# THE COLLEGE AND CAREER READINESS AND SUCCESS ORGANIZER

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# The College and Career Readiness and Success Organizer

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# Introduction

College and career readiness and success have become key priorities for the PK–20 education and workforce communities and the nation at large. Recent projections indicate that within the next decade, 63 percent of all jobs in the United States and 90 percent of new jobs in growing industries with high wages will require some form of postsecondary education. However, institutions of higher education and the business community have long expressed concerns about the inadequacy of a traditional PK–12 education in preparing students for the 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).
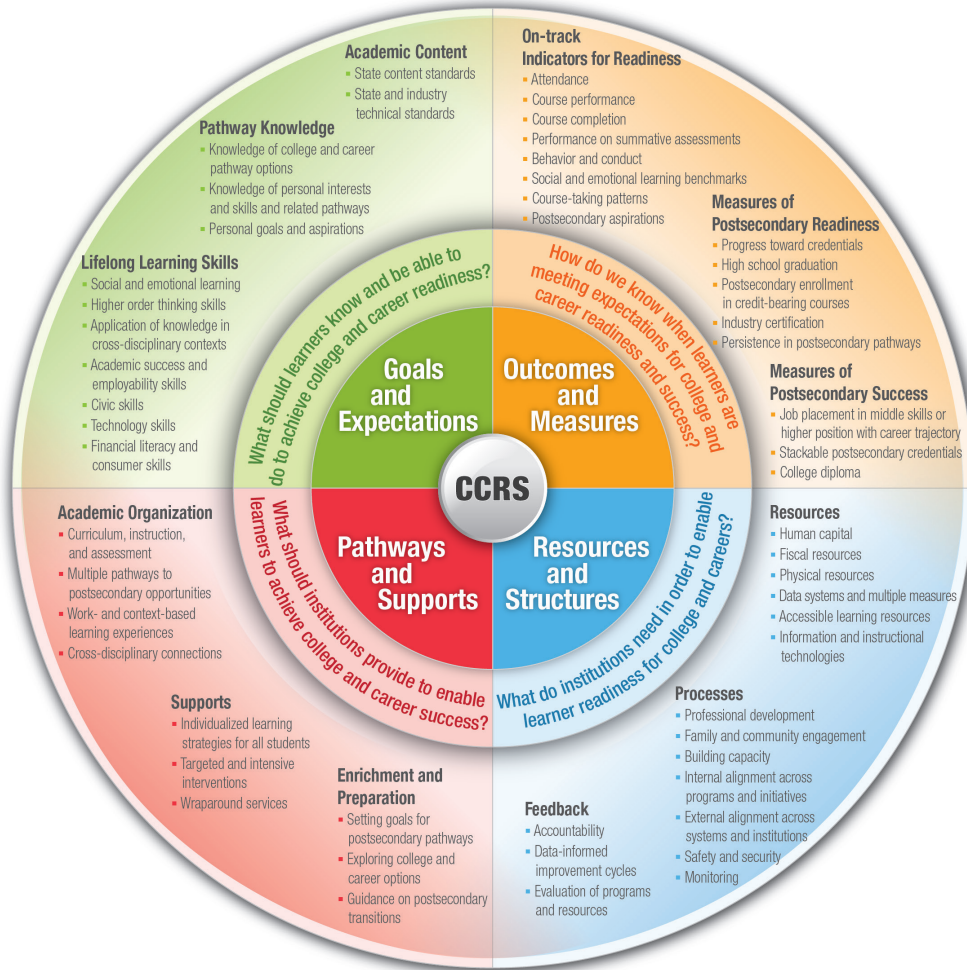
States, districts, and schools must rise to the challenge of ensuring that students graduate ready to succeed in college and careers by supporting the mastery of knowledge and skills beyond traditional core subjects. Although schools must help students prepare academically for postsecondary pathways, they also must provide experiential learning opportunities and programming to ensure that students develop emotional maturity, professionalism, technical abilities, and an awareness of postsecondary options.

The increased focus on college and career readiness and success from prekindergarten to the workforce (PK–20W) has driven a rapidly growing body of research and resources. However, the diversity of initiatives and loosely defined terminology have created complexities in the field. In response, the College and Career Readiness and Success Organizer was created to synthesize and organize college and career readiness and success topics to make the landscape more accessible to policymakers, practitioners, and the public.

# The College and Career Readiness and Success Organizer

The Organizer is a graphic that displays a consolidated overview of the many elements that impact a learner's ability to succeed in college and careers at both the institutional and individual levels. Originally created by the National High School Center, the revised Organizer incorporates feedback and insights provided by content-area experts representing diverse stakeholder communities, including workforce, early childhood education, career and technical education, community colleges, education nonprofits, and out-of-school time. The Organizer is intended to be a comprehensive and visual representation of the complexities of the college and career readiness and success universe. It can be used to facilitate discussions and inform collaboration within and across various stakeholder communities. Furthermore, it can contribute to strategic planning, conceptualization, and decision making as well as alignment of strategies and initiatives to ensure that all learners achieve college and career readiness and success.

The Organizer is segmented into three increasingly specific tiers: *strands*, *threads*, and *components*. *Strands* (the four titles around the "CCRS" circle) are the overarching categories under which all college and career readiness and success topics are organized. *Threads* (bolded titles in the outer circle) highlight particular aspects of each *strand*, and *components* (bulleted) are the specific items that may be leveraged by state education agencies (SEAs), local education agencies (LEAs), and schools to impact college and career readiness and success.

