equitable access by design

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Introduction

This report proposes a conceptual framework for defining and implementing a system of integrated student supports that provides equitable access to college and career readiness via Linked Learning pathways in high schools. The framework emphasizes the central commitment of the Linked Learning approach to challenge prevailing norms of stratification in the American high school and to prepare ALL students for college and career. Integrated student supports are consequently situated in the context of the broadened learning demands of the Common Core State Standards, the Next Generation Science Standards, and the technical and workplace learning requirements of Linked Learning pathways specifically.

We first clarify the relevant learning goals pursued through Linked Learning strategies and then define and outline the importance to those goals of program and organizational integration of student supports in schools and school districts. Two kinds of integration appear, both in the relevant literature and from practitioner experience, to be associated with positive student learning outcomes. The first type of integration involves the extent to which student supports are conceived, designed, and implemented to promote effective student engagement with the other three Linked Learning pathway components: academic mastery, technical knowledge, and workplace learning. A second type of integration involves the alignment of student services offered within a curricular pathway with other school and district (or regional) strategies for achieving college and career readiness among all students. We conclude by examining emergent approaches to the implementation of integrated supports that may serve to guide further research on effective and scalable practices in Linked Learning settings. An overview of evidence-based student supports, including relevant background research and resources for practitioners, is provided as an appendix to this report.

APPROACH: This proposed framework was developed in close consultation with expert practitioners and Linked Learning support providers, including ConnectEd California and the Center for Powerful Public Schools (CPPS) in Los Angeles. We also conducted an extensive review of the available literature on college and career preparation for students in secondary schools, including many of the publicly available tools, practice guides, policy papers, and Linked Learning case studies developed by professional organizations, including the National Academy Foundation, Child Trends, Jobs for the Future, as well as by academic research centers at UC Berkeley's Career Academy Support Network, UCLA's Institute for Democracy, Education, and Access; and Stanford's Center for Opportunity Policy in Education among others. We were further informed by our visits to Linked Learning sites, and with district administrators where we were able to observe the work of ConnectEd, CPPS, and others in collaboration with schools and districts. This includes the examples drawn from Los Angeles and Oakland that we use to illustrate key lessons. Drawing on this knowledge base, we conclude with a proposed framework for integrated student supports that operates within a system of continuous learning and improvement and that can be tested and elaborated in closer collaboration with Linked Learning schools and districts.

Context for Integrated Supports within Linked Learning Pathways

Linked Learning: A New Vision for the American High School

At its technical core, Linked Learning joins together rigorous college-prep academics, a challenging career or profession-themed curriculum that meets industry standards, and an opportunity for students to apply classroom learning through work-based experiences or other real-world experiences in their communities. Students enrolled in a Linked Learning pathway enter into a four-year program of study. In California schools, the connection between the academic and technical components of Linked Learning is achieved through the explicit integration of the Common Core State Standards and the Next Generation Science Standards in every Linked Learning pathway. Beyond this defining core, however, Linked Learning encapsulates a broader and clearly transformative vision for the American high school. As framed by the California Department of Education (CDE) in a report to the California Legislature, the Linked Learning approach is understood as aiming to "fundamentally change the orientation of the high school experience… [wherein] the school must work with the community to support students and families… [and where] business, industry, and labor must be engaged in more integral roles within high schools to help ensure the relevance and applicability of curricula" (California Department of Education, 2010, p. 197).
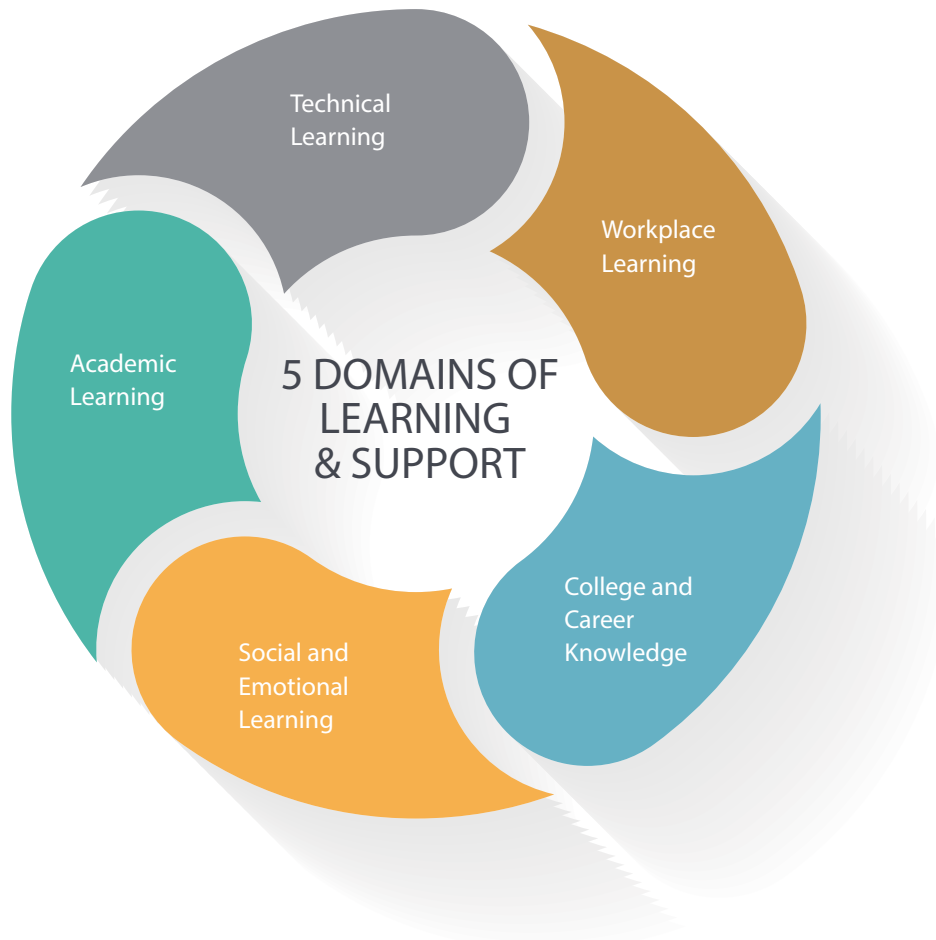
In sum, the clear thrust behind Linked Learning is an ambitious goal to redesign the high school of tomorrow into an American institution that prepares all students for both college and career — not one or the other. This new vision recognizes that, more than ever, education is the key to social and economic mobility. As education analyst David Conley has aptly summarized it, "success in the future will be much more a function not simply of what people have learned but of what they are capable of learning. Schooling will truly need to be about enabling students to learn throughout their careers. Creating lifelong learners…will become an increasingly critical and compelling goal of education" (Conley, 2014, p. 20).

The Linked Learning approach thus incorporates a dual commitment to challenge prevailing patterns of stratification through universal access to a rigorous, standards-based curriculum and to graduate all students fully prepared for college, career, and civic engagement. This dual commitment to equal access and gap-closing implicates a critical dimension of the Linked Learning approach: comprehensive and integrated student supports that meet all students where they are, scaffold their engagement with a standards-based curriculum, and address their learning and personal youth development needs.

EQUITABLE ACCESS TO LINKED LEARNING PATHWAYS AND EFFECTIVE STUDENT SUPPORTS

Equitable access to high quality Linked Learning pathways requires that school staff and all pathway partners work in concert to address and support each student's individual developmental needs, skills, strengths, interests, and aspirations. To this end, effective student support programs are designed to reach beyond the academic domain, to wrap around and remove academic and non-academic barriers to learning, "increasing students' chances to succeed in school; and expanding students' opportunities for positive youth development" (Child Trends, 2014, p. 14). As well, because academic engagement is mediated by the multiple ecological contexts of a student's life — individual, school, family, demographic, and community-level variables — effective supports likewise reach beyond the school to engage families, community-based partners, employers, and all

5 DOMAINS OF LEARNING & SUPPORT

- Technical Learning
- Workplace Learning
- Academic Learning
- Social and Emotional Learning
- College and Career Knowledge

other public agencies that engage youth. School leadership and staff, in collaboration with families and service providers, hold one another accountable for identifying and addressing the academic, personal, social, and emotional needs of every student so that she or he makes progress toward achieving college, career, and civic engagement goals.

Domains of Learning and Support for College, Career, and Civic Readiness

As elaborated in greater detail in the report Appendix, effective student supports build or scaffold student competencies in five domains of learning:

Supports for Academic Learning ensure that all students, regardless of their academic background, are supported to graduate from high school with a level of academic competence that prepares them for postsecondary education. Whether they plan to attend college or

workforce training programs after graduation, students need key academic content knowledge and cognitive skills, such as problem solving and critical thinking, to continue learning after high school. While college and career readiness are not identical, roughly the same foundational set of English and mathematics knowledge and skills applies to both college and career readiness (ACT, 2006, 2015; Conley, 2014). In addition to core academic knowledge, students need to graduate from high school with academic content knowledge and skills specific to their future career interests and postsecondary goals (Conley & McGaughy, 2012).

