to attain in each area and help them communicate with students about the ways in which career and college planning should be jointly addressed.

CONCEPT MAPS

Concept maps, which are found at the start of each readiness section, provide detailed outlines for each **area of readiness** in the college and career readiness framework.

These maps illustrate the key **components** within a given area of college and career readiness as well as the **elements** required to attain skills and knowledge in that component.



READINESS CHARTS

AREA OF READINESS: Component of readiness		
Specific knowledge, skills, and abilities needed for readiness		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Examples of things young people can do to build the indicated knowledge, skill, or ability	Examples of things navigators can do to help young people gain the knowledge, practice the skill, or acquire the ability	Examples of accomplishments, achievements, or outcomes that indicate the young person has the specific knowledge, skill, or ability

Readiness charts, organized in three columns, help navigators: suggest what students can do to acquire the specific knowledge and skills needed to achieve readiness in each area of the framework; identify how they can help students build readiness in each area; and determine whether young people have demonstrated specific knowledge and skills. The charts highlight multiple examples, but they are not intended to be exhaustive lists. There is some intentional repetition from one chart to another. This repetition reflects the recursive nature of the college and career readiness process and emphasizes the need to expose students to a few essential actions or benchmarks at multiple points in time.

FHI 360 also recognizes that no single person can implement or manage all of the suggestions presented in this guide. The recommendations for what navigators can do are meant to spark ideas and planning; they are not intended to outline the expectations for all navigators. Some students may work with the same navigators throughout four years of

high school, but most will need to work with multiple navigators to attain college and career readiness. More information can be found in Appendix A, Tips for Navigators.

Why is it important for students to have an integrated education and career plan?

To help both students and navigators map and track the college and readiness journey, FHI 360 strongly recommends the use of a written education and career plan (ECP) that integrates college *and* career readiness preparation in a single document. The plan should be updated regularly to reflect accomplishments and changing goals. Ideally, this is done during meetings between young people and navigators. However young people may do this on their own or with the help of parents or guardians. If a navigator is working with a young person over several years, a copy of the ECP should be kept by both.

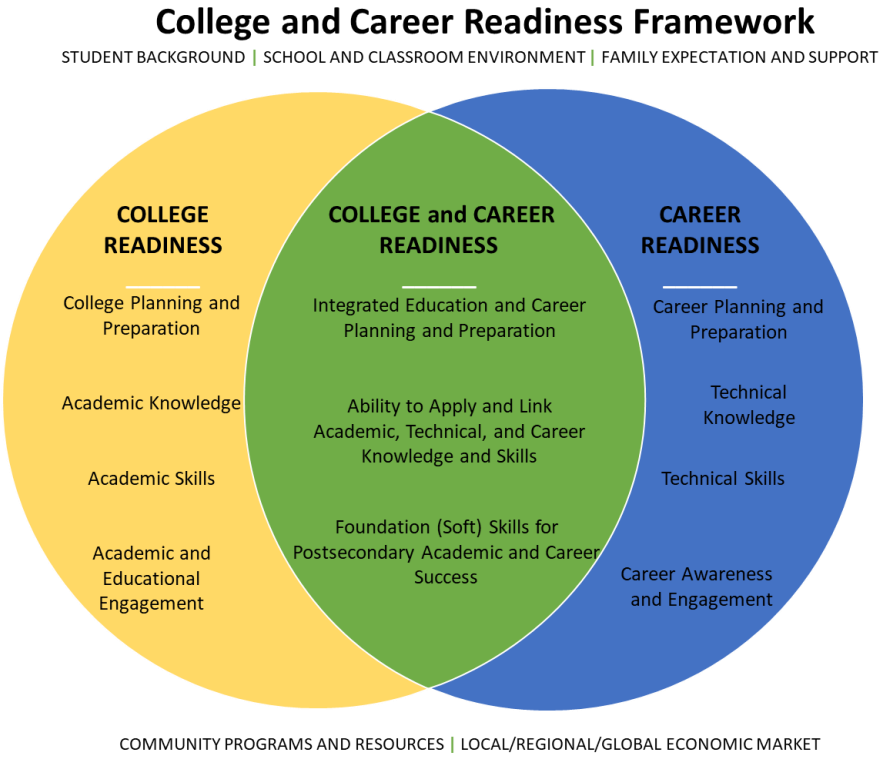
The ECP:

- **Identifies a student's career interests and goals** and incorporate the qualifications, education, and training requirements for the identified careers.
- **Connects a student's career goals** with the specific qualifications, education, and training required for entry into those careers.
- **Outlines a student's four-year course plan for high school** that aligns with graduation requirements as well as the student's postsecondary education and career goals.
- **Provides an integrated record of progress in college and career planning** that shows activities and accomplishments in both areas.

The process of creating ECPs will help young people identify the steps needed to move from where they are to where they want to be. In addition, students can revise their ECPs as their goals, interests, and circumstances change. If a young person works with different navigators over time, the ECP can provide documentation of what has been accomplished in each area to date. By developing and refining their ECPs, young people can track their progress toward acquiring the knowledge, skills, qualifications, and experiences needed to achieve their college and career goals. An example of an ECP is included in Appendix B, Education and Career Plan.

College Readiness

This chapter examines the left side of the college and career readiness framework: the essential skills and knowledge that students need for college readiness. These elements are critical to students achieving access to and success in postsecondary programs following the completion of their high school degrees.

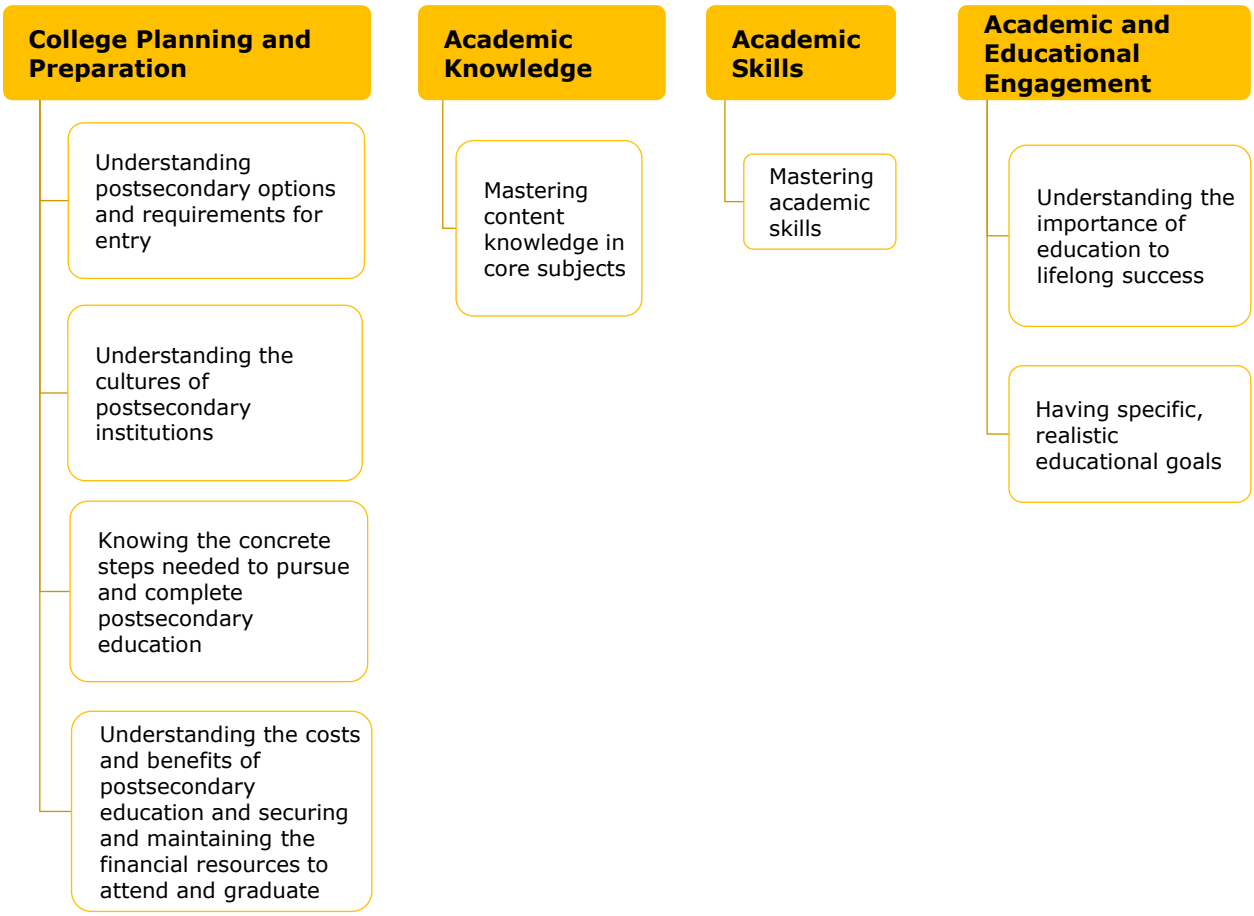


In recent years, there has been increased debate among both researchers and practitioners about what it means for students to be "college ready."[4] Several key components are instrumental in preparing young people for successful entry into and completion of postsecondary education.[5]

[4] See Conley DT. College knowledge: what it really takes for students to succeed and what we can do to get them ready. San Francisco: Jossey-Bass; 2005; The College Board. Research foundations: empirical foundations for college and career readiness. Farrington, CA: The College Board; 2014; Nagaoka J, Heath RD, Ehrlich SB. Foundations for young adult success: a developmental framework. Chicago: Consortium for Chicago School Research; 2015.

[5] FHI 360 is using the term college readiness here in its broadest sense to include two- and four-year colleges as well as specialized technical schools, apprenticeships, certificate programs, and the military.

The concept map below depicts four components of college readiness and their corresponding elements, each of which focuses on a subset of knowledge, skills, and abilities.



As noted in the introduction to this guide, the use of written education and career plans (ECPs) helps students chart paths between where they are and where they want to be. The ECPs can help students identify the specific steps needed to achieve their education and career goals, including coursework and both curricular and extracurricular experiences. Based on the student's education and career goals, the plan should be aligned with both high school graduation requirements and postsecondary entrance requirements.

COMPONENT: College Planning and Preparation

College planning and preparation enables young people to acquire the information needed to gain acceptance into postsecondary education programs as well as the knowledge and skills needed to succeed in them.

Element 1. Understanding postsecondary options and requirements for entry

While many young people aspire to attend postsecondary institutions, they often have inadequate information about what it takes to get there. Postsecondary options include two- and four-year colleges, specialized technical schools (e.g., culinary schools), apprenticeships, certificate programs, and the military. Failing to understand the specific requirements for admission to different types of postsecondary options can result in weak applications and denial of admission.

Requirements for entry into four-year colleges typically include the completion of college preparatory coursework. Some colleges also require the submission of a formal application as well as essays or personal statements and scores from college admissions tests, most commonly the ACT or the SAT. Entry requirements for two-year colleges and certificate programs are less stringent, often requiring only the completion of a high school diploma or its equivalent. Even this requirement may be waived in some instances.

To understand their options fully, students must gather information about postsecondary education in general, specific colleges and training programs, and their respective entry requirements. Students' postsecondary research should culminate with understanding of their preferred options and lists of specific opportunities that align with those preferences. Navigators can help young people identify the best options and create realistic lists of possible postsecondary pathways.

First-generation college students may struggle during the college search and application processes[6] because they may lack family or friends who can tell them what college is like. These groups of young people benefit from having navigators to help them focus and refine college searches, understand the college admission process, and apply for financial aid.

[6] Balemian K, Feng J. First generation students: college aspirations, preparedness and challenges. Presentation at College Board AP annual conference; 2013 Jul 19; Las Vegas, NV.

COLLEGE READINESS: College Planning and Preparation		
Understanding postsecondary options and requirements for entry		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Research colleges of interest, requirements for entry, student profiles, culture, etc. • Use online planning tools to identify postsecondary options that align with their career goals and interests. • Attend college and career fairs to meet with representatives of postsecondary institutions. • Tour colleges, sit in on classes, talk with students, and speak with faculty.	***Navigators can:*** • Show students how to use online postsecondary planning tools (e.g., Naviance) to research options. • Help students compare their qualifications with the entrance requirements for different postsecondary options. • Connect students with a variety of college exploration experiences (e.g., college and career fairs, near-peer alumni panels, college faculty guest lectures, or workshops offered by college admissions officers). • Explain how students can address shortcomings (comparing current qualifications to entrance requirements) to become more successful applicants.	***Students:*** • Gathered information and researched a wide array of postsecondary options. • Compared their individual qualifications with postsecondary entry requirements. • Developed and reviewed ECPs that link their postsecondary goals to career interests and align coursework with college requirements. • Developed lists of potential postsecondary options with entry requirements and time lines for application submissions.