The Organizer contains a central figure with four strands.

**CCRS** (center)

**Goals and Expectations**
What should learners know and be able to do to achieve college and career readiness?

- **Academic Content**
  - State content standards
  - State and industry technical standards
- **Pathway Knowledge**
  - Knowledge of college and career pathway options
  - Knowledge of personal interests and skills and related pathways
  - Personal goals and aspirations
- **Lifelong Learning Skills**
  - Social and emotional learning
  - Higher order thinking skills
  - Application of knowledge in cross-disciplinary contexts
  - Academic success and employability skills
  - Civic skills
  - Technology skills
  - Financial literacy and consumer skills

**Outcomes and Measures**
How do we know when learners are meeting expectations for college and career readiness and success?

- **On-track Indicators for Readiness**
  - Attendance
  - Course performance
  - Course completion
  - Performance on summative assessments
  - Behavior and conduct
  - Social and emotional learning benchmarks
  - Course-taking patterns
  - Postsecondary aspirations
- **Measures of Postsecondary Readiness**
  - Progress toward credentials
  - High school graduation
  - Postsecondary enrollment in credit-bearing courses
  - Industry certification
  - Persistence in postsecondary pathways
- **Measures of Postsecondary Success**
  - Job placement in middle skills or higher position with career trajectory
  - Stackable postsecondary credentials
  - College diploma

**Pathways and Supports**
What should institutions provide to enable college and career success?

- **Academic Organization**
  - Curriculum, instruction, and assessment
  - Multiple pathways to postsecondary opportunities
  - Work- and context-based learning experiences
  - Cross-disciplinary connections
- **Supports**
  - Individualized learning strategies for all students
  - Targeted and intensive interventions
  - Wraparound services
- **Enrichment and Preparation**
  - Setting goals for postsecondary pathways
  - Exploring college and career options
  - Guidance on postsecondary transitions

**Resources and Structures**
What do institutions need in order to enable learner readiness for college and careers?

- **Resources**
  - Human capital
  - Fiscal resources
  - Physical resources
  - Data systems and multiple measures
  - Accessible learning resources
  - Information and instructional technologies
- **Processes**
  - Professional development
  - Family and community engagement
  - Building capacity
  - Internal alignment across programs and initiatives
  - External alignment across systems and institutions
  - Safety and security
  - Monitoring
- **Feedback**
  - Accountability
  - Data-informed improvement cycles
  - Evaluation of programs and resources

The Organizer contains four central *strands*, each driven by a guiding question:

▶ **Goals and Expectations:** What should learners know and be able to do to achieve college and career readiness?

▶ **Outcomes and Measures**: How do we know when learners are meeting expectations for college and career readiness and success?

▶ **Pathways and Supports**: What should institutions provide to enable learners to achieve college and career success?

▶ **Resources and Structures**: What do institutions need to enable learner readiness for college and careers?

The Organizer is a composite of essential considerations that are equal in importance and interconnected. Each of the four *strands* presents a distinctive topic area essential to college and career readiness and success. Although these categories offer their own unique approaches, users are encouraged to reflect on relationships across *strands* and recognize the inextricable interplay of a broad range of *threads* and *components*. As users address key challenges in one *strand*, the implications for the other three also should be considered, particularly with respect to

how students might benefit. The College and Career Readiness and Success Center recommends using the Organizer in its entirety to frame conversations and develop college and career readiness and success priorities to ensure alignment and cohesion.

## Using The College and Career Readiness and Success Organizer

The Organizer can be used to map the efforts of SEAs, LEAs, and the many organizations devoted to researching and providing resources, advocacy, and support for college and career readiness and success. Mapping existing initiatives against the Organizer may help illustrate strengths and gaps in college and career readiness strategies and supports, and can be used to promote conversations across divisions and stakeholder groups to better align programs.

The Organizer also can be used as a set of building blocks to help SEAs, LEAs, schools, and organizations determine comprehensive initiatives and strategies to address learner needs for college and career readiness and success. Stakeholders can use the *components* of the Organizer to ensure that they are designing thorough college and career readiness and success definitions and programs that address all aspects of the field, and that are essential to their individual contexts. After reviewing the diversity of topics presented by the Organizer, schools and organizations may choose to limit or prioritize the consideration of certain *components*, depending on their local resources and most pressing college and career readiness needs.

In addition to identifying the *components* that can be used to structure college and career readiness and success efforts, it is essential to consider the relationships among these *components* and how they fit together into an aligned agenda. Although the Organizer is intended to help frame potential strategies, the planning, alignment, and implementation of college and career readiness and success initiatives should be driven by local contextual factors, including college and career readiness and success interests, resources, policies, priorities, and stakeholder needs. Therefore, the Organizer intentionally does not provide a universal framework or model for addressing the selected *components*.

The remainder of this brief will explore each *strand* of the College and Career Readiness and Success Organizer in greater depth. In doing so, each *strand* section includes a brief overview, a breakdown of its subordinate *threads* and bolded interwoven *components*, as well as a list of key considerations for policymakers, practitioners, and the public.