In California, the state legislature has adopted the Common Core State Standards (CCSS) as defining the academic goals to which all California schools are accountable. The stated goal of the CCSS is to define the knowledge and skills students need to graduate high school prepared to succeed in entry-level careers, introductory academic college courses, and workforce training programs (Common Core State Standards Initiative, 2010). The high level of rigor embedded in the CCSS presents a challenge to all students, but

particularly to those who are performing below grade level, English learners, and those with learning challenges. Unless adequate supports are in place to help all students master the standards, existing educational inequalities will persist and increase (Regional Equity Assistance Centers, 2013).

Drawing largely on lessons from Linked Learning implementation in Long Beach Unified, for example, the Stanford Center for Opportunity Policy in Education (SCOPE) illustrates important examples of integrated supports that advance academic success. In particular, they cite the importance of school-level efforts to familiarize business and postsecondary partners with the CCSS so that those partners can buttress teacher-led instruction when the partners engage students in projects, during student presentations, site visits, and internships. The schools examined in the SCOPE report also emphasize how collaboration among academic and technical instructional partners provides integrated supports to youth that reinforce the "key academic and technical vocabulary necessary for college and career success" (Rustique & Stam, 2013, p. 4). At the district level, Rustique and Stam also observe the importance of systems alignment through district creation of "crosswalks" between school-level student learning outcomes, district graduate profiles, and the learning requirements of the CCSS. These efforts help the district to provide relevant and coherent supports for students and teachers, including curricular and instructional resources to guide the development of interdisciplinary projects and curricula that integrate technical and academic content (Rustique & Stam, 2013).

Supports for Technical Learning ensure that all students have the technical skills and knowledge to complete the requirements of specific pathways, to successfully engage in work-based learning experiences, and to prepare for high-skill, high-wage employment in those fields. Clearly, effective supports depend on the demands of the specific pathway, the needs of the students in the program, and the available resources (e.g., teacher knowledge, community connections, and facilities). Nevertheless, a common set of promising practices emerge from the available literature that have been found to support students as they embark in learning technical or career pathway skills. These include, for example, in-class opportunities to practice and master skills required in a given industry; trainings, workshops, or classes (on or off campus) that allow students to develop specific job skills or master necessary technology; and

tutoring or mentoring directly related to career-specific research, problems, or projects.[1]

Supports provided by pathway partners may also extend efforts by classroom teachers to provide students with opportunities for exploring connections between academic and technical learning through student-led projects, extra-curricular activities, or pathway-related service learning opportunities that deepen student understanding, enhance a sense of opportunity, and make learning more exciting and relevant.

Another emerging practice, both within and beyond Linked Learning initiatives, is the use of performance assessment as an integrated support for high quality student engagement and learning, especially in the technical learning domain. Performance tasks serve the dual purpose of enhancing student assessment and serving as real-time learning tools. According to Darling-Hammond and her colleagues, students who are routinely expected to demonstrate applications of their technical knowledge and to explain and defend their answers often outperform peers on more traditional tests. The use of performance assessments as an integrated support can thus increase the intellectual challenge in classrooms, while "overcoming some of the validity challenges of assessing English language learners and students with disabilities" (Darling-Hammond & Adamson, 2010, p. 3).

Supports for Workplace Learning provide students with tools to engage in successful work-based learning experiences by advancing their knowledge of career opportunities, workplace etiquette, and job site expectations. Perhaps the most widely communicated expression of the importance of integrated supports in the workplace learning domain comes from the Linked Learning Alliance and the experience of a key Alliance partner, the National Academy Foundation (NAF). Both NAF and the Linked Learning Alliance promote a "work-based learning continuum," which recognizes that workplace learning is a continuum of educational strategies that require scaffolding of student supports well before a student may be ready for engagement in a workplace (National Academy Foundation, 2012). Depending on students' developmental stage, supports may involve efforts to promote career awareness (e.g., workplace tours, career fairs, guest speakers) or career exploration experiences,

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1 See, e.g., Alliance for Excellent Education, 2014; Friedlaender, 2014; Hoachlander & Yanofsky, 2011; Lewis- Charp & Law, 2014; Rice & Rutherford-Quach, 2012; Richardson & Feldman, 2014; Rogers-Chapman & Darling- Hammond, 2013; Saunders, Hamilton, Fanelli, Moya, & Cain, 2013; Vega, 2012).

including informational interviews, job shadows, and virtual exchanges with employer-partners.

In modeling this continuum of experiences, NAF's "NAFTrack Certified Hiring Program" for participating high schools and employers includes several specific integrated student supports to scaffold student workplace engagement. Most notably, NAF integrated supports include pre-interview and résumé supports for students, and applicant feedback and coaching post-interview.[2] Likewise, Felicity Rogers-Chapman and her colleagues at SCOPE cite the Kearny Construction Tech Academy in San Diego as implementing exemplary programs to integrate workplace learning with school and districtwide learning goals, including professional development tailored to the needs of teachers trying to align curriculum to workplace learning demands, and the creation of individual learning plans that allow students to move seamlessly between real-world work experiences and on-site instruction (Rogers-Chapman & Darling-Hammond, 2013).

Supports to Advance College and Career Knowledge help students and their families to develop realistic expectations and an understanding of the long-term benefits associated with the completion of a college education and the demands of a specific career, as well as the college application process and financial aid opportunities. Students' decisions about postsecondary education are shaped at least in part by their interests and goals for the future. As Carnevale and colleagues suggest, "[a] student's choice of career is the primary motivation for going to college. Helping students connect their college studies with their future careers captures this motivation and increases graduation rates" (Carnevale, Hanson, & Gulish, 2013, p. 48). Beyond that, Elisabeth Barnett cites research suggesting that "… students who enter college with a clear career goal in mind are likely to experience a more positive adjustment" to postsecondary education (Barnett, 2016, p. 10).

Career Knowledge. Given the diversity of personal circumstances and vast array of interests among students, the intentional development of career knowledge — opportunities and requirements for entry into various professions or trades — is a critical step toward making informed decisions about postsecondary plans. An educational framework such as Linked Learning places workplace learning at the core and thus sets the stage for students to gain career knowledge.

College Knowledge. College Knowledge refers to the information "formal and informal, stated and unstated, necessary for both gaining admission to and navigating within the postsecondary system" (Conley, 2007, p.17). This includes information about the process of college admissions, including curriculum, testing, and application requirements; the full array of postsecondary options available; the set of schools that constitute a good match based on the academic, social, and personal needs of the student; how to pay for college and the process of applying for financial aid; and understanding how the culture of college (values, expectations, behaviors) is different from that of high school.

Research evidence (Venezia & Kirst, 2005; Wimberly & Noeth, 2005) indicates that many students want to attend college after high school but lack information or are misinformed about college requirements, the college admission process, and how to pay for college. Moreover, disparities exist in student access to college knowledge across race, ethnicity, income, and curricular tracking lines (George-Jackson & Gast, 2015; Holland, 2010; Venezia & Kirst, 2005). Lack of information, guidance, and support prevent many high school students from taking the steps to prepare for and enter college (Tierney, Bailey, Constantine, Finkelstein, & Hurd, 2009).

While the college access literature highlights the crucial role that high school counselors play in improving college knowledge, particularly in the case of disadvantaged students (e.g., Belasco, 2013; Venezia, Kirst, & Antonio 2003), ensuring that more underrepresented students are college-ready requires a collaborative effort that involves teachers as well (Welton & Martinez, 2013). While research shows that teachers play a major role in the transmission of college knowledge, they often lack the resources they need to provide students with accurate information (Venezia, Kirst, & Antonio, 2003). Based on their findings, Venezia, Kirst, and Antonio argue that all teachers (and not only Honors teachers) need access to up-to-date information on college application and placement and training on how to help students navigate the application process.

Likewise, practitioners emphasize that both college and career knowledge can be shaped as much by peer, family, and community information networks as by interactions with teachers and counselors in school settings. Thus,

practitioners in many Linked Learning sites emphasize the need to integrate college and career knowledge efforts with family engagement efforts and with the student engagement strategies used by school partners and employers who work directly with students.