COMPONENT: College Planning and Preparation

Element 2. Understanding the cultures of postsecondary institutions

There are substantial differences in how postsecondary institutions are organized and structured. Institutional characteristics vary tremendously. Distinctions can be characterized by the type (e.g., two-year versus four-year, public versus private versus religious, or single-sex versus coed), size, location, setting (e.g., rural, urban, or suburban), student demographics, support services, student activities, and culture. Institutions also vary in the extent to which they provide support for students as opposed to taking a "sink or swim" approach. These characteristics may affect student retention and graduation rates as much as the entering students' academic qualifications, characteristics, or abilities to transition effectively.[7]

Postsecondary culture includes an institution's norms, conventions, traditions, learning environment, supports, and policies as well as its extracurricular activities and organizations. Understanding the cultures of various postsecondary institutions enables students to find the right ones for them. These cultural qualities influence a student's ability to integrate or fit into the postsecondary setting (e.g., a campus) and to succeed in that environment.[8]

Students can begin to learn about different postsecondary cultures through research and reading and by attending college fairs where representatives of different institutions are available to answer questions. Nevertheless, visiting postsecondary institutions is the best way for students to get a true sense of the everyday campus cultures.

[7] Nagaoka J, Roderick M, Coca V, Moeller E. From high school to the future: potholes on the road to college. Chicago: University of Chicago Consortium on School Research; 2008.

[8] MacAllum K, Glover DM, Queen B, Riggs A. Deciding on postsecondary education: final report. Washington, DC: National Postsecondary Education Cooperative (NPEC); 2007.

COLLEGE READINESS: College Planning and Preparation		
Understanding the cultures of postsecondary institutions		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Talk with individuals currently enrolled in postsecondary institutions as well as parents and other adults about postsecondary options. • Attend college fairs where representatives of different postsecondary institutions are available to answer questions. • Tour colleges, universities, or other training programs. • Shadow students currently enrolled in postsecondary institutions, sit in on classes, talk with students, visit labs, and speak with faculty. • Identify the characteristics of postsecondary culture that align with their individual goals, interests, and needs.	***Navigators can:*** • Encourage students to research institutional characteristics, including: student activities; student support services; campus life; student demographics; and faculty. • Provide students with college assessment tools and checklists — available on the College Board's website — to help them understand the culture at various postsecondary institutions. • Encourage students to visit several college campuses. • Talk with students about their findings and priorities and help them identify the best options in terms of postsecondary culture. • Encourage students to participate in summer camps, dual-enrollment opportunities, or bridge programs on college campuses.	***Students:*** • Gathered information and researched postsecondary options. • Talked with currently enrolled students, parents, family, and friends about options and postsecondary culture. • Visited postsecondary institutions and/or enrolled in college courses, summer programs, or bridge experiences. • Determined personal likes and dislikes and clarified what characteristics they value in postsecondary institutions and their cultures.

COMPONENT: College Planning and Preparation

Element 3. Knowing the concrete steps needed to pursue and complete postsecondary education

For most students, the predisposition to further their educations coincides with the development of career goals and the understanding that postsecondary education is instrumental in attaining career goals. However, many students, particularly those who will be the first in their families to go beyond high school and those from low-income families, may need additional help to understand how earning postsecondary credentials can transform their future pathways. They may also need help envisioning the ways in which postsecondary education can expand their career options and earning potential.

Similarly, many students need help defining the concrete steps needed to pursue and complete postsecondary education. Many of these steps will be concentrated in students' junior and senior years, but it is important to help students and their families learn what steps will be needed as early as eighth grade to help students make informed course selections. [9]

Navigators can play a critical role in helping young people understand the importance of maintaining high GPAs and steady academic progress throughout high school as well as the ways in which postsecondary institutions use different tests (e.g., ACT and SAT) to select which students to admit. In addition, navigators need to help students understand the high stakes associated with placements tests given after they are admitted and their strategic role in helping students and their families avoid the higher costs associated with taking non-credit developmental (also known as remedial) courses.

[9] See Redford J, Hoyer KM. First-generation and continuing-generation college students: a comparison of high school and postsecondary experiences. Statistics in Brief. Washington, DC: U.S. Department of Education, National Center for Education Statistics. Sep 2017; Engle J, Bermeo A, O'Brien C. Straight from the source: what works for first-generation college students. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education; 2006.

COLLEGE READINESS: College Planning and Preparation		
Knowing the concrete steps needed to pursue and complete postsecondary education		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Initiate college planning and preparation tasks. • Take the PLAN (practice ACT) or PSAT. • Prepare for and take the ACT/SAT; enroll in a review course, if needed and available. • Complete all high school graduation requirements. • Write personal statements or essays, request high school transcripts, and obtain letters of recommendation. • Prepare the Common App — an online college application used by more than 500 colleges — or applications to preferred institutions. • Make a list of all application submission deadlines.	***Navigators can:*** • Advise students to take the PLAN or PSAT. • Use the results of the PLAN or PSAT to help students assess their strengths and areas that need improvement. • Identify available and affordable resources to prepare for the ACT/SAT. • Advise students on whether they need to retake the ACT or SAT to increase their scores. • Advise students on the steps involved in the application process for postsecondary education. • Support and monitor the application process. • Write letters of recommendation.	***Students:*** • Decided to pursue postsecondary education. • Took the PLAN or PSAT. • Enrolled in ACT/SAT review courses. • Took the ACT or SAT and repeated the test if necessary to raise scores. • Completed all college/postsecondary application requirements. • Submitted the Common App or specific applications to postsecondary institutions of choice. • Took postsecondary placement tests, if necessary.

COMPONENT: College Planning and Preparation

Element 4. Understanding the costs and benefits of postsecondary education and securing and maintaining the financial resources to attend and graduate

Finances significantly affect college retention. Students who receive financial support are more likely to persist and complete postsecondary education than those who do not.[10] Young people attending postsecondary education will likely need one of four types of financial aid: 1) grants; 2) loans; 3) scholarships; and 4) work-study programs. Students need to understand financial aid programs, especially the processes and time lines for applying for and repaying financial aid. To qualify for aid, students apply through federal and state governments, colleges and universities, or private organizations. The federal government is the largest financial aid provider in the nation.[11] To apply, students complete the U.S. Department of Education's Free Application for Federal Student Aid (FAFSA) early in the spring to be considered for aid the following fall.[12]

Students who understand all the associated costs of postsecondary education (e.g., tuition, room/board, books) and the earning potential of their intended degrees tend to borrow less, have lower debt, and higher degree completion rates.[13] Unfortunately, the combination of rising college costs, the declining availability of financial assistance, and the structure of financial aid packages makes it more difficult for students to secure and maintain the financial resources required to attend and complete postsecondary education. Navigators can help students explore the full range of postsecondary financial aid options and other relevant information.

[10] Bettinger E. How financial aid affects persistence. In: Hoxby CM (editor). College choices: the economics of where to go, when to go, and how to pay for it. Chicago: University of Chicago Press; 2004. p. 207-238.

[11] What are the different types of financial aid for college students? [Internet]. Peterson's College Quest Career Education Guidance; c2014 [cited 2018 Apr 24]; Available from: http://www.collegequest.com/different-types-of-financial-aid-for-college.aspx.

[12] Onink T. 2017 guide to college financial aid, the FAFSA and CSS profile [Internet]. New York City: Forbes Magazine. 2017 Jan 8. [cited 2018 Apr 24]; Available from: https://www.forbes.com/sites/troyonink/2017/01/08/2017-guide-to-college-financial-aid-the-fafsa-and-css-profile/#7c6966724cd4.

[13] American Student Assistance. Life delayed: the impact of student debt on the daily lives of young Americans. Boston: American Student Assistance; 2015.

COLLEGE READINESS: College Planning and Preparation		
Understanding the costs and benefits of postsecondary education and securing and maintaining the financial resources to attend and graduate		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Gather information about different cost elements of postsecondary education. • Complete the Consumer Financial Protection Bureau's Know Before You Owe student financial aid shopping sheet. • Determine what they (or their families) can afford. • Work with parents or guardians to prepare the Free Application for Federal Student Aid (FAFSA), which is required to apply for financial aid. • Research and apply for scholarships. • Apply directly to colleges and private organizations for additional aid. • Learn about student debt management and repayment strategies such as Income Based Repayment (IBR) and Public Service Loan Forgiveness (PSLF). • Review financial aid offered by colleges to which they were accepted; the differences may influence final college selections. • Call colleges to negotiate financial aid and work-study packages.	***Navigators can:*** • Explain the different cost elements associated with postsecondary education. • Explain the different types of financial aid. • Identify financial aid workshops for students and parents/guardians. • Put the students and their parents/guardians in contact with financial aid advisors. • Advise students and families on scholarship opportunities. • Help students perform cost-benefit analyses to help them determine how much financial support they will need at different colleges. • Review scholarship applications and essays. • Provide students and parents/guardians with assistance in the FAFSA application process, if needed. • Advise students and parents/guardians on student debt strategies and resources. • Provide guidance on negotiating the financial aid packages offered by colleges.	***Students:*** • Identified what their families can afford to contribute toward postsecondary education costs. • Made financial plans for paying for the duration of their postsecondary experiences. • Submitted the FAFSA, scholarship applications, and grant applications by the specified deadlines. • Received scholarships or grants. • Finalized financial aid packages with postsecondary institutions. • Secured educational loans, if needed. • Demonstrated understanding of student debt repayment strategies. • Secured work-study positions.

COMPONENT: Academic Knowledge

Academic knowledge requires mastering content in the core subject areas — English/language arts, mathematics, science, and social studies.

Element 1. Mastering content knowledge in core subjects

Entry requirements for most postsecondary programs include three to four years of courses in all core subjects. Progressive coursework in foreign language and electives such as technology or fine arts may also be required.

Students' grades and grade point averages (GPAs) in core coursework are often used by postsecondary institutions as indicators that they have mastered the required academic knowledge. Most postsecondary institutions also use standardized assessments such as the ACT or SAT as an indicator of students' competencies in core subject areas (English and mathematics).[14] Many high schools offer students opportunities to master additional content knowledge and earn college-level credits through International Baccalaureate (IB) programs, Advanced Placement (AP), and dual credit or dual enrollment options.

Almost all two-year and many four-year colleges also require new students to take at least one placement test (e.g., Compass, ACCUPLACER). According to the College Board, as many as 40 to 50 percent of newly enrolled postsecondary students are required to take at least one developmental course based on placement test results.[15] Since developmental courses do not count toward postsecondary graduation requirements, they slow the accumulation of credits toward degree completion and may create financial burdens that can lead students to drop out prior to completion.

Some high schools and postsecondary partners are helping students succeed at the postsecondary level by addressing gaps identified by the ACT and SAT tests while students are still in high school. Navigators can help students identify and address potential weaknesses early, reducing or eliminating the need for costly remediation at the postsecondary level. Because research shows student learning may erode during the last year of high school, students should continue to take rigorous courses in their senior year even if they have fulfilled graduation requirements.[16]

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[14] BigFuture. What are college placement tests? [Internet]. New York: The College Board; c2018 [cited 2018 Apr 24]. Available from: https://bigfuture.collegeboard.org/find-colleges/academic-life/what-are-college-placement-tests.

[15] Ibid.

[16] The California State University. Early Assessment Program. [Internet] Long Beach, CA: The California State University; 2016 May 11 [cited 2018 Apr 24]. Available from: http://www.calstate.edu/eap/about.shtml. See also Vargas J. Why 12th grade must be redesigned now—and how. Washington, DC: Jobs for the Future; 2015.

COLLEGE READINESS: Academic Knowledge		
Mastering content knowledge in core subjects		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Understand which courses help meet their higher education goals. • Maintain high grade point averages (GPAs). • Take rigorous courses as high school seniors. • Complete college-level courses via International Baccalaureate (IB), Advanced Placement (AP), dual-enrollment, or dual-credit opportunities. • Master high school course content at levels sufficient to avoid the need for developmental courses at the postsecondary level. • Use ACT or SAT test scores or early placement tests to identify areas of weakness to address prior to graduation. • Prepare for college placement tests by taking review courses or by completing online practice exams.	***Navigators can:*** • Help young people identify and address gaps in academic knowledge that might lead to developmental course placements. • Encourage students to pursue rigorous coursework aligned to high school graduation requirements, interests and abilities, and college prerequisites. • Recommend that students go beyond the minimum high school requirements, especially in their senior years. • Explain the purpose of college placement tests and the consequences of the results. • Encourage students to prepare for placement tests — especially, if they have not taken the subjects recently.	***Students:*** • Attended school regularly. • Exhibited consistent mastery of academic content. • Earned high school diplomas/GEDs. • Graduated with high GPAs and/or exhibited progressive academic improvements. • Took college placement review courses or online practice exams. • Identified and addressed academic skills gaps or weaknesses to avoid developmental courses at the postsecondary level.