**The Organizer can be used as:**

- A sense-making resource to map existing definitions, resources, and organizations to the college and career readiness and success landscape.

- A conversation starter or facilitator to help SEAs, LEAs, schools, community-based organizations (CBOs), and other stakeholders consider the vast landscape of college and career readiness and success in conjunction with the Common Core State Standards.

- A set of building blocks to help SEAs, LEAs, schools, CBOs, and stakeholders construct contextually appropriate frameworks that ensure that college and career readiness initiatives address the diverse range of knowledge, skills, and supports that students need to be ready for college and careers after graduating from high school.

**The Organizer should not be used as:**

- A universal model to be adopted as a de facto definition of college and career readiness.

- A checklist for which SEAs, LEAs, schools, CBOs, and stakeholders must develop at least one strategy or program to address each *component*.

- A "how to" or process guide that advises SEAs, LEAs, schools, CBOs, and stakeholders on the course of action for implementing college and career readiness strategies and initiatives.

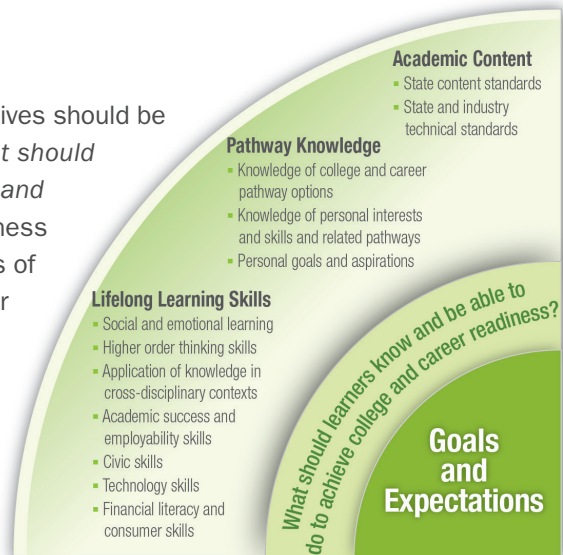# GOALS AND EXPECTATIONS

*What should learners know and be able to do to achieve college and career readiness?*

## PURPOSE

All college and career readiness and success initiatives should be derived from the fundamental consideration: *What should learners know and be able to do to achieve college and career readiness?* To achieve postsecondary readiness and success, learners must raise their expectations of themselves, identify rigorous educational and career aspirations, and meet goals.

The *Goals and Expectations strand* encompasses the work traditionally thought of as college and career readiness standards. This includes the necessary academic content to enroll in college without the need for remediation, the technical prerequisites to compete in the workforce, and the lifelong learning skills to succeed in both. In addition, as learners identify postsecondary interests, they will require specific skills to prepare for their chosen pathway. The *Goals and Expectations strand*, which includes the range of competencies and knowledge required to successfully meet educational and career goals, is organized into three *threads*: (1) *Academic Content*, (2) *Pathway Knowledge*, and (3) *Lifelong Learning Skills*.

**Academic Content**
- State content standards
- State and industry technical standards

**Pathway Knowledge**
- Knowledge of college and career pathway options
- Knowledge of personal interests and skills and related pathways
- Personal goals and aspirations

**Lifelong Learning Skills**
- Social and emotional learning
- Higher order thinking skills
- Application of knowledge in cross-disciplinary contexts
- Academic success and employability skills
- Civic skills
- Technology skills
- Financial literacy and consumer skills

*What should learners know and be able to do to achieve college and career readiness?*

**Goals and Expectations**

## ACADEMIC CONTENT

**ACADEMIC CONTENT** is the academic knowledge that learners must master to graduate from primary and secondary school, make the transition to college, and/or succeed in a variety of career trajectories.

Since the 1990s, many states have implemented new strategies and initiatives for public school teaching and learning in an effort to increase content relevance and breadth. States have adopted more demanding **state content standards**, such as the Common Core State Standards in English language arts (ELA) and mathematics, and have raised graduation requirements, particularly in mathematics and science, in an effort to better prepare students to meet college and career expectations (Zinth, 2012).

The Common Core State Standards, now utilized by the vast majority of states, exemplify a current trend in standards design that is detailed, evidence-based, and aligned to postsecondary coursework and training. States also are increasing the rigor of pathway-specific **state and industry technical standards** through the adoption of the Common Career Technical Core and others similar to it, to prepare learners for the workforce and enhance their career qualifications within competitive industries. By assuming a comprehensive approach to academic content that holds students to high expectations, institutions of education can expand student learning and subsequently improve readiness for, and success in, a wider variety of postsecondary and career endeavors.

## PATHWAY KNOWLEDGE

**PATHWAY KNOWLEDGE** enables familiarity with personal interests and related postsecondary options to help learners set college and/or career goals based on personal aspirations or skills.

To formulate aspirations and concrete plans to meet postsecondary goals, learners must first have exposure to **knowledge of college and career pathway options**, including the career skill profiles and entrance requirements for each option. With this knowledge, learners may be able to align specific courses to desired career trajectories and later determine their best fit within postsecondary options across internships, two- and four-year colleges, and professional industries. College- and career-specific knowledge also includes learners' ability to take the necessary steps to pursue their chosen pathway. These skills may include interview competency and self-presentation, essay writing, as well as comfort in accessing application material.