One exemplary practice can be drawn from a review of efforts at San Diego's Kearny Construction Tech Academy, where family engagement practices focus on promoting college and career knowledge of parents, including frequent communications between parents and teachers, and bi-monthly reports that document student progress (Rogers-Chapman & Darling-Hammond, 2013). Here in California, the State Department of Education has acknowledged the need for better supports integrated with student needs in the college and career knowledge domain. In a report to the State Legislature, the CDE has asked that the Legislature require all California local Workforce Investment Boards to provide training accessible to all high school students within their service region on how to use California's One-Stop Business and Career Center system. The CDE has also proposed expanding the capacity of the California Career Resource Network to offer interactive web-based college and career resources and advisement to individual middle and high school students throughout the state (California Department of Education, 2010).
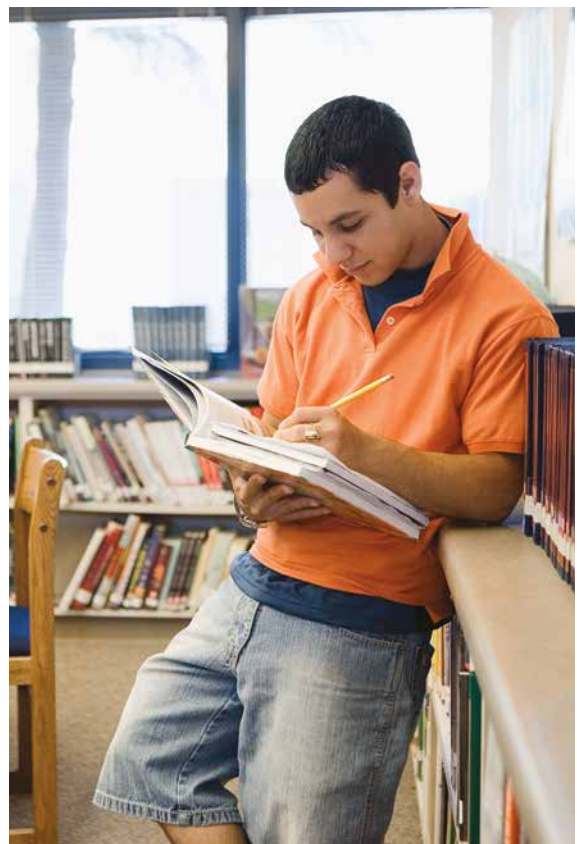
Supports for Social and Emotional Learning foster the development of mindsets, social and emotional skills, and adaptive behaviors. These encompass intra-personal qualities such as self-management and growth mindset, as well as interpersonal qualities such as social awareness. To be successful in postsecondary education, careers, and life, students need to acquire a range of social and emotional competencies, including the ability to manage their own emotions, work well with others, and persist in the face of setbacks. Extensive research evidence shows that social and emotional competencies predict positive adult outcomes and that they are malleable — they can change in response to educational interventions and are shaped by life experiences (Pellegrino & Hilton, 2012; Farrington, Roderick, Allensworth, Nagaoka, Keyes, Johnson, & Beechum, 2012).

Several frameworks have emerged over the past few years to organize the social and emotional learning competencies. These include the National Research Council's 21st Century Competencies framework (Pellegrino & Hilton, 2012); the UChicago Consortium on Chicago School Research Non-Cognitive Factors framework (Farrington et al., 2012);

the Collaborative for Academic, Social, and Emotional Learning framework (Weissberg & Cascarino, 2013); and the StriveTogether framework (Philliber Research Associates, 2013). While each of these frameworks offers unique ways to think about social and emotional learning, they all have in common an emphasis on key competencies that have traditionally been under-emphasized and that are now seen as crucial to student success (Hagen, 2013). These key competencies, summarized below, overlap considerably and are intertwined in the process of social and emotional development.

Academic Mindsets refer to students' attitudes and beliefs about themselves in relation to academics. In particular, research evidence shows that the extent to which students feel connected to school, believe that their ability grows with their effort, feel confident that they can succeed at school, and see academic tasks as interesting or relevant to their lives, contribute to academic performance (Farrington et al., 2012; see also Dweck, Walton, & Cohen, 2011).

Self-Regulated Learning and Study Skills. Students are not just passive recipients of knowledge but rather active participants in the learning process. They construct their own meanings, goals, and strategies as they go about

learning (Pintrich, 2000). Self-regulated learning has been defined as a process whereby learners set goals for their learning and then actively monitor, and control their cognition, motivation, and behavior, guided by attention to their goals, context, and environment (Wolters, Pintrich, & Karabenick, 2003). Self-regulated learning processes include goal setting, planning, self-motivation, attention control, flexible use of learning strategies, self-monitoring, appropriate help-seeking, and self-evaluation (Zumbrunn, Tadlock, & Roberts, 2011). Students who effectively activate those processes are aware of what they know and what they still need to learn; realize when they need help; find ways to overcome obstacles to learning; use appropriate study strategies; and successfully manage time and other resources to meet academic demands (Philliber Research Associates, 2013; Zimmerman, 1990). Research evidence shows that students who are self-regulating learners set more ambitious learning goals for themselves and achieve at higher levels in the classroom (e.g., Zimmerman & Martinez-Pons, 1986; Zimmerman & Risemberg, 1997).

Emotion regulation refers to "the processes responsible for monitoring, evaluating, and modulating emotional reactions in order to accomplish individual goals and facilitate adaptive social functioning" (Larsen, Vermulst, Geenen, van Middendorp, English, Gross, et al., 2013, p. 185). Emotion regulation involves keeping in check strong and unpleasant feelings that may lead to counterproductive responses (Ormrod, 2008). Gross (2015) describes three stages of emotion regulation: 1) identification; 2) selection; and 3) implementation. The identification stage requires awareness and understanding of one's feelings. The selection stage results in the selection of an emotion regulation strategy such as reappraisal (i.e., looking at the situation or issue from a different perspective) and distraction (i.e., thinking about something else). During the implementation stage, the selected strategy is translated into specific tactics appropriate to the situation one is in. Each of these stages represents a point of potential failure for emotion regulation. It is also important to take into account the role of the environmental context on emotion regulation. For example, it is well documented that prolonged or pronounced adversity or stress, including poverty and traumatic experiences, can impair the ability to self-regulate emotions (Murray, Rosanbalm, Christopoulos, & Hamoudi, 2015). Also, peers

and family can both support or interfere with adolescents' healthy regulation of their emotions.

Social skills, which refer to the ability to interact effectively and to establish and maintain healthy relationships with diverse individuals and groups, include communication skills, collaborative skills, and conflict resolution (CASEL, 2015). Social skills figure prominently in Linked Learning programming and are among the skills and qualities employers are looking for when considering new employees for job openings (e.g., Casner-Lotto & Barrington, 2006). Cotton (1993) argues that employability skills, including social skills, are best learned when positioned as instructional goals and explicitly taught. She also advocates for the use of instructional approaches that replicate key features of real work settings and that involve hands-on learning. Consistent with Cotton's recommendations, Darling-Hammond et al. (2008) concluded from their review of the relevant literature that inquiry-based, collaborative approaches to learning promote the development of twenty-first century skills, such as interpersonal skills and the ability to work in teams.[3]

The development of key social and emotional learning skills has long been a concern among Linked Learning advocates and their employer and community-based partners. But the evolution of the school and district role in promoting these skills remains at a formative stage. In California, the embrace of SEL skills by the California CORE[4] districts in their emerging accountability system is notable in that it includes four Linked Learning districts. Even though the reauthorization of the Elementary and Secondary Education Act will signal the end of the federal waiver process, the CORE Districts have signaled a commitment to continue implementing key aspects of their professional accountability system, including a focus on SEL skills. The 2014-15 school year was a baseline year for the CORE districts' SEL initiative. Going forward, it will bear watching how leaders in Oakland, Los Angeles, Long Beach, and Sacramento will provide integrated supports to assist school personnel to experiment with different implementation models and assessments for SEL learning, especially in high school settings. Officials in Oakland, especially, are developing plans to assist high schools (through professional development and implementation rubrics) to launch Linked

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3 For key practices for making cooperative learning effective, see Bell (2010) and Slavin (2014).

4 The California Office to Reform Education (CORE), is a formal collaboration of California school district leaders who are working together on a shared school accountability model to support cross-district continuous learning and improvement. The CORE districts include the San Francisco, Oakland, Fresno, Sanger, Garden Grove, Santa Ana, Los Angeles, and Long Beach Unified School Districts.