COMPONENT: Academic Skills

By mastering academic skills, students acquire the abilities to organize, synthesize, evaluate, analyze, link, and apply knowledge, ideas, and concepts within a specific content area and/or across content areas.

Element 1. Mastering academic skills

Interviews conducted with experts at postsecondary institutions while preparing the guide identified reading comprehension, technical writing, and numeric literacy as three core skills that help to ensure students have successful college experiences. In addition, some research suggests that there are five "key cognitive strategies" that also are needed for success at the postsecondary level. These strategies are problem formulation, research, interpretation, communication, and precision and accuracy.[17]

Students need to understand the critical importance of developing consistent work habits, study skills, and the other key academic skills early in their high school years. Research on ninth-grade success has shown that students who fail classes in the freshman year of high school often do so because they have a significant deficiency in crucial academic skills.[18]

While postsecondary institutions often use grades and GPAs to measure mastery of academic content knowledge, grades also are used as a proxy for academic skills. Grades reveal "the presence of good study habits and time management skills" and "often reflect the ability to accept criticism and benefit from it and the capacity to take a reasonably good piece of one's work and reject it as not good enough." Ultimately, these essential academic skills and behaviors can be more reliable predictors than test scores in determining which students are likely to excel in their studies and persevere in postsecondary education.[19]

[17] Conley DT. Defining and measuring college and career readiness. Presentation at the Council of State Governments, Education Policy Taskforce; 2011 Oct 21. Available from: http://knowledgecenter.csg.org/kc/system/files/conleyPDF.pdf.

[18] Farrington, op. cit.

[19] Farrington, op. cit.

COLLEGE READINESS: Academic Skills		
Mastering academic skills		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Regularly attend classes. • Be prepared for classes and ready to work. • Actively participate in instructional activities and class discussions. • Devote time to studying and completing assignments. • Develop good study skills. • Practice taking notes. • Use good time management strategies. • Organize work and keep track of assignments. • Use core academic skills to organize, synthesize, evaluate, analyze, link, and apply information. • Practice applying academic skills across coursework, projects, and learning activities.	***Navigators can:*** • Monitor school attendance. • Monitor students' academic progress — especially in ninth grade — to ensure that they are on track for graduation. • Support the academic development and enrichment of students, especially in the areas of reading, technical writing, and numeric literacy. • Encourage students to take catch-up or summer enrichment courses, if needed, to address identified weaknesses in academic skills. • Help students develop academic skills by organizing workshops. • Encourage students to try new things and develop new skills.	***Students:*** • Attended school on a daily basis and participated in classroom activities and discussions. • Consistently completed homework assignments. • Earned high school diplomas/GEDs. • Demonstrated abilities to organize, synthesize, evaluate, analyze, link, and apply knowledge and ideas across academic disciplines. • Addressed skills gaps. • Graduated with highest possible GPAs or exhibited progressive academic improvements.

COMPONENT: Academic and Educational Engagement

By being engaged in academic and educational pursuits, young people show that they are informed about, invested in, and motivated by their postsecondary goals.

Element 1. Understanding the importance of education to lifelong success

Students who understand that education has an instrumental value and is essential for lifelong success are typically more motivated to pursue and complete postsecondary education options. They also may be more likely to take advantage of additional education and training opportunities later in life that help advance their careers and enrich their family lives and community relationships.

Talking with parents and guardians, family members, peers, and other adults both within and beyond their social circles can help young people understand the value of education to improving the quality of their lives. These conversations also can serve as first steps in building networks of adult contacts who can later link students to potential career opportunities.

COLLEGE READINESS: Academic and Educational Engagement		
Understanding the importance of education to lifelong success		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Talk with teachers, family members or other adults within and beyond their immediate social circles about the ways in which education, both immediately following high school and throughout their lives, has helped them build successful careers and thrive in their professional and personal lives.	***Navigators can:*** • Explicitly illustrate for students the value of education in building a foundation for future career success. • Connect students to adults who can help them better understand how education options and lifelong success are connected.	***Students:*** • Interviewed adults within and beyond their social circles about the importance of education. • Created potential networking opportunities. • Decided to pursue and complete postsecondary education and/or training.

COMPONENT: Academic and Educational Engagement

Element 2. Having specific, realistic education goals

Education goals answer the question: what learning plan will help me develop the knowledge and skills I need to pursue my desired career path? The goals need to reflect what young people can see themselves realistically doing throughout their adult lives and what contributions they want to make to society. Students' career goals should be influenced by their goals for further education and training. Realistic education goals should also be based on aptitudes, abilities, and interests. Young people's goals need to be specific if they are to take the concrete steps required to select appropriate postsecondary education options, complete the application processes, and enroll in the colleges or programs they choose.[20] That includes setting academic goals that detail what courses to take each year in high school in order to ensure postsecondary entry requirements are met.

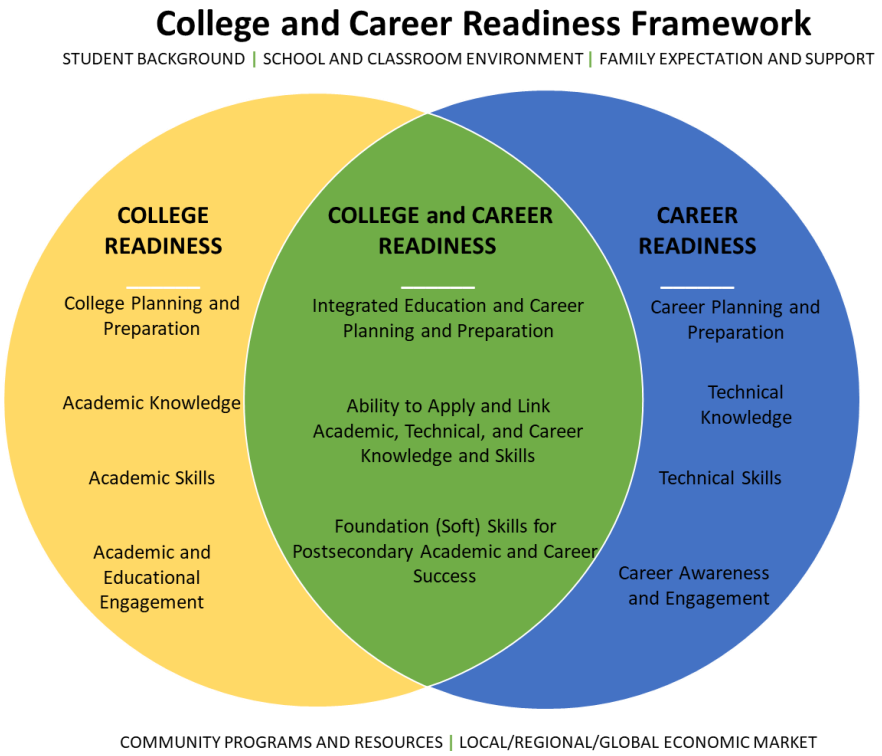
Developing written ECPs enables students to chart paths between where they are and where they want to be. The ECPs can help students identify the specific steps needed to achieve their education and career goals, including coursework and both curricular and extracurricular experiences. Based on the student's education and career goals, the plan should be aligned with both high school graduation requirements and postsecondary entrance requirements.

[20] Nagaoka, op. cit.

COLLEGE READINESS: Academic and Educational Engagement		
Having specific, realistic educational goals		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Develop realistic education goals. • Develop integrated ECPs that chart the steps needed to achieve their education goals. • Develop four-year course plans that detail academic course goals and are aligned with their ECPs. • Identify postsecondary education goals aligned with their ECPs. • Revisit and revise their ECPs on an annual basis (minimum) or as goals shift or come into focus.	***Navigators can:*** • Talk with students about their education goals. • Help students clarify their education and career goals. • Help students develop ECPs that chart their paths to achieving their education and career goals. • Help students develop four-year course plans aligned with their ECPs. • Help young people set course-specific academic goals as well as broader education goals. • Encourage young people to start taking steps to realize their goals.	***Students:*** • Clarified education and career goals. • Developed ECPs that chart the steps needed to achieve education and career goals and revisited and revised their ECPs at least annually. • Developed four-year course plans that were revisited and revised at least annually. • Achieved their academic course goals. • Showed interest in pursuing postsecondary education and/or training. • Took appropriate steps to achieve postsecondary education goals.

Career Readiness

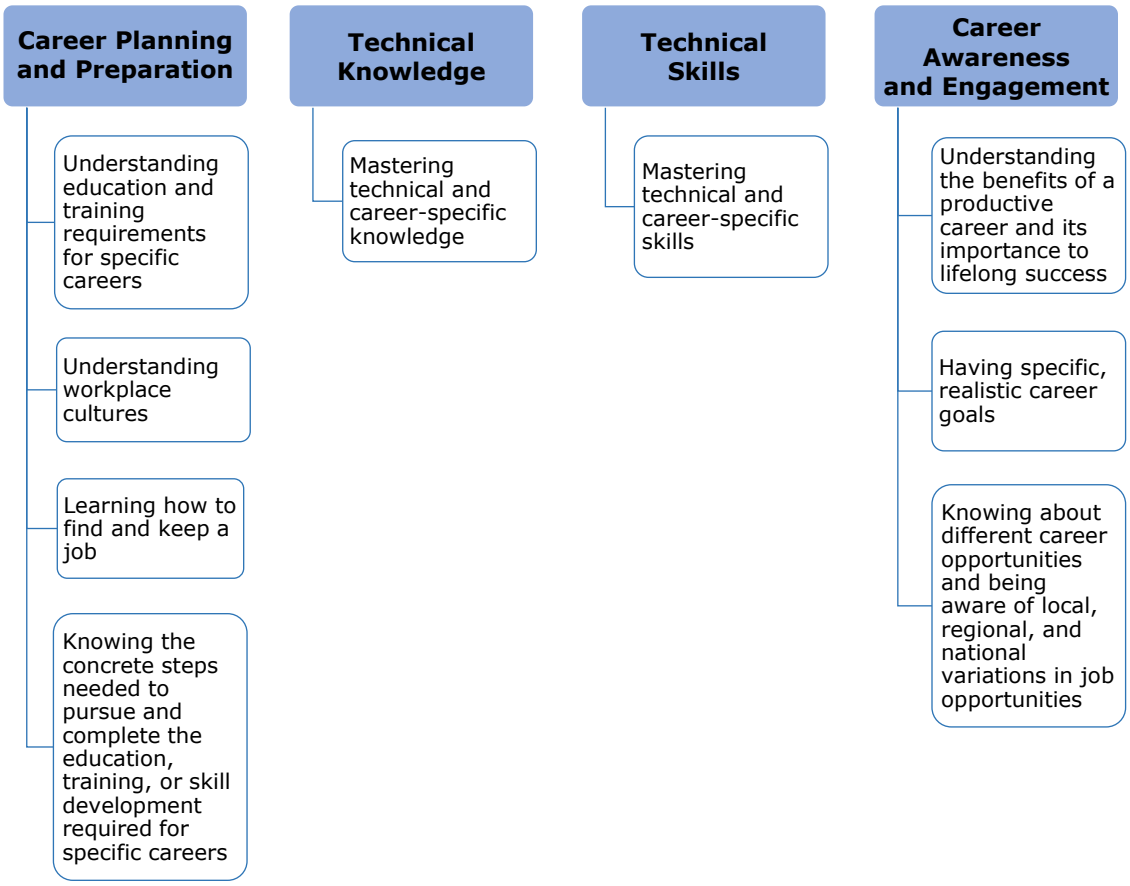
This chapter examines the right side of the college and career readiness framework: the essential skills and knowledge that students need for career readiness. These elements are critical to students achieving access to and success in entry level work positions and upward mobility in viable career paths.



A career is a sequence of positions or occupations that one person engages in during his or her working life. In today's rapidly changing economic landscape, it is increasingly common for individuals to move through a variety of positions within a career path and to transition through multiple careers throughout their working lives.

To have a successful career, an individual must have the required education, training, and experience in a specific field or industry. While lifelong learning is to be expected for most careers, many young people will need some formal preparation before being hired into entry level positions.