To encourage purposeful use of college and career knowledge and promote action, learners must first have **knowledge of personal interests and skills and related pathways**. With a heightened sense of direction and self-awareness, learners may be able to determine postsecondary **personal goals and aspirations** aligned to their preferences. For this reason, it is important that the acquisition of college and career knowledge begins prior to high school enrollment and continues beyond high school graduation. This learning ensures that, from an early age, students acquire the skills and knowledge to support college and career planning at the secondary and postsecondary levels.

## LIFELONG LEARNING SKILLS

**LIFELONG LEARNING SKILLS** enable learners to demonstrate responsible and professional behavior in postsecondary settings, apply their academic and technical knowledge, and engage meaningfully in their communities.

Lifelong learning skills are the essential competencies and behaviors that contribute to a learner's intellectual and emotional maturity, professionalism, and good citizenship. Responsible and professional students use their **social and emotional learning** to self-regulate and manage challenging situations and environments (Shelton & Stern, 2003). These learners also demonstrate

**academic success and employability skills**, such as time management, professional presentation, and workplace-appropriate vocabulary. They are generally intellectually open and collaborative team players. Not only do these competencies contribute positively to a student's acquisition of academic content, but they also are essential to learner success in college and career settings (Asberg, Bowers, Renk, & McKinney, 2008; Hurtado et al., 2007; Norris, 2003; Pritchard, Wilson, & Yamnitz, 2007).

Learners also must demonstrate the ability to apply acquired knowledge to new settings. To do so, learners require **higher order thinking skills**. These include problem solving, critical thinking, and research and synthesis skills (Alliance for Excellence in Education, 2007; Wiley, Wyatt, & Camara, 2010). The **application of knowledge in cross-disciplinary contexts** similarly indicates a learner's ability to determine relationships among subject areas and relate academic learning to environments beyond the classroom. In an ever-changing education landscape, these skills must be coupled with the ability to make use of **technology skills** and a broad access of educational material and learning experiences that increase a student's qualifications within professional industries.

In addition to academic, technical, and employability skills, adolescents transitioning into adulthood must master the essential **civic skills** to engage and participate in a community—to improve it and contribute to its future progress (Adler & Goggin, 2005). Among these skills are the abilities to develop relationships and make well-informed life decisions, including those requiring **financial literacy and consumer skills**.

Each of these lifelong learning skills can be leveraged, not only for success in a postsecondary classroom or career, but also to navigate relationships, make practical decisions, explore life options, and engage meaningfully with society outside of the classroom or workforce. These competencies are essential to ensure that leaners have access to opportunities for advancement and expanded mobility in the postsecondary world (Alliance for Excellence in Education, 2007; Wiley et al., 2010).

## KEY CONSIDERATIONS

Through the development of the Organizer, we have identified key considerations for policymakers, practitioners, and the public as they reflect on the *Goals and Expectations strand* within their local contexts.

- Goals and expectations for college and career readiness and success are not uniformly explicit, comprehensive, or shared among organizations, states, and districts.

- To be college and career ready, students must master a wide range of knowledge and a diverse set of skills that extend beyond academic content knowledge.

- Goals and expectations for college and career readiness and success should be driven by state and national economic and workforce needs as well as individual career interests and aspirations. They also should be anchored in expectations outlined in college and industry standards.

# OUTCOMES AND MEASURES

*How do we know when learners are meeting expectations for college and career readiness and success?*

## PURPOSE

Although *Goals and Expectations* are critical to student achievement, *Outcomes and Measures* are essential milestones and benchmarks that can be used to determine progress and future potential for success. These criteria provide points of entry from which teachers and learners can monitor and assess individual college and career readiness and success trajectories.

"On-track indicators" refer to formative measures of progress toward college and career readiness, while "measures of postsecondary readiness" refer to summative measures that gauge readiness at or near the end of a student's high

**On-track Indicators for Readiness**
- Attendance
- Course performance
- Course completion
- Performance on summative assessments
- Behavior and conduct
- Social and emotional learning benchmarks
- Course-taking patterns
- Postsecondary aspirations

**Measures of Postsecondary Readiness**
- Progress toward credentials
- High school graduation
- Postsecondary enrollment in credit-bearing courses
- Industry certification
- Persistence in postsecondary pathways

**Measures of Postsecondary Success**
- Job placement in middle skills or higher position with career trajectory
- Stackable postsecondary credentials
- College diploma

*How do we know when learners are meeting expectations for college and career readiness and success?*

**Outcomes and Measures**

school career. "Measures of postsecondary success" are outcome measures that demonstrate learners' success in achieving their postsecondary goals. Although on-track indicators can be used as predictors, measures of readiness and success serve as validation checks on whether outcomes have been met. For this reason, the *Outcomes and Measures strand* is organized sequentially into three *threads*: (1) **On-Track Indicators for Readiness**, (2) **Measures of Postsecondary Readiness**, and (3) **Measures of Postsecondary Success**.
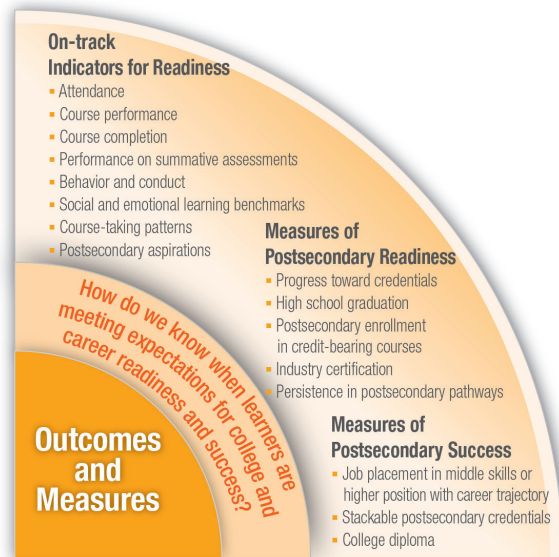
## ON-TRACK INDICATORS FOR READINESS