Learning pathways while incorporating instructional shifts in educator practice to support SEL learning. Outside of these district-led efforts, the Partnership for Children and Youth (PCY) has begun (Spring 2015) to form professional learning communities in a number of urban California districts to organize afterschool and community-based partners to understand and support standards-based SEL learning for students they work with. Given that the PCY network includes several of the CORE Linked Learning districts, including Oakland, Sacramento, and Los Angeles, there will be much more to learn about best practices in SEL that integrate in-school and out-of-school partners under a common learning framework.
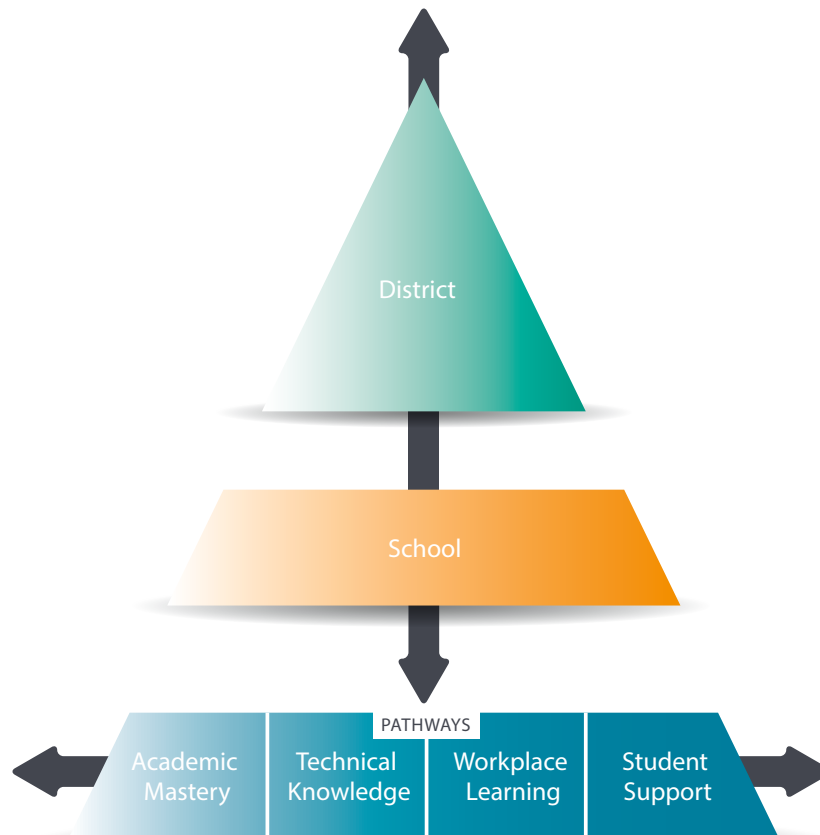
What Do We Mean by Integrated Student Supports?

While the literature does not offer a clear-cut definition of "integrated supports," our approach is consistent with current notions in the field as to the importance of supports to address issues of equity (Child Trends, 2014). There are two important aspects of integration that appear, both in the relevant literature and from practitioner experience, to be associated with positive student learning outcomes.

The first type of integration involves the extent to which student supports are conceived, designed, and implemented to support effective student engagement with the other three pathway components: academic mastery, technical knowledge, and workplace learning. Conceptually, this type of integration can be thought of as horizontal integration insofar as it draws attention to the way that student supports are coherently related within schools to each component of the Linked Learning pathway.

A second important type of integration involves the vertical alignment of student services offered within a curricular pathway with comprehensive school and district (or regional) strategies for achieving college, career, and civic readiness among all students. At the school organizational level, this might relate to the integration of student supports to schoolwide efforts to connect with community-based resources, as for example through community school

TWO TYPES OF INTEGRATION

District

School

PATHWAYS

Academic Mastery | Technical Knowledge | Workplace Learning | Student Support

approaches, Promise Neighborhood strategies, or expanded learning partnerships. At the district level, this could relate to the integration of student supports with district-wide strategies for the implementation of the Common Core curriculum, blended learning initiatives, or interventions for supporting social and emotional learning among students across schools in a district.

Why is Integration of Student Supports Important?

A central goal of every Linked Learning pathway or school is to create a coherent educational experience that fully integrates the academic, technical, workplace learning, and student support enterprises of a school. In many of the model Linked Learning programs that have been profiled in the available literature, this work of integration is built into the design process and foundational planning for the school or pathway from the very inception of the school. Typically, these have been small independent schools, like Met West or Life Academy in Oakland, for example (Saunders, Hamilton, Fanelli, Moya, & Cain, 2013). However, as Linked Learning models are brought to scale across California, the more typical adoption site will be a larger comprehensive high school, like Oakland Technical High School, that will need to go through a re-design process both to create new pathways, but also to re-align, and in some cases, totally re-invent existing organizational and human resources — including pre-existing student supports — with the new learning demands of specific pathways.

Many practitioners observe that integration of student supports with the other components of Linked Learning helps to make the educational experience coherent from the student perspective. Instead of a day characterized by start-stop experiences as students move from classroom to work experiences to support services, students can instead experience each of these components as logically and coherently designed to reinforce and advance the other (Saunders et al., 2013).

Likewise, the vertical integration of student supports with school- and district-wide strategies for college, career, and civic readiness, helps to build instructional capacity within each pathway by making the teaching environment more coherent for teachers and other adults who work with students and by fostering the conditions necessary for adult collaboration, teamwork, and professional capacity building so essential to the Linked Learning model. Vertical integration also contributes to organizational efficiency as the supports,

guidance, and professional development opportunities that districts provide to their principals, teachers, and Linked Learning partners are coherently designed to help them meet student needs and promote a school climate conducive to academic engagement of all students. As Marisa Saunders and her colleagues have observed, Linked Learning sites are embedded in larger systems that must ultimately prioritize the same learning goals. In higher-performing sites, vertical integration of Linked Learning pathways to systems level (district, county or regional) strategies tends to increase students' access to broader learning opportunities within the system. Not only does effective integration enable high quality implementation by helping schools, districts, and regional partners to work together, but integration also helps to diffuse "the principles, norms, practices, and beliefs that undergird Linked Learning…" across a system, thereby exerting a positive upstream influence on "district policies, procedures, and professional development" (Saunders et al., 2013, p. 105).

Illustrations of Integrated Student Supports in the Linked Learning Context

In this section we provide more detailed illustrations of the vertical and horizontal integration concepts that we have introduced. These examples shed light on both the value of integrated student supports as well as on the process used by schools, their district leaders, and their reform support intermediaries to effect high quality implementation in the Linked Learning context. In each case, the focus is on how successfully integrated supports can build instructional capacity in schools and classrooms, while providing students with greater access to relevant and rigorous learning opportunities.

Pathway-Integrated Peer Mentoring at the Community Health Advocates School in Los Angeles.

The Community Health Advocates School (CHAS) is one of three Linked Learning pathway programs on the campus of Augustus Hawkins High School in South Los Angeles. CHAS enrolls about 475 Students, 80 percent

of whom are identified as economically disadvantaged and over 30 percent of whom are English Language Learners. The CHAS pathway is designed to prepare students for a careers in contextually competent social work, behavioral health, and other community health professions; and also seeks to develop its students' potential to serve as community leaders.

About a year after opening in 2012, CHAS teachers gathered with staff of the Center for Powerful Public Schools (CPPS) to examine their student performance data and assess the needs of their students. As they reviewed the challenges of high quality Linked Learning implementation, they found that preparing their students for work-based learning was among the most difficult areas to implement well. The school has a strong partnership with Kaiser Permanente, but many of its students needed supports to enable them to be successful in Kaiser's internships, which demand rigorous technical preparation, as well as strong social skills, like self-management, social awareness, and self-efficacy. Thus, in addition to academic and technical preparation, students at CHAS required the intentional support of social and emotional learning (SEL). It was also clear that social and emotional learning would be of enormous value for students beyond their internships, especially for incoming 9th grade students who are at highest risk of dropping out.

Given the focus of the health advocacy pathway, CPPS and CHAS staff co-designed a Peer Mentor program that simultaneously acted as a support for the development of SEL competencies and pathway-related technical skills. Prior to becoming mentors, seniors participate in an intensive 2-day workshop and continue to be supported through an internship course during their first semester of senior year, as they begin their mentor-mentee relationships. During the second semester of the course, students engage in community-based internships, while maintaining their mentor-mentee relationships. The focus of this support program is on student acquisition of coaching skills (a key technical skill for the pathway), team building, and introspection about the mindsets that may hold students back. Also, health professionals often engage with students in the class, providing additional skill-building support.
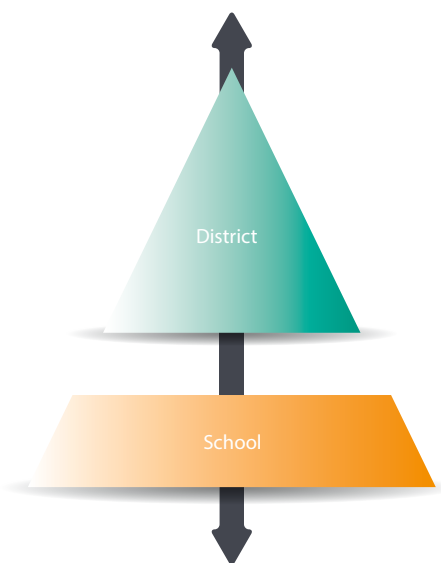
Senior mentors are paired with two or three mentees, who are typically 9th graders but may also be in higher grades. During Advisory, mentors spend time observing their mentees to gain insight about their behaviors and needs. Mentors then develop a plan for their mentees to offer support, guidance, and connection to school resources. On many occasions mentors reach out to teachers to investigate additional tutoring opportunities for their mentees. They also connect mentees to school activities and share lunchtime talking about the mentees' challenges and successes in school and organizing team building and other activities for them.