The concept map below depicts four components of career readiness and their corresponding elements, each of which focuses on a subset of knowledge, skills, and abilities.



The use of written education and career plans (ECPs) helps students chart paths between where they are and where they want to be. The ECPs can help students identify the specific steps needed to achieve their education and career goals, including coursework and both curricular and extracurricular experiences. Based on the student's education and career goals, the plan should be aligned with both high school graduation requirements and postsecondary entrance requirements.

COMPONENT: Career Planning and Preparation

Career planning and preparation enables young people to explore career options, identify career goals, learn about the requirements to enter their chosen careers, and take the steps they need to meet their career goals.

Element 1. Understanding education and training requirements for specific careers

To gather career planning information, students should interview adults to learn about their career experiences and the education and training required to enter and progress in their careers. These requirements might include educational attainment, experiences, academic and technical knowledge and skills, employability skills, and degrees and/or certificates. As students gather information about different careers, they can start building networks of career contacts who can help them in the future.

In addition, students should explore online career planning resources and engage in career mapping activities. Career mapping is a helpful way to learn about specific careers.[21] A career map is typically a visual diagram that provides a picture of what a career trajectory looks like in terms of sequential positions, roles, and stages and describes the steps individuals might take to facilitate advancement in the field. Furthermore, a career map outlines the educational requirements, potential alternative routes, and skills and knowledge needed to gain access to and excel in a career. These maps make it easy to visualize each position as a step along the path. Career mapping tools are available on a wide range of websites.

Students should update their ECPs to include their career research and mapping activities. While ECPs serve a different purpose than career maps, they can be extremely helpful when young people use them for forward planning and tracking progress.

[21] Clark G, Garrett E. Career mapping: charting your course in the new world of work. New York: Morgan James Publishing; 2011.

CAREER READINESS: Career Planning and Preparation		
Understanding education and training requirements for specific careers		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Use online career planning tools to develop a better understanding of the education and training requirements for different careers. • Conduct informational interviews and talk with family and other adults about their career paths; retain contact information to start professional networks. • Explore careers through different online and written tools and materials. • Participate in career mapping exercises to learn about the education and training requirements of various careers. • Align their ECPs with information and knowledge obtained from career mapping exercises.	***Navigators can:*** • Explain to students that their careers of interest may require education and training beyond high school. • Spearhead career mapping exercises to help students understand their career options and the education and training requirements of specific careers. • Provide young people with the names of professionals in their career areas of interest. • Help students develop and update ECPs. • Encourage young people to start taking steps to realize their goals.	***Students:*** • Completed career maps. • Initiated career planning. • Identified education and training requirements for careers of interest. • Updated ECPs based on career mapping and other research. • Developed a list of contacts to create their own professional networks.

COMPONENT: Career Planning and Preparation

Element 2: Understanding workplace cultures

Nearly one-third of an individual's life is spent at work. Finding a workplace culture that fits with one's personality and learning/work style is critical. When young people understand different workplace cultures and are able to determine what they value, they increase the chance of finding careers in which they experience high levels of job satisfaction.[22]

Work-based learning engages employers and schools in providing structured learning experiences for students. Its purposes are to build student awareness of potential careers, facilitate student exploration of career opportunities, and begin student preparation for careers. The work-based learning continuum encompasses guest speakers, workplace tours, college and career fairs, informational interviews, job shadows, and internships.[23]

Participation in various types of work-based learning opportunities can help students acquire first-hand understanding of workplace cultures and develop deeper understandings of career requirements. While some schools and districts offer work-based learning opportunities for their students, other young people get those experiences through jobs obtained on their own (or with assistance from others) or by doing research on workplaces.[24]

[22] Tsai Y. Relationship between organizational culture, leadership behavior and job satisfaction. BMC Health Services Research [Internet]. 2011 May 11 [cited 2018 Apr 24];11(98). Available from: https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-11-98.

[23] Johnson L, White R, Charner I, Cole J, Promboin G. Succeed 2020 work-based learning manual. Washington, DC: FHI 360; 2018.

[24] Studies show that about 20 percent of U.S. high school students hold summer or part-time jobs at some point before they graduate. Data taken from: College enrollment and work activity of high school graduates [Internet]. Washington, DC: U.S. Department of Labor Bureau of Labor Statistics (various years). Available from: https://www.bls.gov/bls/news-release/home.htm#HSGEC.

CAREER READINESS: Career Planning and Preparation		
Understanding workplace cultures		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Identify their own workplace culture preferences. • Research various workplaces; identify how they are similar to or different from their preferences. • Participate in work-based learning opportunities or volunteer/service learning experiences. • Obtain part-time or summer jobs. • Conduct informational interviews and talk with family, friends, and other adults about their workplace cultures. • Gather and retain contact information of all individuals with whom they speak to start professional networks.	***Navigators can:*** • Help students research different organizations and fields to develop better understandings of different workplace cultures. • Organize career exploration opportunities. • Help students find work-based learning or volunteer/service learning opportunities aligned to careers of interest. • Support students in reflecting on how they can apply knowledge and skills from part-time or summer job experiences to future careers. • Talk with students about their findings, preferences, and priorities related to workplace cultures — what they liked, what they did not like, and how the various settings seemed to affect employees. • Encourage students to create their own professional networks.	***Students:*** • Gathered information and researched workplace cultures. • Determined what they value most in workplace cultures. • Identified workplace cultures that align with their values and priorities. • Compiled information from business contacts to start professional networks.

COMPONENT: Career Planning and Preparation

Element 3: Learning how to find and keep a job

Finding a job in one's chosen career path requires preparation. It takes an understanding of the processes, strategies, and skills necessary for conducting an effective job search. In addition, an effective job search requires a focus on specific career preferences, based on the kind of work, schedule, and compensation a student has set as goals.

Students need opportunities to conduct sample job searches and go through the process — either real or simulated — of submitting job applications and interviewing for part-time or summer jobs. Students should become familiar with and explore professional social media sites such as LinkedIn to learn about the ways professionals in their fields of interest promote themselves. As part of learning how to sell themselves to employers, they also should learn to prepare persuasive resumes; construct personal statements or portfolios; practice effective interviewing skills in mock interview situations; and ask teachers, supervisors, and other adults to serve as references. Finally, young people should have the opportunity to learn about and practice job-seeking etiquette, which includes writing thank you letters after interviews. These actions will help them to earn the confidence of potential employers and set them apart from the larger applicant pool.

As important as it is, finding a job is only the beginning. Keeping a job and advancing in a career are the real goals. Keeping a job requires an individual to demonstrate the abilities, practices, and approaches needed to meet an employer's expectations. Some of the things workers can do to stay employed and advance in their careers include: demonstrating commitment to their jobs; showing value to the organization; being visible; becoming valuable resources to the organization and other employees; excelling at assignments; networking within the organization; pursuing additional education; and being active in professional networks.[25]

[25] Katcher B. 25 ways to stay employed [Internet]. New York: American Management Association. c2018 [cited 2018 Apr 24]. Available from: http://www.amanet.org/training/articles/25-ways-to-stay-employed.aspx.

CAREER READINESS: Career Planning and Preparation		
Learning how to find and keep a job		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Research different jobs; review the necessary qualifications and required skills. • Learn how to prepare resumes as well as personal statements or portfolios, if appropriate. • Develop resumes that detail knowledge, skills, abilities, and experiences. • Conduct mock job searches. • Submit applications for part-time or summer jobs. • Practice interviewing techniques. • Ask teachers, supervisors, or other adults to serve as references. • Use professional social media sites such as LinkedIn. • Talk with family and adults recommended by teachers/counselors; retain contact information to start professional networks.	***Navigators can:*** • Suggest different job search strategies. • Offer or help organize classes to teach resume writing skills; show students sample resumes and point out best practices. • Review students' resumes and provide recommendations for improvement. • Help students practice interviewing skills and writing thank you letters. • Introduce students to personal contacts and industry professionals. • Help students find work-based learning or volunteer/service learning opportunities aligned with careers of interest. • Connect students with workshops or other experiences that can help them learn about job preparation and job search techniques. • Help students develop and use job-seeking etiquette. • Help students understand how individual jobs contribute to building a career.	***Students:*** • Recognized the value and importance of preparation for employment. • Developed resumes or portfolios that outline knowledge, skills, and experiences. • Obtained positive references. • Applied for part-time or summer jobs or participated in simulated job searches. • Participated in real or mock job interviews and prepared follow-up thank you letters. • Secured part-time or summer jobs. • Started professional networks. • Initiated presence on professional social media.

COMPONENT: Career Planning and Preparation

Element 4. Knowing the concrete steps needed to pursue and complete the education, training, or skill development required for specific careers

Career success was once seen as upward mobility within one organization until retirement. Today, this is no longer the case. For a variety of reasons, people rarely stay at the same organizations for their entire careers. As a result, students need to understand that their futures will most likely involve moving into different jobs or positions with different employers within their chosen careers or changing to different careers. These moves and changes will often require additional education, training, or professional development.

Students need to understand what a career is and identify the steps required to move from a job or series of jobs as they advance along their chosen career paths. At the same time, students should realize the importance of lifelong learning and continued networking to progress in their careers.

Navigators can help students identify and complete the preparation required to achieve career goals as well as the continuing education, training, and professional development needed to progress in their chosen careers. Navigators can also encourage students to participate in work-based learning opportunities that allow them to interview adults about the steps they took to enter and build their careers.

CAREER READINESS: Career Planning and Preparation		
Knowing the concrete steps needed to pursue and complete the education, training, or skill development required for specific careers		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Initiate career planning processes and take specific actions to achieve their career goals. • Learn about the specific preparation required to achieve their career goals (e.g., degrees, certificates, other credentials, internships, or other practical experiences). • Use online career planning tools to map the steps needed to enter chosen career fields. • Identify specific postsecondary options for entering their chosen career fields and the entry requirements to gain access to these options. • Develop ECPs that connect career goals with education and training requirements; revisit and revise at least annually.	***Navigators can:*** • Explain to students that their careers of interest may require education and training beyond high school. • Help students understand the differences among a job, a series of jobs, and a career. • Show students how to use online career planning tools to map career plans. • Discuss what students learn from online career planning tools and how education, training, and professional development will need to be part of their career planning and preparation. • Help students incorporate what they learn from online tools into integrated ECPs, which they revisit and revise at least annually.	***Students:*** • Identified broad and possibly specific areas of career interest. • Used and learned from online career planning tools. • Demonstrated understanding of how a job or series of jobs can form the foundation of a career. • Mapped concrete steps needed to prepare for entry into desired career fields. • Developed ECPs and revisited and revised them at least annually.

COMPONENT: Technical Knowledge

Technical knowledge encompasses the technical content of a specific industry, sector, or career.

Element 1. Mastering technical and career-specific knowledge

Technical knowledge is required to enter and progress in any given career — be it healthcare, business, manufacturing, teaching, technology, plumbing, or auto mechanics. Many high schools offer career and technical education (CTE) programs of study that provide a sequence of academic and CTE courses aligned to industry-recognized credentials and paths to postsecondary education. Some high schools also offer dual-enrollment or dual-credit options that enable secondary students to earn postsecondary CTE credits prior to high school graduation.

A college degree, industry-recognized credential, or certificate is often used by employers to ensure that the applicant has the required technical knowledge.[26] These qualifications can be used for recruitment, screening, hiring, and retention or advancement purposes.

Some students may choose to move directly to an apprenticeship or employment position after completing high school rather than pursuing postsecondary education. Navigators can help these young people understand that ongoing skill-building or future education/training may be required to advance or excel in their jobs and build successful careers. Students should recognize that certificate programs and/or technical training may be relevant options to help them realize their future learning goals. These types of learning opportunities are not mutually exclusive with being employed, since many of these opportunities are employer-based or available for people who are also working. Thus, employees can continue to acquire more advanced technical knowledge while remaining employed and gaining hands-on experience through their jobs.

[26] Carnevale AP, Jayasundera T, Hanson AR. Career and technical education: five ways that pay along the way to the BA. Washington, DC: Georgetown University Center on Education and the Workforce; 2012; Carnnvale AP, Smith P, Strohl J. Help wanted: projections of jobs and education requirements through 2018. Washington DC: Georgetown University Center on Education and the Workforce; 2010.