**ON-TRACK INDICATORS FOR READINESS** are used to evaluate a learner's progress toward readiness in college and careers.

A number of on-track indicators have emerged from research on college and career readiness, and are increasingly used to identify learners in need of additional support. On-track indicators of college and career readiness must measure not only academic and engagement factors that ensure learners are making progress toward content mastery or proficiency, but also behavioral factors that relate to the mastery of the lifelong learning skills needed to succeed in postsecondary pathways.

Academic and engagement-related indicators of readiness include student performance with respect to **attendance**, credit accumulation, **course performance** (grade point average and demonstration of proficiencies in context), **performance on summative assessments**, competitive **course-taking patterns** (Advanced Placement [AP], International Baccalaureate [IB], and career technical education options), and **course completion**. Indicators of **behavior and conduct**, **postsecondary aspirations**, as well as **social and emotional learning benchmarks** also are essential measures of student readiness. Each of these indicators demonstrates students' attitude toward learning as well as their ability to set meaningful goals. Although measuring social, emotional, and engagement factors is important, further research is needed to determine how to effectively evaluate these skills.

## MEASURES OF POSTSECONDARY READINESS

**MEASURES OF POSTSECONDARY READINESS** signal a learner's preparedness to enter and persist in postsecondary pathways.

Measures of postsecondary readiness include a range of benchmarks, from completing high school to persisting in postsecondary pathways and completing college-level coursework. Many historical measures of postsecondary preparedness are proxies for readiness. For instance, **high school graduation** and the attainment of a high school diploma or general equivalency diploma (GED) indicate that students have completed a course of study that should enable them to enroll in college and/or start a career. High school students also may document readiness by earning an **industry certification** in their chosen field. **Postsecondary enrollment in credit-bearing courses** without the need for remediation also suggests a learner's preparedness for college coursework at the associate's or bachelor's degree level. However, though these measures are critical to college and career readiness, research suggests that none of these measures are sufficient as stand-alone predictors of success. A diploma, certificate, or college enrollment cannot fully capture the broad range of skills necessary to succeed in college and career (Alliance for Excellent Education, 2009; Carnevale, Smith, & Strohl, 2010; U.S. Department of Labor, 2008).

Learners also can demonstrate readiness for postsecondary environments by achieving success in college and career programs while still enrolled in high school. For example, learners who pursue advanced, college-level coursework and credit through AP, IB, and dual-enrollment programs can signify college readiness through academic performance and, in the case of some dual-enrollment programs, by successfully navigating the college environment. Learners may demonstrate preparedness for career entry by engaging in employment or internship opportunities. Making **progress toward credentials** or a postsecondary degree requires learners to use the same skill sets they will need in college or workplace environments, and therefore are effective measures of readiness for college and career.

Although ideally a high school diploma would be a sufficient measurement of readiness, these documents rarely evaluate the comprehensive body of academic and lifelong learning skills necessary to succeed in college and careers. For this reason, it is crucial to consider a range of readiness measures, including postsecondary experiences prior to high school graduation and **persistence in postsecondary pathways**.

# MEASURES OF POSTSECONDARY SUCCESS

**MEASURES OF POSTSECONDARY SUCCESS** demonstrate the achievement of college and/or career success by degree completion and job placement.

Postsecondary success benchmarks are easily identifiable and measureable. Measures of postsecondary success include the attainment of an associate's or bachelor's degree (**college diploma**) and postsecondary certification in an industry-recognized training program. Success measures also may include obtaining **stackable postsecondary credentials** that enable career advancement through additional education in the future. Whether or not a learner receives a college degree or postsecondary certification, ultimately all learners reach career success by securing a **job placement in a middle-skills or higher position with a career trajectory**.[1] These jobs ensure a livable wage and present opportunities for advancement.

Given their ex post facto nature, success measures cannot provide actionable data to practitioners within the PK–12 system and cannot be used on behalf of students currently off-track for readiness. Despite their inability to help individual learners at the primary and secondary levels, success data can provide valuable information to SEAs, LEAs, and schools regarding the long-terms trends in learner performance and institutional effectiveness.

# KEY CONSIDERATIONS

Through the development of the Organizer, we have identified key considerations for policymakers, practitioners, and the public as they reflect on the *Outcomes and Measures strand* within their local contexts.

- College and career readiness and success should be determined by a variety of factors and driven by *Goals and Expectations*. This content, and the measures that accompany it, should be developed in collaboration with stakeholders from K–12 education, postsecondary institutions, and industry.

- College and career readiness and success *Outcomes and Measures* should be directly aligned to *Goals and Expectations*. *Outcomes and Measures* should be continuously validated, with the actual intended outcomes (college and career success) included in the analyses. Adequate data and analytical systems are required for documentation and validation of processes.