According to CPPS staff, teachers report that the relationships developed between mentors and mentees have reduced conflicts (self-management skills) and have improved the overall school climate in significant ways. Mentees, believing that someone cares about them (sense of belonging), report greater attachment to the school community. Mentors report that this experience makes them feel more self-confident, with growing awareness that they are making a difference in the life of another person (self-efficacy). They also feel better prepared to engage in an internship outside of school. Mentors gain self-awareness about who they are as people as well as about their professional competence (social awareness).

In the years that followed the first pilot and pathway-wide implementation, CHAS staff have continued to work with the CPPS to assess the program's strengths and weaknesses,

and to scale or tailor the supports to additional vulnerable students (e.g., newcomer immigrants and unaccompanied minors enrolled at the school). Ultimately, the effectiveness of the program on student-level outcomes is due in part to the horizontal integration and alignment of the supports to the learning demands of the pathway (e.g., the development of relevant technical and SEL skills) as well as to the way that the supports help prepare all participants to engage effectively in workplace learning opportunities. This program also illustrates vertical integration as the SEL skills developed at CHAS are aligned with the SEL learning priorities established for all schools by Los Angeles Unified.

District-led Efforts to Promote Pathway and Systems Integration of Student Supports in Oakland

In Oakland, the school district's strategic plan for student success calls for 100 percent of its rising sophomores to be in Linked Learning pathways by the year 2020. As well, Oakland Unified School District (OUSD) plans for each Linked Learning pathway to require students to take college-level Advanced Placement, International Baccalaureate, and/or Dual Enrollment courses while providing support to students who need additional help in meeting college- and career-level expectations (OUSD, Pathways to Excellence, 2014). To help schools and students reach these ambitious goals, OUSD has devoted a large percentage of its capital and human resources to student supports. OUSD, for example, operates 15 school-based health clinics — one in every high school. The district also is one of eight U.S. school districts selected to participate in a special initiative

by the Collaborative for Academic, Social, and Emotional Learning (CASEL) to help students manage emotions, achieve positive goals, show empathy for others, maintain positive relationships, and make responsible decisions. In the 2015-16 school year, the district will begin to implement this work on SEL skills at the high school level and within Linked Learning pathways. The district's ambitious goals for students, and the complex web of supports that it provides to schools have raised the stakes for the integration of all of its student supports, both across schools and pathways, and with districtwide system goals.

To achieve systemwide integration of student supports, the district has established a set of school quality improvement routines including a regular cycle of inquiry for all school leaders who meet on a monthly basis with district administrators for regular progress monitoring and improvement planning (OUSD, School Performance Framework Guidebook, 2015-2016). A key quality standard and focus of inquiry is on how school and Linked Learning pathway leaders provide a coordinated and integrated system of academic supports and enrichment that promote quality learning experiences for all students (OUSD, School Quality Standards, 2012).

At the school level, the district is working to support program and pathway integration of student services by supporting the staffing and guidance it provides to the Coordination of Services Team (COST) at each school. A COST is a site-based multidisciplinary team composed of service providers, partners, school administration, and school staff. COST members include principals, assistant principals, Linked Learning pathway leaders, community school coordinators, school counselors, school nurses, mental health therapists, special education teachers, afterschool providers, case managers, and family advocates. Weekly or bi-weekly COST meetings provide a regular opportunity for staff to assess individual students' support needs, and develop and monitor the effectiveness of interventions. From the student perspective, COST helps link students and families to available services. From the teacher and Linked Learning partner perspective, COST helps to facilitate communication among multidisciplinary teams of providers and school staff to ensure that supports are coordinated and aligned to learning goals. COST also functions as a central point for continually assessing the quality of student supports, as well as the relevance of those services so that they can modify interventions as needed using data-based decision-making. Staff at Oakland's Coliseum College Preparatory Academy (CCPA) and at Oakland Technical High School (Oakland

Tech), for example, report that COST helps to integrate the instructional day with expanded learning time opportunities and student supports by enhancing coordination of efforts, reducing service gaps and duplication, and providing a vehicle for progress monitoring, both of individual students and service delivery systems. COST and the services it coordinates are also credited with helping to improve student attendance and increase student skills linked to behavior and/or performance issues (e.g., improved self-management) and with reduction in disciplinary referrals – all of which contribute to increased instructional capacity for academic and technical learning.

Introducing an Emergent Implementation Framework for Integrated Student Supports within a Continuous Improvement System

Beyond the selection of a set of field-tested student supports, the foregoing examples illustrate how site leaders engage in a process for integrating individual supports with pathway or district learning goals, as well as for ensuring the effectiveness of services over time. Yet, this process of high quality implementation has been largely understudied. Available case studies, for example, generally focus on elaborating the substantive elements of student supports rather than on how those supports were implemented or adapted at sites over time. Nevertheless, our work with key Linked Learning intermediaries such as ConnectEd and CPPS suggests that the successful integration of student supports with pathway learning demands often requires a careful balance of two implementation strategies that can be in tension with each other: fidelity of implementation and favorable adaptation of a practice to a new setting.

Experts generally agree that faithful implementation is important at the initial stages of implementation to "establish base-level knowledge, capabilities, and performance … stem rapid regression to past practice… [and] to create an infrastructure for professional practice and learning…" (Peurach, 2015, p. 116). But, as the CHAS and Oakland examples illustrate, once these basic structures are in place, higher performing schools and systems tend to engage in on-going reflection, continued review, and data-driven learning among teachers, school leaders, and partners to implement favorable

program adaptations that increase the effectiveness and responsiveness of supports to local needs.

Ultimately, key Linked Learning intermediaries, including ConnectEd, CPPC, and the National Academy Foundation, report that higher performing Linked Learning initiatives bring this insight about continuous learning to the conception, design, and implementation of their integrated student supports as much as they do to the execution of their academic, technical, and workplace learning components. The work of these intermediaries has surfaced key elements of continuous learning and improvement relevant to Linked Learning that merit further study and that we briefly summarize below.

Equity at the Center

An explicit system goal of school leaders in high-achieving, high-poverty schools is equitable access to learning opportunities that prepare all students for college and careers. This has been a major theme, for example, in the districtwide planning at OUSD and of the California CORE Districts more broadly.[5] Generally, this goal also takes a youth development stance, which focuses on guiding youth to embrace learning for

a predominantly middle-class community with demographic pockets of poverty. Differentiation is also needed to respond to the needs of specific demographic sub-groups, including English learners, recent immigrants, foster youth, students with disabilities, and vulnerable youth coping with the effects of trauma, bereavement, or abuse. More fine-grained descriptions are needed that document how this type of differentiation is achieved in demographically diverse settings. Moreover, we need to learn more about how such differentiation can be implemented within the Linked Learning approach at a scale and supply level that allows for personalization in the delivery of services at the person-to-person level.

their own long-term social, emotional, and personal growth, as much as for future economic and civic participation.

As Saunders and her colleagues observe in their own review of successful Linked Learning sites, equity cannot be mandated, but is instead cultivated as a collectively shared commitment in the schools they reviewed. And, equally important, a concern for equity was built into the design of Linked Learning sites "to ensure [that each] pathway would effectively attract and serve a diverse population of students based on academic background and experiences (including English learners and special education students), gender and ethnic/racial background"(Saunders et al., 2013, p. 15). Additional research is needed to better describe how site leaders promote equity through the routine practice of disaggregating all student performance data by race, ethnicity, English learner, and poverty status and including these disaggregated reports in self-evaluation systems.

Personalization within a Differentiated Service Delivery Design

Case studies of career academy and Linked Learning sites, as well as the learned experience of practitioners in the field, suggests that providing equitable access to learning opportunities requires differentiation that responds to local context and need (Child Trends, 2014). Differentiation is needed to respond to the varying context of settings; for example, how services might be delivered in a school that serves a community of concentrated poverty, versus the delivery of the same set of services in a school that serves

Structural Features that Support Continuous Learning and Improvement

What structural features tend to characterize schools, districts, and community-based partnerships that focus on continuous improvement? To begin to answer this question, we draw on early guidance from the practitioners and Linked Learning advocates we have consulted. As noted earlier, Linked Learning site leaders are challenged to address the need for integration of student supports across organizational units of a pathway program (as when a school puts structures into place to make sure that the content of its tutoring services are aligned with the content standards applied in classrooms) and of achieving synergies across organizational boundaries (as for example, efforts to integrate or coordinate the supports of school, employer, or community partners). As well, site and district leaders must address the challenges associated with vertical integration that is necessary where the success of a set of supports delivered at the school or Linked Learning pathway level might rest on the existence of a process for bringing those efforts into alignment with district goals and accountability requirements.

More detailed descriptive studies are needed to illustrate how site leaders and their support intermediaries are working to achieve the intentional alignment of goals, interests, and resources in areas like districtwide professional development and instructional supports to build site-level capacity and efficiency. Two elements seem ripe for further exploration and fine-grained descriptions drawn from Linked Learning practice.