CAREER READINESS: Technical Knowledge		
Mastering technical and career-specific knowledge		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Identify the technical knowledge and postsecondary credentials required for entry and success in their chosen careers. • Assess current strengths and gaps in their technical knowledge. • Pursue coursework aligned with career interests and/or postsecondary prerequisites. • Participate in work-based learning opportunities. • Develop resumes that detail technical knowledge and experiences. • Enroll in CTE programs of study.	***Navigators can:*** • Help students determine which postsecondary credentials (e.g., two-year or four-year college degrees, certificates, industry-recognized credentials) are needed to enter and advance in specific careers. • Explain that most careers require further knowledge-building or future education/training. • Encourage students to pursue coursework aligned with career interests and/or postsecondary entrance requirements. • Teach students how to prepare resumes that outline specific technical knowledge and experiences.	***Students:*** • Completed CTE programs of study that lead to industry-recognized credentials, certificates, or entry into postsecondary degree programs. • Completed preparation for postsecondary degrees, certificates, or industry-recognized credentials aligned with specific careers of interest. • Prepared resumes that outline specific technical knowledge and experiences.

COMPONENT: Technical Skills

By mastering technical skills, students acquire the professional abilities needed to enter and progress in a specific industry, sector, or career.

Element 1. Mastering technical and career-specific skills

Technical and career-specific skills are precise, industry-specific competencies that can be developed through courses, experiences, and activities. CTE courses provide opportunities for students to apply industry-specific technical skills learned in the classroom to simulated work settings (e.g., a welding lab, a computer lab designed for Cisco certification, a commercial kitchen). Technical skills include the abilities to organize, synthesize, solve problems, and apply knowledge in different settings and contexts. Students should master these skills as well as habits and behaviors such as punctuality, attention to detail, teamwork, and time management.

Project-based learning, service learning, and work-based learning activities such as job shadows and internships can also provide opportunities to acquire or hone technical skills. These experiential opportunities give young people meaningful exposure to the kinds of work they might want to do in their adult lives and help them develop specific skills that expand their choices after high school. Additionally, students can interview adults about the technical skills they have mastered and the formal and informal skill-building they used to acquire these skills.

A new and promising development for assessing technical skills is micro-credentialing. Often awarded in the form of badges, micro-credentials focus on mastery of a single technical competency.[27] To earn a micro-credential, students submit portfolios or artifacts (such as videos, work produced in internships, or project plans) and respond to questions. Submissions are reviewed by experts to ensure relevancy and rigor, so colleges, employers, and other evaluators can be confident in recognizing them.

Credentials, experiences, job references, and other employment qualifications may be used by employers to identify whether applicants have the required technical skills as well as general employability skills. Interviews and cover letters enable job applicants to highlight and discuss their experiences, their unique qualifications, and the technical skills they have attained through school, service, and work.

[27] Netzer M, Reynolds C. How microcredentials are changing the landscape of higher and technical education [Internet]. The Evolllution; 2016 Jul 7 [cited 2018 Apr 24]. Available from: https://evolllution.com/programming/credentials/how-microcredentials-are-changing-the-landscape-of-higher-and-technical-education/.

CAREER READINESS: Technical Skills		
Mastering technical and career-specific skills		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Identify technical skills required in their targeted careers and conduct self-assessments to determine current strengths and gaps in their technical skills. • Enroll in CTE programs of study or project-based learning classes. • Participate in work-based learning, service learning, or volunteer opportunities. • Practice work-related skills and behaviors such as attending school regularly and completing all assignments on time. • Develop resumes that list technical experiences and skills. • Participate in micro-credentialing/badging programs. • Interview adults about their technical skills and how they developed and mastered them.	***Navigators can:*** • Help students identify and address gaps in their technical skills. • Encourage students to try new things and develop technical skills. • Organize, identify, and/or provide opportunities for project-based, work-based, and service learning experiences. • Encourage students to pursue CTE programs of study and/or employment opportunities that build specific technical skills in areas of interest. • Teach students how to prepare resumes that outline specific technical skills and experiences. • Provide information about micro-credentialing or badging programs.	***Students:*** • Conducted self-assessments of current strengths and gaps in their technical skills. • Developed resumes that list technical experiences and skills. • Completed CTE programs of study. • Acquired better understanding of employer expectations through internships or other work-based learning opportunities. • Exhibited technical skills as well as work-related skills and behaviors. • Earned micro-credentials/badges.

COMPONENT: Career Awareness and Engagement

By demonstrating career awareness and engagement, young people show they are informed about, invested in, and motivated by career goals.

Element 1. Understanding the benefits of a productive career and its importance to lifelong success

A job is an activity through which an individual earns money or payment. A career is a sequence of positions or occupations with increasing responsibility and remuneration over the course of a working life. In today's economy, many people move through multiple careers.

A career requires an individual to have the education, training, and experience identified by a specific field or industry. The benefits of choosing a career far outweigh those of a choosing a job:[28]

- Increased potential of higher pay and long-term financial rewards.
- Increased opportunities for ongoing skill development.
- Higher workplace productivity and satisfaction.
- Better job security (especially in high-demand fields).
- Additional networking and professional development opportunities.

Young people who understand the distinction between a career and a job and see the lifelong benefits of careers are more likely to take the steps necessary to achieve their career goals. These young people tend to have more positive attitudes toward work and their futures and are motivated to pursue postsecondary options.[29]

While young people can learn about the benefits and importance of careers in a variety of ways, parents, family members, and navigators can play critical roles in helping students understand the value of careers to the quality of their lives.

[28] Lore N. The pathfinder: how to choose or change your career for a lifetime of satisfaction and success. New York: Touchstone; 2012.

[29] Brand B, Valent A, Browning A. How college and technical education can help students be college and career ready: a primer. Washington, DC: College and Career Readiness & Success Center at American Institutes for Research; 2013.

CAREER READINESS: Career Awareness and Engagement		
Understanding the benefits of a productive career and its importance to lifelong success		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Talk with teachers, parents, and other adults about their initial and continued preparation for careers. • Talk with teachers, parents, and other adults about the benefits and importance of a career to lifelong success.	***Navigators can:*** • Help students understand the difference between jobs and careers as well as the value and benefits of careers. • Link students to adults who can talk with them about the benefits and importance of careers to lifelong success.	***Students:*** • Explored various networking opportunities. • Demonstrated positive attitudes toward career development. • Expressed interest in pursuing careers rather than jobs. • Investigated the postsecondary education and/or training required for their chosen careers.

COMPONENT: Career Awareness and Engagement

Element 2. Having specific, realistic career goals

Career goals reflect what students want to do in the future. Career goals need to focus on what young people can see themselves doing to earn a living throughout their adult lives and what contributions they want to make to society. Students' career goals should influence their goals for postsecondary preparation and career development. As with education goals, career goals should be based on aptitudes, abilities, and interests.

Career interest inventories can help students identify realistic career goals. The Holland Occupational Themes (or Holland Codes) are widely used in career interest inventories and career counseling. The Holland Codes Career Test (sometimes identified as a RIASEC assessment) is designed to help individuals identify their strongest career interest among six occupational themes: **r**ealistic; **i**nvestigative; **a**rtistic; **s**ocial; **e**nterprising; and **c**onventional[30].

Career choices are not made based on any one factor. Choices are subject to individual, cultural, social, and environmental influences. There may be several good fits for each student rather than a single "right" choice.

Once aptitudes, abilities, and interests are better known, students can begin to develop specific career goals. To be realistic, career goals should reflect the qualifications, including the formal education and training requirements, for entry into particular career paths. Navigators can support students in developing their career goals and help them determine if they are realistic and achievable, based on their high school academic achievements and relevant experiences to date.

Identification of specific, realistic career goals is an essential first step in career planning. Navigators can then work with and encourage students to develop written ECPs that identify the education and training requirements needed to reach their goals. A student's ECP should include both education and career goals and reflect the qualifications, education, and training requirements for the desired career choice.

[30] Nauta MM. The development, evolution, and status of Holland's theory of vocational personalities: reflections and future directions for counseling psychology. Journal of Counseling Psychology. 2010;57(1): 11-22.

CAREER READINESS: Career Awareness and Engagement		
Having specific, realistic career goals		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Take career interest inventories or assessments. • Identify aptitudes, abilities, career interests, and career goals. • Learn about the preparation required to achieve career goals. • Develop ECPs. • Revisit and revise their ECPs at least annually or as goals shift or come into focus.	***Navigators can:*** • Advise students to take career interest inventories or assessments. • Help students review the results of career interest inventories and assessments as well as any other career exploration activities. • Talk with students about their aptitudes, interests, and abilities. Discuss how they relate to career goals. • Help students set career goals. • Help students determine if career goals are realistic and achievable, based on academic achievements and experiences to date. • Talk with students about the career planning process and the actions they can take to achieve their goals. • Help students develop and revise their ECPs.	***Students:*** • Took career interest inventories or assessments. • Identified aptitudes, abilities, and career interests. • Set specific, realistic career goals. • Developed ECPs and revisited and revised them at least annually.

COMPONENT: Career Awareness and Engagement

Element 3. Knowing about different career opportunities and being aware of local, regional, and national variations in career opportunities

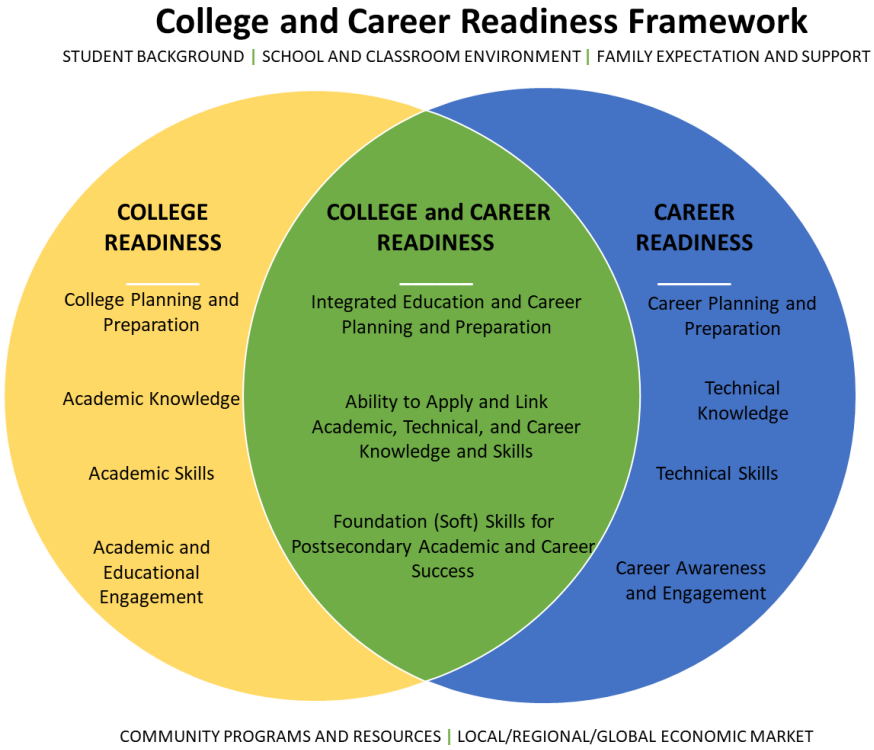
Students should have knowledge and understanding about the broad array of career opportunities available to them and how employment opportunities vary significantly by location. Navigators can help students understand their options fully by learning about careers within their local and regional markets as well as those available beyond the borders of their states. They can support young people as they gather information and research possible careers that match their knowledge, interests, skills, and abilities. Learning about local and regional opportunities through company tours, job shadowing, and internship experiences also affords students the benefit of learning by "seeing and doing."

Developing written ECPs helps students chart paths between where they are and where they want to be. Based on the student's education and career goals, the plan should be aligned with high school graduation requirements and postsecondary entrance requirements. ECPs should also reflect knowledge of where young people are most likely to find employment and career opportunities.

CAREER READINESS: Career Awareness and Engagement		
Knowing about different career opportunities and being aware of local, regional, and national variations in career opportunities		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Conduct research on careers, with a focus on those in high demand in their regional and state labor markets. • Participate in career awareness activities, such as career expos and fairs or company tours. • Learn about CTE programs of study offered in their high schools and/or regional CTE centers. • Conduct informational interviews and talk with family, friends, and other adults about their careers and their career paths.	***Navigators can:*** • Organize career awareness opportunities for young people. • Introduce students to adults with whom they can talk about possible careers. • Provide young people with names of professionals or organizations in the careers in which they are interested. • Review career research results with students. • Help students align interests, aptitudes, and abilities with potential careers.	***Students:*** • Gathered information and researched career options. • Identified several potential careers of interest. • Looked at interests, aptitudes, and abilities and how they relate to potential careers. • Initiated career planning and preparation strategies. • Incorporated career planning information into their ECPs. • Started professional networks.