- *Outcomes and Measures* should be integrated into a system of assessments that tracks the progress of individual students, schools, LEAs, and SEAs toward college and career readiness and success. *Outcomes and Measures* should be used to identify and examine the impact of appropriate interventions.

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[1]  Middle-level skills jobs include plumbers, electricians, health care workers, legal assistants, machinists, and police officers. Such jobs require significant education and training but not necessarily a four-year college degree. High-level skills jobs include engineers, teachers, attorneys, and physicians.

# PATHWAYS AND SUPPORTS

*What should institutions provide to enable learners to achieve college and career success?*

## PURPOSE

The variety of programs and policies through which an institution provides learning opportunities is a key determinant of a learner's college and career readiness and success. A school must construct *Pathways and Supports* to enable students to meet competitive *Goals and Expectations*, facilitate college and career planning, and scaffold the learning experience according to individual learner needs. In this sense, *Pathways and Supports* set the context wherein students master content, determine postsecondary options, and overcome barriers to postsecondary success. This *strand* represents the bulk of work done by SEAs, LEAs, PK–12 schools, institutions of higher education, and other organizations to prepare students for postsecondary readiness and success.

**Academic Organization**
- Curriculum, instruction, and assessment
- Multiple pathways to postsecondary opportunities
- Work- and context-based learning experiences
- Cross-disciplinary connections

**Pathways and Supports**

*What should institutions provide to enable learners to achieve college and career success?*

**Supports**
- Individualized learning strategies for all students
- Targeted and intensive interventions
- Wraparound services

**Enrichment and Preparation**
- Setting goals for postsecondary pathways
- Exploring college and career options
- Guidance on postsecondary transitions

An institution's services and supports are important facilitators of student growth and success. To enable learners to meet their maximum potential, institutions must carry out a broad scope of initiatives, ranging in focus from curricular rigor to individualized supports. The *Pathways and Supports strand* is organized into three *threads*: (1) **Academic Organization**, (2) **Supports**, and (3) **Enrichment and Preparation**.
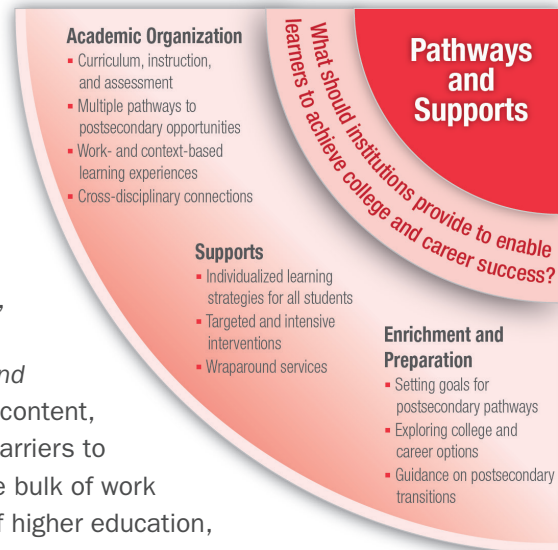
## ACADEMIC ORGANIZATION

**ACADEMIC ORGANIZATION** encompasses the range of opportunities that enable learners to acquire, practice, and evaluate knowledge to prepare for postsecondary pathways.

Regardless of postsecondary goals, all students should be provided with rigorous **curriculum**, **instruction**, **and assessment**. This foundation can empower learners to meet high standards aligned to postsecondary expectations and to develop content proficiencies necessary for college and career achievement. **Multiple pathways to postsecondary opportunities** provide learners with the core skills necessary for success and opportunities to build on those skills by

tailoring coursework to meet individual college and career goals. Pathways may focus on specific content areas (e.g., business; health; or science, technology, engineering, and mathematics [STEM]) or may help students to accelerate their rate of learning and master more competitive academic and technical skills.

Within the classroom and beyond, **work- and context-based learning experiences**—including independent projects—increase students' mastery of academics while equipping them with lifelong learning skills. These learning experiences present opportunities to explore topics of interest outside of school, make **cross-disciplinary connections**, and apply skills and knowledge mastered in any academic discipline to real-world environments. Access to a diverse range of academic options enables students to develop a comprehensive and usable knowledge base. For these reasons, a system of rigorous academics is essential to ensure learner progress toward college and career readiness and success.

## SUPPORTS

**SUPPORTS** include a variety of interventions and scaffolds that enable learners to meet their college and career readiness goals and expectations.

Individual supports aid all learners in reaching their college and career goals, despite their varying foundational knowledge, abilities, and skills. To foster and accelerate each learner's progress toward college and career readiness and success, schools must leverage **individualized learning strategies for all students** (National Center on Response to Intervention, 2010).

For some learners, individual pathway planning and classroom-based supports are insufficient scaffolds to attain their college and career goals. Students may require additional **targeted and intensive interventions** to meet academic standards or develop lifelong learning skills that ensure preparedness for postsecondary environments. Students who demonstrate severe behavioral problems or learning disabilities may be appropriate candidates for **wraparound services**. These resources include physical and mental health programs, nutritional programs, afterschool mentoring and tutoring, early childhood development, and family engagement. It is essential that supports cater to the needs of each student, regardless of required services, so that all learners can graduate ready for success.