CYCLE OF INQUIRY

04 TAKE ACTION

01 COLLECT DATA

03 MAKE DECISIONS

02 ANALYZE DATA

Continual process of asking questions and documenting answers evolving around the what, why, how, and who of data collection, data analysis, decision making, and action.

Organizational Infrastructure to Support Collaboration. There is mounting evidence that organizations engaged in continuous improvement tend to set up structures, processes, and procedures to promote effective interactions among participants and to clarify the goals for student performance and success. In addition to the COST and Quality School Review systems in Oakland noted above, more widely used systems approaches include the protocols associated with programs like Response to Intervention (Oakland), Restorative Justice Practices (Oakland, Los Angeles, San Francisco), Positive Behavior Support and Intervention Strategies (Los Angeles), Professional Learning Communities (Fresno), and other forms of data-driven cycles of inquiry. We are not endorsing any of these specific approaches, but mention them here as examples of how effective schools and districts are working to build organizational infrastructure and protocols and to continually assess and adapt those structures in response to student needs. These processes help them to "stay true to the common vision, collect data, track progress across the network, and facilitate communication" throughout the school, district, or community (Park, Hironaka, Carver, & Nordstrum, 2013, p. 24).

With specific respect to Linked Learning, we understand that many Linked Learning intermediary organizations have developed protocols for the identification and selection of students who are at risk for failure. In general, structural features commonly identified as supporting integrated student supports include: systematized needs assessment protocols; routine practices for the identification and placement (or recruitment) of students into services; data collection and tracking of student progress; protocols and dedicated time for school staff, partners, and others to engage in inquiry focused on student performance and supports; and systems or protocols for devoting resources (time and human capital) to service coordination efforts. These types of structures might vary across school sites depending on school size and demographic characteristics, but there is increasing evidence to suggest that they represent critical infrastructure for the effective implementation of responsive integrated student supports (Child Trends, 2014).

Using Data for Learning and Professional Development.
We are learning that early identification of students in need of supports necessitates the presence of robust data systems and capacity for data use at each school site (McLaughlin & London, 2013). The use of data to identify students in need of individual supports, as well as its critical role in informing a cycle of inquiry and continuous improvement at the setting and system levels, must be part of a vision embraced by leaders that places supports at the center of an equity agenda. We need to learn more, with specific attention to Linked Learning sites about how effective schools and districts gather data from within their organizations, from across their partners, and from participating agencies and use it to better understand the needs and strengths of their students and to improve their teaching and systems of supports. This may include outcome data (e.g., performance rates on standard assessments or graduation rates), as well as data on student engagement (e.g., school climate, attendance, suspensions) and on the acquisition of critical aspects of social and emotional learning (e.g., collaboration, growth mindset, self-efficacy, social awareness, and self-discipline).

Creating and Sustaining Conditions – School and Community Culture and Attention to Unmet Physical and Behavioral Health Needs

The case studies we reviewed draw attention to the importance of a socially supportive school-wide culture and to community economic factors that create and sustain positive conditions for teaching, learning, and youth development. Three conditions in particular emerge from the available literature and merit further exploration in the Linked Learning context.

A Culture of Positive Family and Community Engagement.
One important avenue of future inquiry derives from the ground-breaking work of Linked Learning advocates, including Inner City Struggle in Los Angeles, which illustrates how family engagement may significantly impact student persistence and success, especially for immigrant students and those who are first-generation to attend college. In addition, community engagement may offer a degree of support in cases where families are not accessible, or positively impact situations where family engagement is limited. Since the most appropriate methods of engagement vary, based on the characteristics of the community and the school population, school staff and partners are best positioned to determine effective methods to engage parents or guardians, and to develop systems that utilize these approaches.

Attention to Students' Physical and Behavioral Health.
While not directly related to academic achievement, schools in high poverty communities find that they must often work to address barriers to learning that stem from unmet needs related to nutrition, health, mental health and, in some cases, the need for re-integrative services for students who have been involved in the juvenile justice system. Here again, the CHAS example in Los Angeles is instructive. At one level, the peer mentoring program there was very intentionally designed to build social skills for seniors preparing for workplace learning experiences in the health field. But for incoming 9th graders, the peer mentoring program was also designed to help identify youth who might benefit from early identification for the services of trauma-informed care providers or other social services as well as academic supports.

Youth Sector Approach
Finally, schools, their community partners, families, health providers, and other youth serving agencies may be disconnected or siloed, even as they work with the same youth in their communities. To address this sector integration problem, many of the leaders of exemplary schools in the available studies of Linked Learning and career academy sites have taken the stance that all adults who work with youth in schools are part of a continuum of care, supports, and intervention. They work to achieve a common vision among all partners and focus on learning and coordination among all partners before, during, and after school, and in out-of-school learning settings. This approach is consistent with prior research suggesting that understanding how a community as a whole — rather than any one agency, program, or intervention — meets young people's academic and developmental needs is important for supporting their pathways to college, career, and civic readiness (McLaughlin & London, 2013).

Conclusion

The foregoing framework for integrated student supports emphasizes the potential of the Linked Learning approach to redesign the American high school and to provide more equitable access to college- and career-ready opportunities to all students. Integrated student supports are situated in the context of the broadened learning demands of the Common Core State Standards, the Next Generation Science Standards, and the technical and workplace learning requirements of Linked Learning pathways. This report defines the effective integration of student supports in schools and school districts and

concludes with an exploration of emerging elements of a system of continuous learning and improvement in which integrated student supports can be effectively implemented.

It is hoped that this evolving framework will support educators as they develop local guides and implementation tools that will enable them to strategically consider their unique resources, opportunities, challenges, and populations as they design, implement, and adapt an integrated and cohesive set of student supports. More importantly, it is hoped that such a set of supports will effectively meet the needs of all students in ways that allow them to fulfill their potential in pathways of their choice toward college, career, and civic engagement.

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Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. Educational psychologist, 25(1), 3-17.

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Appendix
Background Research and Resources

Student Supports for College and Career Readiness

This Appendix offers background research and resource guidance that may inform the selection and design of site-appropriate student supports for learning. In general, existing studies of student support programs tend to focus narrowly on one student outcome (e.g., academic achievement in mathematics) or on a handful of related student performance influencers (e.g., attendance or measures of student-school connectedness). Consequently, the following examples are best conceived as a starting point for a local needs assessment and design of an implementation process that attends to the integration of services within schools, districts, and communities. In what follows, we organize the literature on student supports as it relates to the identified domains of learning required for college and career readiness. We follow each section with a table or set of tables that contain examples to suggest how supports might be organized or implemented with an eye to pathway and systems integration. Ultimately, the final design of student supports at a given site requires alignment to Linked Learning goals and student needs.

Supports for Academic and Technical Learning

It has long been understood that high school is the time and place for students to gain critical academic and technical knowledge that will prepare them for their next steps in education or career. Thus, this Appendix does not devote in-depth attention to the research documenting the importance of these learning domains. They are understood as the core work of teaching and learning in public schools. That said, the need to personalize education is rooted in the notion that "educational equity is not simply about equal access and inputs, but ensuring that a student's educational path, curriculum, instruction, and schedule be personalized to meet [each student's] unique needs" (Hanover Research, 2012, p. 7). What follows is an overview of some illustrative academic or technical content learning supports, grouped into three overarching categories: school organization and schedule; schoolwide or pathway programs for all students; and individual-level responses to identified student needs.

School Organization and Schedule

A school's organization and schedule can combine to establish opportunities for personalized learning environments — a critical feature of high school reform that has been found particularly effective to promote the academic achievement of at-risk students (Chait, Muller, Goldware, & Housman, 2007). Strategies for creating personalized learning environments include restructuring school size by creating small learning communities (a central feature of all Linked Learning pathways), implementing individualized learning plans, and developing a flexible block schedule.

SMALL LEARNING COMMUNITIES (SLCs)

An SLC is a form of school structure that organizes students into small autonomous groups who often remain together from grade to grade. The smaller size of these communities affords teachers the opportunity to get to know their students well, provide them with individualized attention, and identify and address their specific needs. SLCs can take several forms, including freshman academies or theme-based programs within a school (Darling-Hammond, Ross, & Milliken, 2007).

Additional Resources:
• Cotton, K. (2001). New small learning communities: Findings from recent literature. Portland, OR: Northwest Regional Education Laboratory.

INDIVIDUALIZED LEARNING PLANS (ILPs)

An individualized learning plan (ILP) is both a document and a process that students use – with support from school counselors and teachers – to define their college and career goals and to inform the students' decisions about the courses and activities they will undertake throughout high school to achieve their goals. Many states have adopted policies that require all middle and/or high school students to develop and maintain an individualized learning plan in order to make schools more personalized and improve student outcomes. Research findings connect ILPs to positive student outcomes, including increased motivation and engagement, goal setting, long-term planning, increased awareness of career options, and parental involvement in academic and career decisions (Rennie Center, 2011).