College and Career Readiness

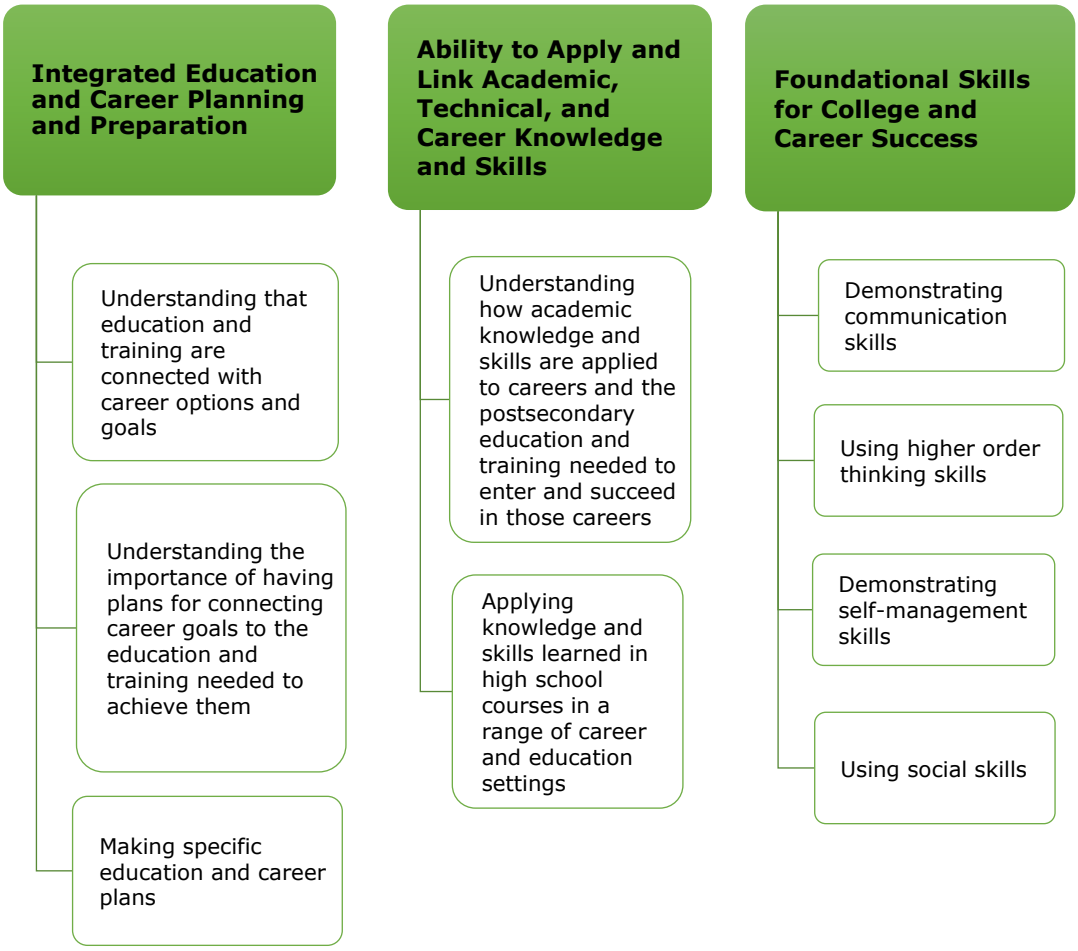
This chapter examines the middle of the college and career readiness framework: the essential skills and knowledge students need for both college *and* career readiness and to transition into productive adulthood. Too often, students' planning for postsecondary education and careers take place on parallel tracks without explicit links between students' future occupational choices and the educational pathways they will need to take to achieve them.



For too many students, postsecondary education and training are seen more as what they plan to do the year after high school than vital next steps to building successful careers. They do not yet realize that their futures will likely include a combination of work and learning in the form of additional certifications, continuing education courses, training, and professional development to keep skills current, to progress in a career, or to transition into a new career. In addition, retraining may be warranted as young peoples' interests change or the demands of the labor market evolve.

The framework diagram reflects the belief that ALL students need to be both college AND career ready to ensure successful and productive adulthood. Navigators can most effectively support young people by helping them understand where planning for college and planning for careers comes together.

The concept map below depicts three components of college and career readiness and their corresponding elements, each of which focuses on a subset of knowledge, skills, and abilities.



The use of written education and career plans (ECPs) helps students chart paths between where they are and where they want to be. The ECPs can help students identify the specific steps needed to achieve their academic and career goals, including coursework and both curricular and extracurricular experiences. Based on the students' education and career goals, the plans should be aligned with both high school graduation and postsecondary entrance requirements.

COMPONENT: Integrated Education and Career Planning and Preparation

Integrated planning and preparation for college and careers requires explicit connections between a student's postsecondary and career goals and identification of the steps that are needed to achieve both sets of goals.

Element 1. Understanding that education and training are connected with career options and goals

For many young people, conversations about career goals and plans are separate from those about postsecondary education and training. For some, this distinction reflects the misperception that college-ready and career-ready are the same so a discussion of one addresses the other. For others, this compartmentalization reflects the assumption that they will proceed directly into the labor market and hence college planning is a secondary concern for them. To ensure more equal outcomes for students, conversations about college goals and career goals need to be connected to form a single integrated plan for college and career readiness.

Young people need help exploring career options as early as possible so they can learn how secondary education will serve as a foundation for successful futures. Carefully designed career explorations help students better understand the steps to take while still in high school, including which courses and extracurricular activities will best prepare them. Early explorations can also help students understand that some careers offer limited opportunities for advancement or require frequent moves, long hours, or irregular schedules. Activities such as job shadows can begin in the ninth grade, with more intensive work-based learning opportunities occurring in later grades. Hands-on, work-based learning activities should build in explicit conversations about the education and training needed to enter and succeed in careers.

Navigators can help young people by exposing them to resources that explicitly link education and careers. For instance, *U.S. News & World Report* ranks careers based on the "costs of entry" for entry level jobs, the availability of those jobs, and the earning potential in that career. Additionally, resources such as the Roads to Success curriculum provide guided lessons that integrate college- and career-planning resources with academic course content to help young people make connections between their school experiences and their goals for adulthood.

COLLEGE AND CAREER READINESS: Integrated Education and Career Planning and Preparation

Understanding that education and training are connected with career options and goals

What actions can young people take to achieve readiness in this element?	How can navigators support young people?	How do young people and navigators know that readiness has been achieved?
Students can: • Take rigorous courses that are prerequisites for entry into desired postsecondary programs and careers. • Maintain highest possible GPAs and work hard to learn core subject matter to avoid postsecondary remediation. • Talk with teachers, parents, or other adults about how education is essential for building successful careers. • Enroll in CTE programs of study that lead to industry-recognized credentials, certificates, or postsecondary degrees. • Participate in dual-enrollment or dual-credit opportunities. • Use online college and career planning tools. • Develop career and education goals that align with the qualifications required to enter target careers.	***Navigators can:*** • Talk with students about career goals and how they link to secondary and postsecondary education. • Emphasize the value of education in preparing for careers. • Help students identify and address gaps in their academic and technical knowledge and skills to ensure their readiness to complete degrees or credentials and secure employment in targeted careers. • Help students connect with adults in a variety of careers to learn about different options and the education needed to enter each of these fields. • Show students how to use online planning tools (e.g., CollegeGrad.com and Roads to Success). • Help students link their education and career goals by developing ECPs.	***Students:*** • Explored college and career planning options and opportunities to link careers with education and training requirements. • Chose high school courses that align with education and career goals. • Compared individual qualifications with postsecondary requirements and career qualifications. • Decided to pursue postsecondary education and/or training to attain career goals. • Graduated with highest possible GPAs and/or exhibited progressive academic improvements. • Completed CTE programs of study. • Identified and addressed gaps in knowledge or skills. • Learned that further education, training, and professional development will be necessary for career success and progression.

COMPONENT: Integrated Education and Career Planning and Preparation

Element 2. Understanding the importance of having plans for connecting career goals to the education and training needed to achieve them

Students who have set plans and strive to meet goals prepare themselves for more career options and greater career satisfaction than students who approach the future by "keeping their options open." One reason goal setting is a proven strategy is that the act of planning provides young people with agency – the sense that they can control their futures.[31] A second reason is that the act of following through on a plan creates positive lifelong habits. Students should be introduced in middle school or early in high school to the connection between their career goals and the education needed to achieve these goals.

To integrate career exploration with the education requirements that accompany particular career options, it is important for young people to have ECPs that promote college and career readiness in a single aligned document. Ideally, these plans will start prior to high school (to help in 9th grade course selection) and will be revisited and revised each year, as students' interests and preferences develop and change. Students' ECPs should be dynamic, living documents that are adjusted as student priorities and contexts change.

[31] Nagaoka J, Farrington CA, Ehrlich SB. A framework for developing young adult success in the 21st century. White paper: defining young adult success. Chicago: University of Chicago Consortium on Chicago School Research; 2014.

COLLEGE AND CAREER READINESS:
Integrated Education and Career Planning and Preparation

Understanding the importance of having plans for connecting career goals to the education and training needed to achieve them

What actions can young people take to achieve readiness in this element?	How can navigators support young people?	How do young people and navigators know that readiness has been achieved?
Students can: • Initiate college and career planning and preparation tasks • Take career assessments to discern what they enjoy learning and how these preferences translate to careers. • Identify specific, realistic education and career goals. • Research the education and experience needed to achieve postsecondary and career goals. • Set specific goals for every course taken. • Pursue rigorous high school coursework that aligns with career interests and meets postsecondary education or training prerequisites. • Develop resumes that outline specific knowledge, skills, abilities, and experiences. • Complete work-based learning activities, volunteer service, and/or service learning opportunities aligned with career and education goals.	***Navigators can:*** • Talk with students about the planning needed to achieve education and career goals. • Help students understand the importance of college degrees, credentials, or certificates to secure entry and advancement in specific careers. • Explain that most careers require ongoing skill-building or future education and training. • Connect students with professionals in their target fields or industries. • Help young people set course-specific goals as well as broader educational goals. • Encourage young people to take steps toward realizing their goals. • Teach students how to prepare resumes that outline specific academic and technical knowledge and experiences. • Help students develop ECPs.	***Students:*** • Clarified education and career goals. • Earned strong grades in all courses and took as rigorous course loads as possible. • Took career assessments to develop better understandings of how their academic interests connect to potential career choices. • Met or surpassed course-specific goals. • Learned about the education and experience needed for specific careers of interest. • Completed internships, volunteer service, or other work-based learning experiences. • Developed ECPs, revisiting and revising these documents at least annually. • Initiated college and career planning and preparation strategies to make goals a reality. • Developed resumes or portfolios that outline specific college- and career-readiness knowledge, skills, and experiences.

COMPONENT: Integrated Education and Career Planning and Preparation

Element 3. Making specific education and career plans

One of the challenges of encouraging young people to become more actively engaged in college and career planning is that the process can at first appear very daunting. An integrated ECP helps demystify the process and provides tangible and actionable steps that break the entire process into easy-to-digest pieces.

An ECP is a written document that explicitly aligns students' college and career goals with the education, training, and experiences that will be needed to achieve them. ECPs help students make the connection between the kinds of career options they hope to pursue and the kinds of courses and curricular or extracurricular experiences they will need to succeed in these careers. ECPs also document the progress the students are making and help them anticipate what they need to do in future years. Some secondary schools have incorporated this concept and language into their policies and strategies for middle and high school students to assure that there is alignment between education and career goals and the academic and experiential preparation needed to achieve these goals.

COLLEGE AND CAREER READINESS: Integrated Education and Career Planning and Preparation		
Making specific education and career plans		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Develop ECPs that outline education and career goals and the academic and experiential steps needed to achieve these goals. • Use their ECPs to guide their course selections and career development activities throughout their four years of high school and ensure they are working toward attaining career goals and meeting education/training requirements. • Revisit their ECPs at least annually to modify and update them as goals change, as learning and preparation tasks are completed, and as labor market demands evolve.	***Navigators can:*** • Help students set specific education and career goals. • Help students identify the specific academic and experiential preparation they will need to achieve their goals. • Encourage young people to start taking steps to realize their goals. • Help students develop written ECPs that align their education and career goals. • Help students revisit and revise their ECPs as their goals change or as learning and preparation tasks are completed.	***Students:*** • Developed ECPs, revisiting and revising these documents at least annually. • Aligned their ECPs with postsecondary goals, career goals, and entry requirements for both postsecondary institutions and entry level positions in careers of interest. • Applied to postsecondary programs related to career interests and plans.

COMPONENT: Ability to Apply and Link Academic, Technical, and Career Knowledge and Skills

Attaining college and career readiness requires young people to apply knowledge and skills across disciplines, learning environments, and workplace contexts.

