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Goals and Expectations for College and Career Readiness: What Should Students Know and Be Able to Do?

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INTRODUCTION

College and career readiness has become a key priority for the PK–20 education community and the nation at large. And although college and career readiness is a PK–20 issue, much of the attention has focused on secondary education, fueled by economic projections and secondary reform efforts. Recent projections indicate that within the next decade, 63 percent of all jobs in the United States will require some postsecondary education, and 90 percent of new jobs in growing industries with high wages will require some postsecondary training; however, institutes of higher education and the business community have long expressed concern over the inadequacy of a traditional high school education in preparing students for postsecondary education or training necessary to succeed in these careers (Alliance for Excellent Education, 2009; Carnevale, Smith, & Strohl, 2010; U.S. Department of Labor, 2008).

High schools face many challenges in ensuring that all students are college and career ready. Not only must high schools raise their expectations and help students set more ambitious postsecondary goals, but they must also provide a wider array of supports to help students meet their individual goals. Furthermore, the growing consensus on the importance of all students mastering a broad range of knowledge and skills—like the English language arts and mathematics standards within the Common Core State Standards; key learning skills such as social and emotional and academic success skills; and knowledge of and exposure to a diverse range of postsecondary pathways—is made even more challenging in that there is also subset of college and career readiness skills that are directly tied to individual postsecondary goals. As each student identifies postsecondary aspirations, he or she will require specific knowledge and skills to prepare for the identified pathway (Alliance for Excellent Education, 2009; Educational Policy Improvement Center, 2009; ACT, 2006).

The increased focus on college and career readiness, combined with the complexity of the challenges associated with the topic, has led to a rapidly expanding college and career readiness community that is rich with resources yet replete with confusion. The National High School Center recently conducted a scan of organizations that address college and career readiness and identified more than 70 such organizations, including those focused on policy, practice, advocacy, access, and research. Through this scan, the College and Career Development Organizer was created to help make sense of this increasingly complicated topic.

The purpose of this brief is to summarize and organize the college and career readiness goals and expectations that the National High School Center has collected as part of a scan of organizations involved in college and career readiness. This brief is a companion piece to the National High School Center’s College and Career Development Organizer and is the first in a series of briefs describing the three strands identified therein (see <http://www.betterhighschools.org/CCR/resources.asp> to download briefs):

- ***Expectations and Goals for College and Career Readiness: What Should Students Know and Be Able to Do?***
- *Pathways and Supports for College and Career Preparation: What Policies, Programs, and Structures Will Help High School Graduates Meet Expectations?*
- *Outcomes and Measures for College and Career Success: How Do We Know When High School Graduates Meet Expectations?*

In the pages that follow, the National High School Center briefly summarizes the college and career readiness goals and expectations that have been collected and organizes this information into three key threads (see Exhibit 1):

- *Core Content*
- *Pathways Content*
- *Lifelong Learning Skills*

Along with a brief description of each thread, key components are highlighted and examples of each type of goal and expectation are provided. The brief concludes with key factors that schools, districts, and states may want to address as they begin to build, analyze, and address goals and expectations specific to college and career readiness in their contexts.

Exhibit 1. College and Career Development Organizer: Pathways and Supports Strand.

STRAND 1: Goals and Expectations for College and Career Readiness <i>What should high school graduates know and be able to do?</i>		
THREADS	COMPONENTS	EXAMPLES
Core Content	Common Core State Standards	English/language arts, literacy, and mathematics content standards
	Individual State Standards	English/language arts, mathematics, science, foreign language, and technical standards
Pathways Content	College and Career Knowledge and Access	College and work trajectories, environments, and eligibility requirements
	College and Career Goals	Student-declared educational and career aspirations
	Pathway Content Standards	Programs of study standards (e.g., science, technology, engineering, and mathematics; health; business) ▶ Career and technical education standards
Lifelong Learning Skills	Social and Emotional Skills	Self-management ▶ Responsible decision making ▶ Self-awareness ▶ Social awareness ▶ Relationship skills
	Higher-Order Thinking Skills	Problem solving, critical thinking, and reasoning ▶ Synthesis and precision
	Academic Success and Employability Skills	Inquisitiveness and intellectual openness ▶ Organization, study, and research skills ▶ Attendance and engagement ▶ Teamwork and collaboration ▶ Effective communication
	Civic/Consumer/Life Skills	Civic engagement ▶ Financial literacy and management ▶ Information technology and social media skills