Additional Resources:
• Solberg, V.S., Phelps, L.A., Haakenson, K.A., Durham, J.R., & Timmons, J. (2012). The nature and use of individualized learning plans as a promising career intervention strategy. Journal of Career Development, 39(6), 500-514.

BLOCK SCHEDULING

In block scheduling, students have fewer classes per day and each class is scheduled for a longer period of time. For example, instead of six or seven 50-minute classes that meet daily, a typical block schedule class might last 90 minutes and meet every other day. The longer class periods are intended to support more in-depth learning, provide more instructional time for differentiated instruction, and afford teachers longer planning periods and increased time for collaboration (Chait, Muller, Goldware, & Housman, 2007). Personalized learning approaches such as SLCs and Linked Learning pathways often benefit from a flexible block schedule that allows for extra instructional time for students who need it, longer class periods for integrated projects and activities, and common teaching planning time. In flexible block scheduling, teachers may have autonomy to design alternative schedules within the flexible block according to student needs and may choose, for example, to regroup students within the flexible block to provide targeted instructional support and "double-dose" opportunities (Oxley, 2008).

Additional Resources:
• Hackmann, D. G. (2004). Constructivism and block scheduling: Making the connection. Phi Delta Kappan, 85(9), 697-702.
• Neubig, M. (2006). Essential scheduling practices for high-performing schools with career academies/SLCs. Techniques, 81, 42-43.
• Queen, J. A. (2000). Block scheduling revisited. Phi Delta Kappan, 82(3), 214-222.
• Zepeda, S. J. & Mayers, R. S. (2006). An analysis of research on block scheduling. Review of Educational Research, 76(1), 137-170.

Schoolwide or Pathway Programs for All Students

Many academic or technical learning supports are available to all students in a particular school or pathway, regardless of an identified need. Important examples include expanded learning time opportunities, dual enrollment programs with post-secondary institutions, and comprehensive literacy programs.

EXTENDED DAY AND EXPANDED LEARNING TIME

Extended Day/Year. Extended school time programming is a strategy for redesigning the school day, week, or year to increase academic and technical learning time for students, providing opportunities for academic enrichment, applied learning, and extracurricular activities during the instructional day that would otherwise not be available to students from disadvantaged backgrounds. When the extended day/year is filled with high quality and engaging learning experiences, extended learning time can help ameliorate the achievement gap and thus expand equity (Del Razo & Renée, 2013).

Additional Resources:
• National Center on Time & Learning: www.timeandlearning.org

Expanded Day After-School and Out-of-School-Time Programs. Research evidence indicates that high quality after school and out-of-school-time programs grounded in positive youth development (PYD) principles can enhance vulnerable students' academic achievement, social skills, and behavioral outcomes (Afterschool Alliance 2008; National Institute on Out-of-School Time 2009). Effective PYD programs are characterized by positive and sustained adult-youth relations; skill-building activities for youth to develop competencies in the physical, social, cognitive, vocational, and moral domains; and opportunities for youth leadership (Hall, Yohalem, Tolman, & Wilson, 2003; Lerner, Bowers, Minor, Boyd, Mueller, Schmid, et al., 2012).

Additional Resources:
• ExpandED Schools: www.expandedschools.org
• Every Hour Counts: www.afterschoolsystems.org
• The Coalition for Community Schools: http://www.communityschools.org
• Deschenes, S. N., Arbreton, A., Little, P. M., Herrera, C., Grossman, J. B., Weiss, H. B., & Lee, D. (2010). Engaging older youth: Program and city-level strategies to support sustained participation in out-of-school time. Cambridge, MA: Harvard Family Research Project.
• Wimer, C. & Harris, E. (2011). Research update 7: Out-of-school time programs for older youth. Cambridge, MA: Harvard Family Research Project.

Summer bridge programs. These programs target entering 9th graders to help smooth the transition to high school, aiming to eliminate skill gaps in academic preparation and thus increase the chances of high school graduation. While no randomized studies of these programs have been conducted to date, the available evidence positions summer bridge programs as a promising strategy to improve students' outcomes during the 9th grade (Hanover Research, 2014).

Additional Resources:
• Abbott, S.E. & Templeton, K. (2013). Ninth grade counts: Using the summer bridge program to strengthen the high school transition. Portland, ME: Great Schools Partnership.
• McCallumore, K. M. & Sparapani, E. F. (2010). The importance of the ninth grade on high school graduation rates and student success in high school. Education, 130(3), 447-456.

DUAL ENROLLMENT PROGRAMS

Dual enrollment programs are collaborative efforts between high schools and colleges in which high school students are permitted to enroll in college courses, complete all the assignments, and earn course credit that can be applied toward a college degree or certificate. Unlike other accelerated learning programs, such as Advanced Placement, that target high achieving youth, dual enrollment serves a wide variety of students, including those from groups who attend college at disproportionally low rates (Hoffman, Vargas, & Santos, 2008). Dual enrollment can expose students to college expectations, required behaviors, and habits of mind, which may help students to gain academic confidence and develop a college identity. Furthermore, dual enrollment offers the opportunity to earn free or low-cost college credit and to reduce the time needed to complete a degree or certificate (Allen, 2010; Community College Research Center, 2012; Hoffman, Vargas, & Santos, 2008).

Early research evidence reports a positive relationship between dual enrollment and student outcomes, including postsecondary enrollment after high school, college performance, and college retention (Hoffman, Vargas, & Santos, 2008). Moreover, research has found that dual enrollment may improve outcomes for students in career-technical pathways (Community College Research Center, 2012).

Additional Resources:
• Cassidy, L., Keating, K., & Young, V. (2010). Dual enrollment: Lessons Learned on School-Level Implementation. Hearndon, VA: SRI International.

COMPREHENSIVE LITERACY PROGRAMS

Generally, content area teachers are not trained to teach basic reading skills, yet it is often their responsibility to support students with reading comprehension strategies and writing support specific to the subjects or pathways within which they teach. Teachers may consequently need ongoing professional development in the literacy of their content areas so that they can effectively support students who are reading below grade level. The Alabama Reading Initiative (ARI) and Just Read, Florida! are examples of statewide initiatives that incorporate literacy instruction across the curriculum grounded in ongoing teacher professional development and support from full-time reading coaches (Bacevich & Salinger, 2006).

Additional Resources:
• Chait, R., Muller, R. D., Goldware, S., & Housman, N. G. (2007). Academic interventions to help students meet rigorous standards: State policy options. Washington, DC: Institute for Educational Leadership, National High School Alliance.
• Heller, R. & Greenleaf, C.L. (2007). Literacy instruction in the content areas: Getting to the core of middle and high school improvement. Washington, DC: Alliance for Excellent Education.

Individual-level Responses to Identified Student Needs

Following are examples of supports that may be provided to individual students who have been identified as having particular needs.

DROPOUT INTERVENTION AND DROPOUT RECOVERY PROGRAMS

Dropping out high school is associated with lower life-time earnings, decreased employability, poorer health, and social difficulties over the course of one's lifetime and it carries a high cost for society (Sum, Khatiwada, McLaughlin, & Palma (2009); Tyler, 2008). The best predictors of dropping out are educational experiences – much more so than status predictors such as race/ethnicity, poverty, age, and gender (Jerald, 2007). Furthermore, research has shown that dropping out of school is not a sudden decision but rather is the outcome of a long process of disengagement with school (Christenson & Thurlow, 2004).

In response, educators and policymakers have developed targeted programs to identify students early who are at risk of dropping out and to provide the help they need so they stay in school, or to re-engage students who have left school and provide them with support and alternative paths to graduation (Rennie Center, 2012).

Effective dropout prevention programs tailor services to address the academic, social, and personal needs of the students they serve (Christenson & Thurlow, 2004). Such programs often feature a personalized learning experience, credit recovery opportunities, differentiated instruction, flexible scheduling, support services such as child care for teen parents, and a focus on connections to college or work or both (Rennie Center, 2014). Finally, competency-based education programs such as the Boston Day and Evening Academy (Wolfe, 2012) offer an alternative to the traditional time-based approach; students learn skills at their own pace, content is tailored to each student's unique needs, and students are required to demonstrate their learning.

Additional Resources:
• ACTE. (2007). ACTE Issue Brief: Career and Technical Education's role in dropout prevention and recovery.
• Dynarski, M., Clarke, L., Cobb, B., Finn, J., Rumberger, R., & Smink, J. (2008). Dropout prevention: IES practice guide (NCEE 2008-4025).
• Tyler, J. H. & Lofstrom, M. (2009). Finishing high school: Alternative pathways and dropout recovery. The future of children, 19(1), 77-103.