Element 1. Understanding how academic knowledge and skills are applied to careers and the postsecondary education and training needed to enter and succeed in those careers

College and career readiness requires explicit linkages between students' career goals and preparation and their education goals and academic performance. With few secondary students enjoying the option to take a specific course on college and career readiness or planning, schools need to infuse this connection into the curriculum wherever possible. Navigators can help students understand how to apply course content to other settings and their future careers.

The process of researching careers can help young people understand the educational preparation they will need to enter specific industries as well as different career paths within those industries. In doing so, they can learn what the range of job opportunities are in given fields of interest, the basic duties required by different jobs in these fields, and the education needed to enter each career. They also need to understand that "lifelong learning" is a critical strategy for acquiring the constantly evolving technical knowledge and skills that will be needed throughout their lifetimes.

Once students decide upon a few target careers, they can map the coursework and skill-building opportunities they will need to enter and succeed in these fields. This does not necessarily mean taking only courses that focus on specific industries or careers. In fact, most students need a broad range of courses that build their general knowledge and skills in addition to those related to their careers of interest.

In developing ECPs, students and navigators can cross-reference the knowledge and skills needed for specific careers with coursework and experiences needed to prepare for postsecondary education and then track their progress in successfully completing them.

COLLEGE AND CAREER READINESS: Ability to Apply and Link Academic, Technical, and Career Knowledge and Skills

Understanding how academic knowledge and skills are applied to careers and the postsecondary education and training needed to enter and succeed in those careers

What actions can young people take to achieve readiness in this element?	How can navigators support young people?	How do young people and navigators know that readiness has been achieved?
Students can: • Develop an understanding of the importance of lifelong learning. • Gain awareness of industry sectors and labor market projections in the places they seek to live and work. • Research specific career areas, including the range of jobs the field encompasses, the responsibilities for different jobs, and the education and training needed to enter desired career areas. • Understand the range of high school courses and curricular or extracurricular experiences needed to pursue specific career interests.	***Navigators can:*** • Promote the importance of lifelong learning to ensure that students can adapt to the changing demands of their future career pathways. • Help students research specific career areas, including a range of jobs within their target fields, the responsibilities and requirements for different jobs in this field, and the education and training needed to enter their chosen career areas. • Help students review their academic achievements to date and discuss how their current status aligns with their educational and career interests. • Help students develop and monitor ECPs.	***Students:*** • Gained understanding of how career areas are composed of multiple jobs, each with specific responsibilities and entry requirements. • Learned which specific types of education and training are needed to enter and progress in jobs in different career areas. • Displayed knowledge of how courses align with postsecondary entrance requirements for their careers of choice. • Developed ECPs that lead to two- or four-year degrees or certificate programs aligned with education and career goals.

COMPONENT: Ability to Apply and Link Academic, Technical, and Career Knowledge and Skills

Element 2. Applying knowledge and skills learned in high school courses in a range of career and education settings

Demonstrating what one knows and is able to do — or applying knowledge and skills — is a crucial element of successfully transitioning from high school into college and careers. Transfer of learning is the term used to describe applying what one has learned in a particular situation to another in a different context.[32] Application and transfer of knowledge do not happen naturally or automatically; students who can pass a test may not necessarily know how to apply what they have learned in the classroom. In fact, studies show that many students have difficulties in applying knowledge they learned in one class to another and to outside situations.[33]

The way schools are currently structured is at least partially responsible for students' difficulty applying and transferring knowledge. The National Academy of Sciences examined how school environments compare to the settings in other aspects of everyday life. They found that schools are much more focused on individualized work than most other non-school situations. For successful transfer to non-classroom situations, the National Academy of Sciences recommends that schools place a greater emphasis on shared or experiential learning.[34]

Navigators in secondary schools can play a key role in helping students apply knowledge by using simulations or providing opportunities to make the link between classroom knowledge and the kinds of roles in which students may find themselves in the future. [35] In addition, experiential and project-based learning opportunities that support the application of knowledge and skills across disciplines and in different settings will pay off in students' future abilities to transfer what they have learned to postsecondary education and career opportunities.

[32] Strauss V. The real stuff of schooling: how to teach students to apply knowledge. The Washington Post. 2015 Mar 24; Ferlazzo L. Building a community of self-motivated learners: strategies to help students thrive in school and beyond. Routledge; 2015.

[33] Ibid.

[34] Ibid.

[35] Ibid.

COLLEGE AND CAREER READINESS: Ability to Apply and Link Academic, Technical, and Career Knowledge and Skills

Applying knowledge and skills learned in high school courses in a range of career and education settings

What actions can young people take to achieve readiness in this element?	How can navigators support young people?	How do young people and navigators know that readiness has been achieved?
Students can: • Complete applied learning projects in their courses. • Participate in work-based learning activities, volunteer work, and/or service learning opportunities. • Reflect on how learning from courses and experiential activities can be applied to other settings. • Reflect on constructive feedback received in school and work settings about how well they have applied their knowledge and skills.	***Navigators can:*** • Encourage students to use simulations and participate in experiential or project-based learning in their courses. • Encourage students to process, integrate, and apply knowledge and skills in different settings. • Ask students to explain what they are learning in their own words and how it can be applied in other settings. • Encourage students to use and apply prior knowledge in new ways. • Structure opportunities for cooperative and group learning. • Provide constructive feedback and opportunities to reflect on applied learning.	***Students:*** • Completed applied learning and/or experiential learning opportunities. • Demonstrated abilities to apply content learned in classes and other experiences in different settings. • Developed resumes that specifically describe how knowledge and skills have been applied. • Reflected on feedback received.

COMPONENT: Foundational Skills for College and Career Success

While the foundational skills may be similar, their application and use will differ between college and career contexts. Foundational skills refer to a broad set of skills, competencies, behaviors, attitudes, and personal qualities that enable people to succeed and excel in the world beyond high school. Foundational skills are transferable across education environments, across sectors, and across jobs.[36] Foundational skills can be improved through learning opportunities and experiences in a wide range of classroom, extracurricular, work, and community-based settings.

Element 1. Demonstrating communication skills

Communication skills include oral communication (speaking) and written communication (writing) as well as non-verbal and listening skills. While employers consistently rank verbal (both oral and written) communication at the top of the list for potential employees,[37] they report that many young people do not know how to carry on a conversation and are unable to do things like ask questions, listen actively, and maintain eye contact. These skills are equally important in college, where students must engage with professors to discuss course content and assignments and secure references and recommendations for future endeavors.

Both employers and college representatives indicate that young people's communication skills need to reflect conciseness, clarity, grammar, spelling, and reasoning.[38] Employees must know how to communicate well in written reports and emails, and college admissions officers are looking for articulate candidates who can share their thinking through written assignments. In addition, effective listening skills are needed to absorb the content to which young people are exposed in both classrooms and worksites.

[36] Lippman LH, Ryberg R, Carney R, Moore KA. Key 'soft skills' that foster youth workforce success: toward a consensus across fields. Bethesda, MD: Child Trends; 2015.

[37] Gray K, Koncz A. Employers say verbal communication most important candidate skill. Bethlehem, PA: National Association of Colleges and Employers; 2016.

[38] Witte B. Master needed college writing skills. US News and World Report College Admissions Playbook. 2014 Feb 10.

COLLEGE AND CAREER READINESS: Foundational Skills for College and Career Success		
Demonstrating communication skills		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Practice writing and check written work for spelling, grammar, and clarity. • Prepare and give oral presentations at school. • Speak with teachers or other adults in one-on-one settings. • Practice active listening and asking questions. • Attend communication workshops. • Conduct informational interviews with family, friends, and other adults. • Join a Toastmasters club or school debate team. • Prepare resumes or personal statements that highlight communication skills.	***Navigators can:*** • Model effective communication strategies and active listening techniques. • Provide students with feedback about how they communicate with and provide information to others. • Help students strengthen communication skills to address identified deficiencies. • Teach students how to develop resumes that highlight communication skills. • Critique student's resumes, portfolios, and personal statements; point out errors in grammar, spelling, or logical consistency.	***Students:*** • Demonstrated effective writing, speaking, and listening skills. • Communicated concisely and clearly, both orally and in written work (e.g., correct grammar, proper spelling and punctuation, logical reasoning). • Developed resumes or portfolios that include specific communication skills. • Practiced interviewing techniques.

COMPONENT: Foundational Skills for College and Career Success

Element 2. Using higher order thinking skills

Higher order thinking skills are critical for success in postsecondary education, but they also are ranked as essential by employers. In a discussion of how to assess higher order thinking skills, Susan Brookhart groups other researchers' definitions of these skills into three categories:[39]

- **Transfer:** the ability to apply what has been learned to situations and contexts beyond those in which it was originally learned.
- **Critical thinking:** the use of reflective thinking for deciding what to believe or do,[40] including use of skills related to reasoning, questioning, investigating, observing, describing, comparing and connecting, finding complexity, and exploring viewpoints.[41]
- **Problem solving:** the use of "nonautomatic strategizing required for reaching a goal" that cannot be attained with a predetermined solution.[42]

Young people must be able to solve problems in creative ways and determine solutions to issues, often with no prescribed formula to guide them. Individuals who do not develop higher order thinking skills are more likely to struggle and confront unanticipated setbacks in both college and the workplace.

[39] Brookhart SM. How to assess higher-order thinking skills in your classroom. Alexandria, VA: ASCD; 2010.

[40] Norris SP, Ennis RH. Evaluating critical thinking. Pacific Grove, CA: Midwest Publications; 1989.

[41] Barahal SL. Thinking about thinking. Phi Delta Kappan. 2008;90(4): 298–302.

[42] Nitko AJ, Brookhart SM. Educational assessment of students. 5th ed. Upper Saddle River, NJ: Pearson Education; 2007.

COLLEGE AND CAREER READINESS: Foundational Skills for College and Career Success		
Using higher order thinking skills		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Complete applied learning projects that require knowledge and skills to be used in new and unexpected ways. • Enroll in electives that offer new opportunities to apply knowledge and use skills gained in prior coursework. • Participate in curricular or extracurricular activities that require thinking in new and different ways.	***Navigators can:*** • Help students identify and participate in applied learning projects or other experiential learning opportunities. • Require students to use higher order thinking skills to complete tasks. • Help students develop and use a variety of problem-solving strategies.	***Students:*** • Demonstrated creative thinking, critical thinking, good decision-making, problem-solving, and resourcefulness in school projects or assignments. • Developed resumes or portfolios that highlight higher order thinking skills. • Completed applied learning projects.

COMPONENT: Foundational Skills for College and Career Success

Element 3. Demonstrating self-management skills

Self-management includes elements such as self-direction, discipline, and taking ownership of one's efforts and achievements as well as the ability to delay gratification, control impulses, direct and focus attention, manage emotions, and regulate behaviors. According to the national experts interviewed for this guide,[43] the self-management skills associated with college and career success are:

- **Time management:** the process of setting priorities and organizing how to divide one's time to accomplish specific activities.
- **Discipline:** working hard and consistently applying effort to tasks.
- **Risk taking:** the willingness to learn new things and try new experiences.
- **Perseverance:** doing something despite difficulty or delay in achieving success.
- **Resilience:** learning from, adapting, and bouncing back from challenges.

[43] Background interviews were conducted by principals of McMahon Consulting Group, spring 2014.

COLLEGE AND CAREER READINESS: Foundational Skills for College and Career Success

Demonstrating self-management skills

What actions can young people take to achieve readiness in this element?	How can navigators support young people?	How do young people and navigators know that readiness has been achieved?
Students can: • Take time management workshops and practice key lessons (e.g., making lists and using calendars). • Establish priorities for daily activities, particularly those associated with school assignments. • Complete all school assignments and projects by the due date. • Keep track of personal achievements in school, at work, at home, and in the community. • Work hard in school, obtaining the highest possible GPAs. • Participate in and assume leadership roles in multiple areas, including clubs, organizations, or sports teams. • Show perseverance by not giving up when faced with challenges. • Learn from mistakes, missteps, and challenges. • Reflect on assignments and experiences, considering what could have been done differently or better.	***Navigators can:*** • Help students identify and address gaps in their self-management skills. • Provide guidance on time management and setting priorities. • Model and reinforce hard work and discipline. • Give students comfortable, low-risk environments to practice new skills and, potentially, make a mistake or fail. • Help students reflect on and learn from mistakes and identify strategies for what could be done differently in the future. • Give students strategies for learning from their mistakes and bouncing back from challenges.	***Students:*** • Earned the highest possible GPAs and/or exhibited progressive academic improvements. • Demonstrated good time management strategies. • Developed a resume or portfolio that highlights self-management skills. • Recorded home, school, work, and community roles and responsibilities as well as the skills, knowledge, and abilities developed from them.