CORE CONTENT

Core Content, the first thread of the Goals and Expectations strand, refers to the set of academic knowledge and skills that all students should master to graduate from high school and pass college-level entry examinations, which test students' academic skills and their alignment with expectations of two-year community and technical colleges as well as four-year institutions (see Exhibit 2). Core content areas include English language arts and mathematics but also may include science, social studies, foreign language, and other content areas based on state policies. In the College and Career Development Organizer, core content is divided into: (1) common core state standards and (2) individual state standards.

Exhibit 2. College and Career Development Organizer: Core Content Thread.

THREADS	COMPONENTS	EXAMPLES
Core Content	Common Core State Standards	English/language arts, literacy, and mathematics content standards
	Individual State Standards	English/language arts, mathematics, science, foreign language, and technical standards

COMMON CORE STATE STANDARDS

Unlike countries such as Germany, Brazil, India, and the Netherlands, the United States does not have national standards or curricula (Schmidt, Houang, & Shakrani, 2009). However, 48 states and territories and the District of Columbia have recently adopted shared standards for mathematics and English/language arts, known as the Common Core State Standards. The *Common Core State Standards*, the first component of the Core Content thread, incorporate college and career readiness standards, which are aligned with both postsecondary education and workplace expectations, involve rigorous content knowledge and application through higher-order thinking skills and build on lessons learned from individual state standards. States that have chosen not to adopt the Common Core State Standards generally have individual state standards in English/language arts and mathematics that hold students to a similar level of rigor. The Common Core State Standards are evidence based and informed by internationally competitive benchmarks in academic achievement with the goal of ensuring that high school graduates are prepared to compete in a globalized economy (Council on Chief State School Officers, National Governors' Association and Achieve Inc., 2010).

The Common Core State Standards are designed to provide fewer, more explicit, and coherent expectations with specific and achievable goals for all students. Furthermore, every standard within the Common Core is grade- or course-specific and intended to be both teachable and learnable by all teachers and students (Council on Chief State School Officers, National Governors' Association and Achieve Inc, 2010; McNeil, 2009; National Secondary Transition Technical Assistance Center, 2011).

INDIVIDUAL STATE STANDARDS

Individual State Standards comprise the second component of the Core Content thread. Historically, state policymakers have set high school performance expectations (expressed as graduation requirements and standards), which are implemented by districts and classroom teachers. In virtually every state, minimum graduation requirements are codified by the legislature or the state board of education. Since the 1990s, course content has been determined by state boards of education or specialized state-level committees. Content is identified by standards that describe the academic knowledge and skills that students in various grade levels and subject areas should learn; performance standards that define the levels of learning, which demonstrate achievement of the standards; and, in some states, the identification of the necessary skills used in problem-solving, communication, and transference of learned information (Georgia Department of Education, 2011¹; McBrien & Brandt, 1997).

Since the 1990s, many states have implemented new strategies and initiatives for high school standards and curriculum in an effort to increase their rigor and relevance. Many states have adopted state-specific content standards; raised graduation requirements, particularly in mathematics and science; and replaced lower-level curricular options with a single college-ready track (Dounay, in press). Though mathematics and English/language arts are often the focus of such initiatives, some states have created history and social science standards to address rigor in other core content areas. California's state history standards, for example, include chronological and spatial thinking; research, evidence and point of view; and historical interpretation of subject matter. As California begins to implement the Common Core State Standards, its history and social science standards also will be assessed for Grades 9–12 (California State Board of Education, 2009²).