# ENRICHMENT AND PREPARATION

**ENRICHMENT AND PREPARATION** connect learner interests and aspirations to opportunities and procedures to actualize postsecondary success.

Preparing students for postsecondary education extends beyond imparting and scaffolding essential academic information. Enrichment and preparation initiatives are necessary to provide students with knowledge of postsecondary options and opportunities, shape college and career goals, and facilitate transitions. To help students in **exploring college and career options** and developing aspirations, an institution may provide postsecondary-related experiences, such as college and career fairs, college visits, job shadowing, workplace tours, mock interviews, and internships. These resources expose learners to professional environments, college varieties, and the processes required to transition into these pathways.

In addition to exploratory opportunities, institutions may offer programming and **guidance on postsecondary transitions** to support learners as they navigate complicated college admissions and workplace entry processes. High schools can help by ensuring that students prepare for and take necessary admissions tests, such as the SAT or ACT; assisting students in completing college applications and the Free Application for Federal Student Aid (FAFSA); and providing guidance on post-admissions decision making (Roderick et al., 2008; Tierney, Bailey, Constantine, Finkelstein, & Hurd, 2009). Enrichment and preparation are essential to assist learners in decision making and **setting goals for postsecondary pathways**, as well as to facilitate the transition from high school to college and careers.

## KEY CONSIDERATIONS

Through the development of the Organizer, we have identified key considerations for policymakers, practitioners, and the public as they reflect on the *Pathways and Supports strand* within their local contexts.

- *Pathways and Supports* must provide students with opportunities to master common skills while still allowing them to tailor individualized learning programs to pathway-specific goals based on their postsecondary aspirations.

- Although student pathways will vary greatly based on postsecondary goals, all students must be provided with the supports necessary to meet similarly rigorous standards. Pathway options must be determined by student aspirations and capabilities rather than prior and existing performance.

- *Pathways and Supports* must be flexible, allowing students to alter programs of study to align with changing postsecondary goals.

- Student supports must be strategically targeted and delivered to maximize each learner's college and career success. These supports should be designed to enable each learner to meet well-defined college and career readiness goals and expectations.

# RESOURCES AND STRUCTURES

*What do institutions need to enable learner readiness for college and careers?*

## PURPOSE

*Resources and Structures* is the final of the four Organizer *strands* and is inextricably linked to the others. *Resources and Structures* are the institutional assets needed to implement successful academic programming and school improvement initiatives—including college and career readiness and success programs and beyond. Although many of the descriptions in the *Resources and Structures strand* are relevant to all aspects of PK–20W education, these *Resources and Structures* are equally essential for stakeholders and institutions of education to invest in, evaluate, and align when developing college and career readiness and success plans.

**Resources and Structures**

What do institutions need in order to enable learner readiness for college and careers?

**Resources**
- Human capital
- Fiscal resources
- Physical resources
- Data systems and multiple measures
- Accessible learning resources
- Information and instructional technologies

**Processes**
- Professional development
- Family and community engagement
- Building capacity
- Internal alignment across programs and initiatives
- External alignment across systems and institutions
- Safety and security
- Monitoring

**Feedback**
- Accountability
- Data-informed improvement cycles
- Evaluation of programs and resources

By enriching *Pathways and Supports*, *Resources and Structures* strengthen an institution's ability to enhance college and career Goals and Expectations as well as learner preparedness for postsecondary pathways. The data gathered as *Outcomes and Measures* inform institutions about which specific *Resources and Structures* might require prioritizing and leveraging to improve student outcomes. *Resources and Structures* serve as the institution's backbone, contributing to the continuous improvement of capability, function, and capacity. The *Resources and Structures strand* is organized into three *threads*: (1) **Resources**, (2) **Processes**, and (3) **Feedback.**
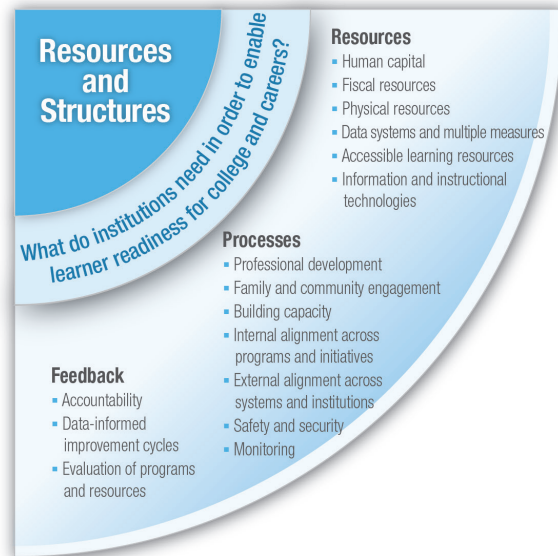
## RESOURCES

**RESOURCES** are institutional assets that can be leveraged to establish effective college and career readiness and success strategies, programs, and initiatives.