COMPONENT: Foundational Skills for College and Career Success

Element 4. Using social skills

Social skills help people get along well with others. These skills include respecting others, using context-appropriate behavior, and resolving conflicts. Social skills are essential for young people to function efficiently and appropriately in college and the workplace. Individuals who do not possess these skills or can only work alone are more likely to struggle in college and beyond, as most careers require some form of teamwork or collaboration.

Specific social skills associated with college and career readiness are:

- Working well with others and using effective teamwork strategies.
- Respecting others and exhibiting multicultural competence.
- Accepting feedback and constructive criticism.
- Knowing how to resolve conflicts and the actions to be taken when groups are not working effectively.
- Understanding how to develop a professional network.

Students can develop these skills through a range of social activities and experiences. They also can begin to develop networks of individuals who can help them succeed in their postsecondary pursuits, forming the foundation for later professional networks.

COLLEGE AND CAREER READINESS: Foundational Skills for College and Career Success		
Using social skills		
What actions can young people take to achieve readiness in this element?	**How can navigators support young people?**	**How do young people and navigators know that readiness has been achieved?**
Students can: • Engage in collaborative or team-based learning projects. • Join clubs, organizations, or sports teams. • Participate in extracurricular activities. • Assume leadership roles in clubs, organizations, or teams. • Reflect on, and learn from feedback provided by others. • Learn conflict resolution strategies and practice the strategies during group activities. • Learn about and meet students or others from different cultures. • Develop a list of personal contacts in career areas of interest.	***Navigators can:*** • Assign team-based projects that require students to collaborate and interact with others. • Teach conflict resolution strategies. • Model an appreciation and respect for diversity and the beliefs or practices of others. • Promote movies, books, restaurants, and museums featuring other cultures. • Encourage friendships and working relationships with individuals of other cultures. • Help students develop a set of personal contacts in career areas of interest as a foundation for later professional networks.	***Students:*** • Developed resumes or portfolios that highlight social and networking skills. • Created lists of social skills developed through home, school, work, and community roles. • Developed a list of personal contacts in career areas of interest that will serve as the foundation for a professional network.

Conclusion

The current and future labor market landscape requires workers who can continually learn and develop new knowledge and skills to keep up with the demands of rapid technology innovation and globalization. Postsecondary education and careers are intrinsically connected, and many adults move between learning and applying what they learn throughout their careers.

Thus, it is critically important for *all* K-12 students to plan for *both* college and careers in an integrated way, and to do so effectively, they need help navigating the process of planning for college *and* careers. Navigators can help young people work simultaneously to develop college and career readiness – the center of the framework – so they can make informed choices that set them on paths to lifelong success.

The goal of college and career readiness is not simply to help young people get into college or get hired for a job. Rather, it is to help them develop the skills, knowledge, and mindsets for ongoing success in postsecondary education and careers. College and career readiness does not result in a single accomplishment or destination. It does not look exactly the same for each person. Rather, the term ***readiness*** implies that a person has the enthusiasm, inclination, knowledge, skills, and abilities to thrive in the varying contexts of work and learning.

Education and work define people and give them the opportunities to define themselves. In the integrated work and learning journey, graduation and college and career readiness are not destinations but rather milestones that place students on the path to lifelong success.

The skills young people need to succeed in college and in their careers are *specific and teachable.* This is the difference great navigators can make; by helping young people explore their options, build their skills, and make concrete plans for postsecondary education and careers, navigators help guide the way to productive futures for all students.

Appendices

Appendix A: Tips for Navigators

Most young people want and seek out caring adults who can provide support and challenge them with new opportunities. College and career navigators have the unique opportunity to guide young people through their journeys toward readiness, helping identify important steps, remove barriers as they emerge, and develop the attitudes, behaviors, and qualities necessary for success.

The quality of the relationship with a navigator can influence how a young person prepares for the future. Trust, respect, and meaningful relationships take time to build. Often young people won't ask for help — sometimes they don't even know they need it. An effective navigator will find out what is important to a young person and develop a relationship with that in mind.

While there are differences in philosophies about the best way navigators can build these relationships, there is agreement on several key principles.[44]

- **Be student-centered and build on strengths.** Navigators should strive to ensure that interactions are youth-friendly and responsive to the specific interests and needs of the individual. This means keeping a focus on the student's aspirations, interests, and goals, which may be different from those of the navigator. In addition, this means asking for and respecting young people's opinions and perspectives and celebrating their ideas, capacities, and achievements. All young people have knowledge, skills, and qualities that navigators can help them recognize, develop, and use.
- **Engage young people in taking charge of their futures.** Navigators can help students become active agents in shaping their futures, guiding them to take ownership of their education and career choices. An emerging body of research on self-efficacy recognizes that young people are contributors to their life circumstances, not just products of them. Navigators can help them build their capacities for intentionality, forethought, self-regulation, self-examination, and improvement.[45] All of these qualities will help young people develop and revise the ECPs they will need to chart their journeys toward college and career readiness.
- **Encourage resilience.** When things get hard, too many young people give up on their plans, and then they give up on planning. Navigators can help students cope with obstacles and reinforce resilience, powerful indicators of success in both college and career settings.
- **Have clear expectations.** Whether navigators act in an official capacity or informally, they need to explain clearly their roles as navigators to the young people with whom they are working and define the type of support the young person can expect from these

[44] McMahon A, Johnson L. Working with BTE youth advancing youth development training program. Washington, DC: FHI 360 National Institute Work and Learning; 2014.
[45] Bandura A. Adolescent development from an agentic perspective. In: Pajares F, Urdan T, editors. Self-efficacy beliefs of adolescents. Greenwich, CT: Information Age Publishing; 2006;5:1-43.

relationships. Navigators should also be as explicit as possible about their expectations for the young people with whom they are working. Young people who know what is expected of them are better positioned to attain college and career readiness.

- **Support continuous preparation for college and careers using the ECP template.** Because the process of becoming both college and career ready can be complex, navigators can encourage young people to use ECPs to document their progress and identify future steps. The ECPs should be living documents that young people update regularly, in collaboration with a navigator, as their goals, interests, and circumstances change, and they explore potential career and postsecondary education options in greater depth.
- **Follow up.** Navigators need to follow up when they see that young people are struggling or just not interested in doing the things needed to move forward on their paths. Navigators should offer consistent follow-up and encouragement to help young people act on their plans. They also need to encourage young people to review their progress toward college and career readiness and revise their ECPs accordingly.

Appendix B: Education and Career Plan (ECP)

An education and career plan (ECP) is a document that a young person can use to map and track the journey toward college and career readiness. It is a powerful tool because it integrates college *and* career planning and preparation into a single document. The process of becoming both college and career ready can be complex; young people should work with navigators whenever possible to use ECPs to identify future steps and document their progress.

The ECP:

- **Identifies a student's career interests and goals** and incorporates the qualifications, education, and training requirements for the identified careers.
- **Connects a student's career goals** with the specific qualifications, education, and training required for entry into those careers.
- **Outlines a student's four-year course plan for high school** that aligns with graduation requirements as well as the student's postsecondary education and career goals.
- **Provides an integrated record of progress in college and career planning** that shows activities and accomplishments in both areas.

Through collaboratively building ECPs with young people, navigators are better able to help them identify the steps and actions needed to move from where they are to where they want to go.

The ECP should be a living document that is updated regularly so that students can revise as their goals, interests, and circumstances change and they explore potential careers in greater depth. Ideally, these updates are done collaboratively with navigators, but young people can work individually through this process or enlist parents or family members to support them. When possible, engaging parents and guardians in updates to students' ECPs keeps them informed and invested in the college and career readiness journeys.

Education and Career Plan (ECP)

Starting the ECP process before students enter high school will help students make thoughtful course selections for 9th grade. This may be done as part of the high school orientation and course selection process. Young people can then develop and refine their ECPs throughout high school and work with their navigators to track their progress toward acquiring the knowledge, skills, qualifications, and experiences needed to achieve their college and career goals.

Education and Career Plan (ECP) of _____
Student Name

Student ID #: _____ **Class of:** _____ **Email:** _____

Name of parent/guardian: _____ **Phone:** _____ **Email:** _____

Name of navigator: _____ **Phone:** _____ **Email:** _____

This ECP is a tool to help you plan and track your progress toward college and career readiness. By connecting college *and* career preparation, this tool can help you:

- Identify your career interests and goals.
- Connect your career goals with the specific qualifications, education, and training required for entry into those careers.
- Outline a course plan for high school that helps you meet your postsecondary education and career goals.
- Record your activities and accomplishments in both college readiness and career readiness.

You should work with a navigator – a teacher, counselor, advisor, mentor, or other advocate – who can provide guidance to you as you develop your ECP and prepare for the future. If feasible, share the ECP with your parents/guardians. Having them review and sign off on the plan will keep them informed and engaged.

Entering 9th grade	**Entering 10th grade**	**Entering 11th grade**	**Entering 12th grade**
Student signature & date	Student signature & date	Student signature & date	Student signature & date
Parent/guardian signature & date	Parent/guardian signature & date	Parent/guardian signature & date	Parent/guardian signature & date
Navigator signature & date	Navigator signature & date	Navigator signature & date	Navigator signature & date

I. Education and Career Goal Setting and Planning

Career goals answer the question: what do I want to do in the future? Your career goals should be realistic and should influence your choices for postsecondary preparation and career planning. Update your goals each year as your interests and circumstances change. If possible, you should update this section each spring as you plan for the following academic year.

	What are my career goals?	What postsecondary education credentials are needed for my career goals?	What high school coursework do I need to take to help me reach my goals?	What additional experiences (work-based, extracurricular, volunteer, etc.) will help me reach my goals?
Semester before entering 9th grade				
Semester before entering 10th grade				
Semester before entering 11th grade				
Semester before entering 12th grade				

II. Academic and Extracurricular Activities: A Record of High School Progress and Accomplishments

At the end of each high school year, provide a summary list of courses taken and major activities and accomplishments during the year. If necessary, add rows to capture additional courses taken in a given year. Then, be sure to review your education and career goals and plan for what academic courses you should take the following year to help you to achieve your goals.

	9th grade		10th grade		11th grade		12th grade	
	Graduation requirements (may not be the same as postsecondary admission requirements)							
	Course title	**Grade**	**Course title**	**Grade**	**Course title**	**Grade**	**Course title**	**Grade**
English								
Math								
Science								
Social Studies/History								
Foreign Language								
Health/Physical Education								
Other required courses								
	Electives							
Elective								
Elective								
Elective								
	Grade Point Averages (GPAs)							
Yearly GPAs								
Overall four-year GPA								
	After-school and out-of-school experiences							
Arts								
Sports								
Clubs								
Leadership roles								
Awards and honors								

III. Career Exploration: A Record of Progress and Accomplishments During the High School Years

As you complete different career exploration and development activities during each year of high school, use this section of the ECP to list and summarize your main career exploration activities and accomplishments.

	9th grade	10th grade	11th grade	12th grade
Conduct career exploration activities (e.g., career research, informational interview, interest inventory, career fair, career mapping)				
Participate in work-based learning experiences, (e.g., job shadow, company tour, internship)				
Complete CTE courses (e.g., technology, computer science, welding) or programs of study				
Develop and revise resume				
Conduct job searches and apply for after-school or summer jobs and volunteer opportunities				
Engage in simulated, mock, and real job interviews				
Attain and complete after-school and/or summer jobs and volunteer opportunities				

IV. Postsecondary Readiness: A Record of Progress and Accomplishments During the High School Years

Each spring, use this section of the ECP to summarize the work you have done to prepare for college, technical school, or other postsecondary program. Be sure to review these categories yearly so you can plan ahead for what you should do during the next year to keep yourself on track. Keep in mind that some of these activities may not begin until the upper grades, so you may have a few blank boxes in your first couple of years of high school.

	9th grade	10th grade	11th grade	12th grade
Identify college and career goals (summarize the goals you recorded on Section 1 here)				
Explore options (e.g., research postsecondary opportunities, visit colleges/ programs)				
Prepare a personal statement/essay (which is often a required element of postsecondary applications)				
Complete national testing (e.g., ACT, SAT, WorkKeys)				
Diagnose and address skills gaps (to avoid developmental coursework)				
Apply to postsecondary institutions and programs (make sure to keep track of all deadlines and requirements)				
Research and apply for financial aid (to help fund your postsecondary experience)				