¹ <https://www.georgiastandards.org/standards/Pages/BrowseStandards/BrowseGPS.aspx>

² www.cde.ca.gov/be/st/ss/documents/histsocscistnd.pdf

PATHWAYS CONTENT

Pathways Content, which is the second major thread of the Goals and Expectations strand, refers both to the academic and career-specific skills that a student must master in an effort to achieve an individually defined college and/or career goal, as well as the process-specific skills that will allow the student to navigate the pathway to achieve his or her college and/or career aspirations (see Exhibit 3). To formulate aspirations and concrete plans to meet them, students must first have exposure to a multitude of career profiles and postsecondary pathways that will allow them to set their goals based on a broad range of knowledge and experience. After goals have been set and concrete pathways defined, students then work to meet pathway-specific academic and technical standards, including technical content required for individual learning plans³ and/or science, technology, mathematics and engineering (STEM) pathways, if applicable.

Finally students must master the skills necessary to navigate the complex applications process, to apply for financial aid (either through grant or scholarship applications and/or the Free Application for Federal Student Aid [FAFSA]), and to find and enlist additional supports after high school graduation to help ensure postsecondary success (Robbins et al., 2004; Venezia, Kirst, & Antonio, 2004⁴). Conley (2008), refers to these skills as *contextual skills and awareness* and also include the ability to navigate the college search and admissions process through self-reflective actions and through interaction with peers, administrators, and professors in their chosen field of study.

Exhibit 3. College and Career Development Organizer: Pathways Content Thread.

THREADS	COMPONENTS	EXAMPLES
Pathways Content	College and Career Knowledge and Access	College and work trajectories, environments, and eligibility requirements
	College and Career Goals	Student-declared educational and career aspirations
	Pathway Content Standards	Programs of study standards (e.g., science, technology, engineering, and mathematics; health; business) ▶ Career and technical education standards

COLLEGE AND CAREER KNOWLEDGE AND ACCESS

College and Career Knowledge and Access, the first component in the Pathways Content thread, includes understanding a wide variety of career options and the steps required to follow them. For individual students, it means exploring career profiles that align to personal interests, skills, and aspirations and knowing the specific courses, postsecondary alternatives (e.g., internship opportunities, “good fit” colleges), and procedures (e.g., interviews, essays, applications) to pursue those pathways (<https://bigfuture.collegeboard.org/>).

Students cannot set targeted college and career goals nor begin learning goal-specific pathway content until they have explored a broad range of opportunities, learning which pathways will best fit individual interests and strengths (Conley, 2012). Thus, it’s important that college and career knowledge and access development begin prior to high

³ For more on individual learning plans, see the National High School Center’s *Pathways and Supports Brief* at <http://www.betterhighschools.org/CCR/resources.asp>

⁴ Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin*, 130(2), 261–288.

Venezia, A., Kirst, M., & Antonio, A. (2004). *Betraying the college dream: How disconnected K-12 and postsecondary systems undermine student aspirations*. San Francisco: Jossey-Bass.

school enrollment and continue beyond high school graduation. This necessitates early planning for the college and career goal-setting process, such as incorporating college- and work-based experiences into middle and early high school and administering self-reflection and interest inventories, to ensure that students are aware of their interests and skills and have first-hand experience to support their college and career planning process. Postsecondary experiences should be based both on student interests and skills and the needs within the business community to help students gain familiarity with industries that are likely to experience growth (ACT, 2011). Simultaneously, students should build a social network including mentors and school counselors or other staff members to develop a unique student profile of strengths, interests, and challenges in an effort to identify which college and career experiences are the best fits for them. As students approach their transition to postsecondary opportunities, they must gain additional college and career knowledge to effectively identify postsecondary experiences (e.g., colleges or internships with best-fit programs) before the senior year of high school, take necessary entrance examinations or placement tests and submit applications in a timely fashion, and complete the FAFSA and scholarship applications (College Board, 2012; Conley, 2011).