In order for institutional resources and structures to facilitate college and career readiness and success programs, policies, and initiatives and to impact student outcomes, they must be strategically aligned and used in accordance with clear, measureable objectives. For many SEAs, LEAs, schools, and institutions of higher education, the question of how to manage and leverage

resources may pose a challenge. However, these challenges may be addressed by resource alignment with cohesive improvement goals. For instance, schools and districts can help ensure the effective use of **human capital** by hiring and assigning qualified faculty and staff to roles that best support the student acquisition of academic and college and career pathway-specific knowledge. Institutions throughout the system can effectively allocate **fiscal resources** by investing in comprehensive initiatives targeted to meaningful goals with a potential for influence on the postsecondary success of learners.

Facilities and equipment must be thoughtfully leveraged to provide appropriate physical spaces for teaching and learning. Within the classroom, **accessible learning resources** should be harnessed to engage learners with special needs and to make content available to students with a broad range of abilities and preferences. Similar to **physical resources, information and instructional technologies** further expand the possibilities of interaction with content. For this reason, classroom technologies designed to support college and career readiness and success goals are increasingly recognized as essential tools by postsecondary intuitions and the workforce.

Finally, institutions must develop an infrastructure to support and maintain **data systems and multiple measures**. The structure for these systems should be designed to house data from various sources, including longitudinal and accountability data, so that college and career readiness and success stakeholders and education agencies can have access to and make evidence-based decisions using comprehensive information.

Investing in resources that support learners' postsecondary goals is a necessary first step toward effective preparation, but cannot stand alone. Institutions must couple these resources with effective processes to be able to ensure the postsecondary success of their learners.

## PROCESSES

> **PROCESSES** are series of actions taken by institutions to ensure that resources are used effectively.

In addition to allocating resources, institutions are responsible for carrying out a number of processes to ensure that assets are used effectively at the institutional and individual levels. **Building capacity** is essential to this effort. At the institutional level, capacity building may help organizations hire more effective staff that can teach college-level coursework or career-specific skills. It also may result in a better investment of fiscal capital that can maximize the impact of college and career readiness strategies. At the individual level, **professional development** can enhance teacher and administrator abilities to provide college and career readiness and success supports, such as individualized learning strategies, postsecondary guidance, and rigorous curricula. Finally, each institution must develop processes for **safety and security** to ensure that capacity-building efforts are effective at both the institutional and individual levels. These processes address fundamental needs that allow students to benefit from capacity-building efforts targeted toward college and career.

To ensure adequate support of learners' college and career goals, an institution must establish **internal alignment across programs and initiatives**. Institutions also must collaborate with other stakeholders to foster **external alignment across systems and institutions** to avoid overlap or contradiction of effort. In addition to collaborations with institutions of higher education and workforce, **family and community engagement** is essential to the alignment of programs that are designed to promote content interest and expertise, social and emotional growth, and other behaviors that contribute to postsecondary success (Forum for Youth Investment, 2010).

Institutions also must establish **monitoring** processes to track resource use and its impact on student outcomes over time. These processes can provide evidence in support of effectively applied resources or can place pressure on institutions to alter ineffective strategies. Monitoring generates the institutional feedback ultimately required to improve resources and processes, ensuring that resources are used to their full potential and aligned to institutional priorities for college and career readiness and success.

## FEEDBACK

**FEEDBACK** is information gathered and used by institutions to ensure that resources are used effectively.

An institution must have access to data that can be used to evaluate, assess, and ultimately improve resources and processes. Beyond this capacity, some data systems may directly serve as catalysts for change by holding institutions accountable to measurable outcomes. **Accountability** reporting systems provide information on the status and progress of a school, district, or state with respect to student performance from year to year. Almost all states and many districts report some form of college and career readiness information, such as student participation in and performance on SAT and ACT college admissions tests and AP and IB assessments. Most accountability systems will soon incorporate metrics from standardized assessments designed to evaluate student performance on college and career readiness learning objectives. Although accountability reporting systems can be used to hold institutions responsible for outcomes, given the aggregate nature of their reported measures, they do not provide actionable data to assess individual student progress toward college and career readiness and success.

Information gathered from the **evaluation of programs and resources** also can be used to hold schools accountable for student progress. When monitored appropriately, data generated from evaluations can be used to reveal the effectiveness of programs, improve efficiencies, and eliminate strategies and initiatives that fail to demonstrate positive outcomes for learners. In some cases, they also can provide evidence of individual student progress.

**Data-informed improvement cycles** leverage information for decision making. These systems bind all institutional actions and data to an overarching process wherein *Resources and Structures* are continuously evaluated and reconfigured. Accountability systems as well as evaluations of programs and resources provide the inputs required to inform data-improvement cycles. Many states have

designed longitudinal data systems to inform their cycles of improvement. To be effective, these data systems must enable cross-agency access to information, use consistent metrics, and ensure accurate reporting. Although the collection of information is a critical piece of the cycle, the use of data to inform *Resources and Structures* is necessary to improve college and career readiness culture, practices, and student outcomes.

## KEY CONSIDERATIONS

Through the development of the Organizer, we have identified key considerations for policymakers, practitioners, and the public as they reflect on the *Resources and Structures strand* within their local contexts.

- Resources should be strategically leveraged to meet measurable goals with the potential for widespread impact on student outcomes.

- Resource alignment is critical to target specific outcomes and to avoid the replication or complication of efforts internally as well as across institutions.

- All decisions regarding resources and processes must be informed by data. Though data collection is essential to institutional improvement, equally critical is the analysis, interpretation, and use of data to better allocate resources, align processes, and support student needs.

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# Acknowledgements

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