The Idaho Career Information System (2003) developed by the Idaho Department of Labor, for example, provides a centralized system for high school students building postsecondary knowledge. The system includes information about career pathways, including career exploration modules; and the steps needed to embark on those pathways, including practice assessments for both college and career entry or certification examinations, information on colleges with career-specific programs and information on scholarships. The site also provides strength exploration tools to help students assess their abilities and evaluate which careers will best harness identified strengths.

COLLEGE AND CAREER GOALS

College and Career Goals, the second component in the Pathways Content thread, can range from general (e.g., to attend a two- or four-year college) to very specific (e.g., to become an engineer) and are a relatively strong predictor of future behavior. For example, an Education Policy Improvement Center report found that high school seniors whose goals included attending a four-year university were 28 percent more likely to apply to college than students with no aspirations to attend college. Moreover, students whose goals included earning an advanced degree were 34 percent more likely to apply to college than students without such goals (Gilkey, Seburn & Conley, 2011). As important as this may be, goals alone are not enough to ensure that students are successful after high school. According to the Education Policy Improvement Center report, the vast majority of middle school students planned to attend college (93 percent), but fewer than half went on to enroll in college (44 percent) and many fewer still went on to earn a college degree (26 percent) (Conley, 2012). At a minimum, goals should be grounded in college and career knowledge and paired with school supports and mastery of other skills and standards to ensure that students make informed decisions about their futures and build the foundation to meet their goals. And though student goals should be based on their interests and skills, college and career knowledge and experiences are critical to ensure that students set goals that are realistic, attainable and best meet their future needs.

PATHWAY CONTENT STANDARDS

Pathways Content Standards, the third component in the Pathways Content thread, are academic and technical expectations aligned to specific disciplines that students explore as part of their college and career goals. Pathway content standards may include standards in advanced coursework, such as Advanced Placement (AP) and International Baccalaureate standards; career and technical education (CTE) standards designed to meet the needs of a specific industry; or standards that are unique to individual programs of study that focus on career pathways, such as

STEM, health or business. Because CTE and programs of study prepare students for specific career pathways, it is important that these standards are aligned with industry needs. Partnerships with local businesses and industry leaders can provide support for the development of appropriate standards and multi-point assessments to ensure students are meeting those standards (Perkins Collaborative Resource Network 2010). Similarly, due to the pathway- and student-specific nature of these standards, they are generally addressed later in high school. This allows schools to first ensure that students master core content standards relevant to all pathways, which afford them access to multiple pathways should their individual goals change as high school progresses (White, 2007)

LIFELONG LEARNING SKILLS

Lifelong Learning Skills, the third thread of the Goals and Expectations strand, are essential skills required for college and career success that extend beyond the boundaries of academic- and career-oriented environments (see Exhibit 4). Though academic skills are essential in ensuring postsecondary success, there is growing consensus that mastery of academic skills is not sufficient to be a successful student or employee (ACTE, 2011; College Board, 2010; Conley, 2012; McGraw Hill, 2012;). Academic and technical skills must be coupled with a diverse set of support skills. Mastery of lifelong learning skills allows students to effectively apply their academic and technical knowledge and simultaneously demonstrate professional and responsible behavior in postsecondary settings. These skills can be leveraged, not just for success in a postsecondary classroom or career, but also to navigate relationships and engage meaningfully with society outside of the classroom or workforce.

Exhibit 4. College and Career Development Organizer: Lifelong Learning Skills Thread.

THREADS	COMPONENTS	EXAMPLES
Lifelong Learning Skills	Social and Emotional Skills	Self-management ▶ Responsible decision making ▶ Self-awareness ▶ Social awareness ▶ Relationship skills
	Higher-Order Thinking Skills	Problem solving, critical thinking, and reasoning ▶ Synthesis and precision
	Academic Success and Employability Skills	Inquisitiveness and intellectual openness ▶ Organization, study, and research skills ▶ Attendance and engagement ▶ Teamwork and collaboration ▶ Effective communication
	Civic/Consumer/Life Skills	Civic engagement ▶ Financial literacy and management ▶ Information technology and social media skills

SOCIAL AND EMOTIONAL SKILLS

Social and Emotional Skills, the first component of the Lifelong Learning Skills thread, include skills necessary to self-regulate, develop relationships, and manage challenging situations and environments (EXSEL, 2004⁵; Shelton & Stern, 2003).⁶ These skills contribute positively to students' acquisition of academic content and also prove essential to student success in college and career (Asberg, Bowers, Renk, & McKinney, 2008; Hurtado et al., 2007; Norris, 2003;

⁵ Project EXSEL New York City All Rights Reserved. Last update 5/14/04 Hosted to ILT, Teachers College, Columbia University webmaster@projectexsel.org

⁶ Shelton, C. M., & Stern, R. (2003). *Understanding emotions in the classroom: Differentiating teaching strategies for optimal learning*: Dude Publishing.

Pritchard, Wilson, & Yamnitz, 2007).⁷ Many states have begun to incorporate social and emotional skills into their curricula and, more recently, into college and career readiness standards (Pathways to College Network, Institute for Higher Education Policy, 2009). For example, the state of Illinois has developed a set of ten social and emotional learning standards that are aligned with five social and emotional learning competencies identified by the Collaborative for Academic, Social and Emotional Learning (CASEL) as required for a positive and successful learning experience and transition to adulthood. These competencies are: self-awareness, self-management, social awareness, relationship skills and responsible decision-making (CASEL, 2005). Illinois' standards also provide benchmarks that describe the level of competency in each skill that students should demonstrate as they progress in their school career from early elementary to late high school (Illinois State Board of Education, 2012).⁸

HIGHER-ORDER THINKING SKILLS

Higher-Order Thinking Skills, which are the second component of the Lifelong Learning Skills thread, allow students to apply their academic knowledge and are equally essential to college and career success. Higher-order thinking skills include cognitive strategies such as problem-solving, critical thinking, and research and synthesis skills (Alliance for Excellence in Education, 2007, Wiley, Wyatt & Camara 2010). Because higher-order thinking skills are applied in concert with academic knowledge, it is important that this skill set be taught alongside academic content in classes or settings where both can be practiced and mastered. Higher-order thinking skills must be embedded within content standards to ensure that students learn the use of these skills and not simply the concept behind them (Partnership for 21st Century Skills, 2010).

Individual standards from several states and the Common Core State Standards demonstrate the incorporation of higher-order thinking skills into core content standards. For example, in addition to content standards for science, history, and English, Oregon state standards include: designing and conducting scientific experiments, analyzing economic systems, and interpreting literary works (Conley et al. 2007). These standards are incorporated into and aligned with the Proficiency-Based Admission Standards Systems, a set of benchmarks students should meet to ensure readiness for college-level work (Oregon University System 2007, Conley 2007).

ACADEMIC SUCCESS AND EMPLOYABILITY SKILLS

Academic Success and Employability Skills, which are the third component of the Lifelong Learning Skills thread, include habits and skills that enable students to demonstrate professionalism and/or responsible behavior in an academic or workplace environment. These skills range from concrete habits such as timeliness, professional dress, and use of workplace appropriate vocabulary, to less tangible skills that contribute to academic and workplace success such as intellectual openness and collaborative teamwork. These skills contribute to students' development as leaders and can result in opportunities for advancement and expanded mobility in the postsecondary world (Alliance for Excellence in Education 2007, Wiley et al., 2010).

⁷ Norris, J. A. (2003). Looking at classroom management through a social and emotional learning lens. *Theory into practice*, 42(4), 313–318.

⁸ A full description of Illinois SEL Standards and SEL Awareness Webinar information can be found at: <http://www.isbe.net/ils/Default.htm>

Perhaps the most definitive report on employability skills, the Secretary's Commission on Achieving Necessary Skills (SCANS), identified skills that both employers and colleges expect from applicants (U.S. Department of Labor, 2009). The commission, composed of representatives from the Department of Labor, businesses, schools, and unions, identified a wide range of necessary skills, including five workplace competencies: (1) identifying and utilizing resources, including managing time and prioritizing goals; (2) working with others, including collaborating on teams and teaching others new skills; (3) acquiring and using information, including organizing and communicating new information; (4) engaging in and navigating various types of systems, including monitoring and improving systems; and (5) learning and using technology, including identifying the correct tools and applying them to the task at hand (U.S. Department of Labor 2009; Halperin, 1998; Gubb et al., 1992).⁹ These skills have been integrated into technology standards in many states and have been adapted into several tools for to assess workplace readiness (Overtoom, 2000; POCl, 2006).¹⁰

CIVIC/CONSUMER/LIFE SKILLS

In addition to academic, technical, and employability skills, adolescents transitioning into adulthood need to master the essential *Civic/Consumer/Life Skills*, which comprise the fourth component of the Lifelong Learning Skills thread, that are critical to be functioning members of society. Civic engagement skills are the set of skills necessary to effectively engage and participate in a community in an effort to improve it and contribute to its future progress (Adler & Goggin, 2005). Civic engagement skills, often fostered through public service experiences, allow students to balance the needs of the community with their individual needs. These skills often include “fairness, beneficence, self-denial, liberty, loyalty, honesty and a commitment to the greater good” (Education Commission of the States, 2000).

Consumer skills, often known as financial literacy skills, include maintaining a bank account and making informed judgments about spending and saving (Partnership for 21st Century Skills, 2008). Research has shown that, in states where financial education is required, adults in postsecondary settings save and accumulate wealth at a higher rate (Bernheim, Garrett, & Maki, 2001). Financial literacy includes a clear understanding of college affordability and financial aid analyses that enable students to make wise decisions that minimize long-term or excessive debt burdens.

Similarly, life skills provide students with other tools necessary to make practical decisions in their adult lives and include self-determination skills, such as exploring life options, setting goals and self-advocating. Research suggests that students with higher levels of self-determination are more likely to have positive adult outcomes including holding a job, having a bank account, and living on their own (Bremer, Kachgal, & Schoeller, 2003). Students may also need to harness social and emotional and higher-order thinking skills as part of civic, consumer, and life skills. Social and emotional skills, such as self-monitoring are crucial to practical decision-making, such as avoidance of risk and drug and alcohol abuse. Similarly, higher-order thinking skills are leveraged to effectively distinguish between fact and opinion, critically evaluating information that is essential to participation in civic or consumer culture (Novelli, 1999).

⁹ <http://wdr.doleta.gov/SCANS/>

¹⁰ A sample can be found at: mychildsfuture.org/.../Activity_HS_EmployabilitySkillsandMe.pdf

KEY CONSIDERATIONS

This brief summarizes the college and career readiness goals and expectations that the National High School Center has collected through a scan of more than 70 organizations and the research and policy literature. The goal of this brief, as well as the College and Career Development Organizer and the other briefs in the series, is to help key stakeholders traverse the vast college and career readiness landscape by mapping its terrain. Through development of the organizer and briefs, we have identified key landmarks that stakeholders may wish to watch for as they work through college and career ready goals and expectations within their local contexts. These landmarks are as follows:

- The goals and expectations used to describe what it means to be college and career ready are not explicit, comprehensive, or shared among organizations, states, and districts. In fact, there are many different expectations, some of which focus on college readiness, career readiness, or a combination of both. Within local contexts it is important that stakeholders are specific and working toward the same goals and expectations.
- To be college and career ready, students must master a wide range of knowledge and a diverse set of skills that range from specific content knowledge in certain academic and technical areas to knowledge of college and work trajectories, environments, and eligibility requirements to collaboration skills and resilience. Education stakeholders should consider all dimensions when developing plans to improve college and career readiness in their localities.
- College and career readiness goals and expectations and corresponding policies should be driven by state and national economic and workforce needs and projected needs, as well as individual career interests and aspirations; they should be anchored in expectations outlined by colleges and industry standards.

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