TUTORING

Tutoring is a common strategy to reinforce classroom instruction and support student learning. Three types of tutoring emerge from the available literature: 1) peer tutoring, where tutor and tutee are of the same grade and age; 2) cross-age tutoring, where older students tutor younger students; and 3) adult tutoring. Whether tutors are peers or adults, research evidence positions tutoring as an effective strategy to raise student achievement in the academic and technical learning domains. Specifically, research findings indicate that well-designed tutoring programs can have positive effects on student academic performance and student attitudes about the tutored subjects. Positive effects are shown for students who receive the tutoring, with benefits extending to peer and cross-age tutors as well (e.g., Cohen, Kulik, & Kulik, 1982; Kalkowski, 1995; Leung, 2015; Ritter, Barnett, Denny, & Albin, 2009).

Additional Resources:
• Bixby, K. E., Gordon, E. E., Gozali-Lee, E., Akyea, S. G., & Nippolt, P. L. (Eds.) (2011). Best practices for tutoring programs: A guide to quality. Saint Paul, MN: Saint Paul Public Schools Foundation.
• Gordon, E. E. (2009). 5 ways to improve tutoring programs. Phi Delta Kappan, 90(6), 440-445.

MENTORING

Broadly defined, a youth mentoring program is "a program or intervention that is intended to promote positive youth outcomes via relationships between young persons (18 years old and younger) and specific non-parental adults (or older youth) who are acting in a nonprofessional helping capacity" (DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011, p. 66). Extensive reviews of mentoring programs (DuBois, Holloway, Valentine, & Cooper, 2002; DuBois et al., 2011) corroborate the value of mentoring programs to support positive youth development in the areas of social, emotional, and academic learning and identity development. Furthermore, findings indicate that mentored youth often benefit in more than one learning domain (e.g., social and academic); that the benefits of mentoring are not limited to attitudes but extend to behavior and academic performance; and that mentoring serves both promotion and prevention aims.

Additional Resources:
• MENTOR (2009). Elements of effective practice for mentoring (3rd Edition). Alexandria, VA: MENTOR.

A note on Supports focused on Technical Learning in Career Pathway Programs

One cornerstone of the Linked Learning approach is that all students gain the technical skills and knowledge necessary to successfully engage in career focused or work-based learning experiences. The introduction and development of these competencies can be done in ways that offer students a sense of opportunity, enhance learning, increase motivation, and support postsecondary success.

Without adequate knowledge and skills related to their work-based tasks, students cannot maximize their effectiveness in internships and other work-based learning experiences, reducing their own chances for success, and also potentially reducing the likelihood of continued opportunities for ongoing collaboration between a school or district and local employers. Many students need to be supported to achieve adequate mastery before arriving to the job site; and they need to continue to be supported to develop and extend those skills in the workplace and career path. While there is no single set of programs and interventions designed to ensure that all students are supported to master these skills, the importance of career-related technical skills and suggestions for effective implementation are highlighted in Criteria for Linked Learning Pathway Quality Review and Continuous Improvement (National Academy Foundation, ConnectEd California, The Education Trust West, Career Academy Support Network, & National Career Academy Coalition, 2012).

At the systems level, schools, districts, and employer consortia play important roles in the design and implementation of effective supports that enhance students' technical (workplace) competencies. For example, the incorporation of

Example Supports for Academic Learning

Support	Student/Individual	School/Setting	District/System
School Organization and Schedule			
• Small learning communities / groups • Individualized Learning Plans (ILPs) • Block scheduling • Master schedule that allows for collaboration • Time during day for completion of homework	Structure and schedule accommodate academic needs, including opportunities for array of teacher-student interactions; students have time and safe places for learning.	Schedule and structure are developed and implemented to reflect student needs; teachers, staff, and partners embrace opportunities for collaboration and to support students.	District supports schedule and structure; provides resources that allow after-school opportunities.
Programs for All Students			
• Expanded Learning Time/ extra-curricular programs during and after school, including advanced coursework and student learning centers • Extended day / creative, strategic use of time • Summer transition / bridge programs • Grade-specific support • Dual Enrollment programs • Comprehensive Literacy programs • Exam study sessions	Adults and peers support academic success in ways that build capacity of students to expand their own potential for ongoing learning; assessments guide positive action; programs meet needs during transitions and push achievement level.	School develops and implements programs to reflect student population, including range of learning needs and styles; systems, schedule, professional development in place to ensure strong adult-student and peer relationships, as well as data use and program delivery.	District provides resources to allow high quality supports; provides long-term commitment to academic supports for all students; supports schedule that allows for necessary programming; commits to resources and policies that support data use.
Individual Responses to Identified Needs			
• Dropout Intervention and Dropout Recovery programs • Tutoring (peer tutoring, cross-age tutoring, and adult tutoring) / specialized instruction • Mentoring (including role models that can inspire bilingual fluency, postsecondary education, etc.) • Credit recovery / remediation / targeted support course	Programs meet the needs of students in ways that allow them to fully participate in pathway programs, while simultaneously meeting requirements for high school graduation and college readiness.	School ensures that programs are designed to fully and equitably meet student needs; that instruction aligns with curriculum; that adults are trained to provide strong academic content; that adults possess a deep belief in the potential of all students.	District provides resources to ensure provision of high quality programs; oversees alignment between K-12 and post-secondary readiness; provides long-term commitment to academic supports for all students.

technical competencies into teaching and learning may stretch teachers beyond their existing knowledge, requiring resources for professional development in pathway-related topics. Further, designing curricula that integrate career-related competencies with academics may require that school and district leaders allocate time for the development of projects, as well as for collaboration with other teachers and/or community partners (Stern, 2015; The Education Trust West, 2015).

Similarly, the high level of mastery required from students to be able to translate skills learned in the classroom to successful application in the workplace requires teachers and administrators to ensure that all students are supported to meet those requirements (Nobori, 2012). The design and implementation of supports that can create opportunities for all students to succeed confront teachers with another layer of demands. If teachers are to be able to provide (and/or orchestrate) the supports necessary for all students to succeed in this domain, they must be supported by the school (setting) and the district (system).

Additional Resources:
• Friedlaender, D. (2014). Student-Centered Learning: Dozier-Libbey Medical High School. Stanford, CA: Stanford Center for Opportunity Policy in Education.
• Hoachlander, G. & Yanofsky, D. (2011). Making STEM Real. Educational Leadership, Vol. 68 No. 6.
• Richardson, N. & Feldman, J. (2014). Student-Centered Learning: Life Academy of Health and Bioscience. Stanford, CA: Stanford Center for Opportunity Policy in Education.
• Saunders, M., Hamilton, E., Fanelli, S., Moya, J., Cain, E. (2013). Linked Learning: A Guide to Making High School Work. Los Angeles, CA: UCLA's Institute for Democracy, Education, and Access.
• Vega, V. (2012). Research-Based Practices for Engaging Students in STEM Learning: Innovative and effective practices at Cleveland's MC2 STEM High School are driving learning and higher achievement for students in a district where every student qualifies for free or reduced-price meals. Edutopia.
• Brand B., Valent A., & Browning A. (2013). How career and technical education can help students be college and career ready: A primer. Washington, DC: The College & Career Readiness & Success Center, American Institutes for Research.

Supports to Prepare Students for Effective Workplace Learning Experiences

Beyond the competencies needed to effectively complete, learn from, and develop new pathway-specific skills and knowledge, students often need to be supported to engage productively in work-based learning experiences. Supports in this learning domain include the acquisition of an understanding of career opportunities, workplace etiquette, and job site expectations. Site leaders and support providers report that preparing students for the workplace may include helping students to develop a career focus or purpose in advance of a jobsite placement so as to maximize their workplace learning. Preparatory support activities often also include induction that emphasizes student safety and well-being, as adolescent learners are often vulnerable in the workplace owing to their relative lack of experience and level of social and emotional maturity. Other sites provide for regular post-placement sessions with students to review the workplace experience, and optimize learning opportunities, and to enable reporting and school staff follow-up regarding inappropriate or negative workplace experiences.

While there is no universally prescribed list of student-level supports, a set of promising practices emerging from the available literature and case studies is delineated below:
• Mentoring and career counseling by teachers and community members about career pathways and workplace behaviors and expectations, as well as the "big picture" (the relationship between preparation for the workplace the short- and long-term impact on the student's educational/career path; the impact of the experience on the workplace supervisor/mentor; and the relationship between the school and community partners).
• Exposure to an array of opportunities that may be unfamiliar to students (to ensure that students are not limited to work experiences of which they have prior knowledge).
• Job shadowing and field trips, offering students the chance to experience "real world" workplace settings and to spend time with community members outside the school site.
• Job search support through coaching or workshops, focusing on topics such as resumé development, making cold calls, "dressing for success," and mock interview facilitation.
• Coaching or workshops related to professional behavior (e.g., arriving on time, clocking in, making eye contact, speaking clearly and at an appropriate volume, making small talk, corporate etiquette, social skills) and making presentations to groups or individuals.
• Training and workshops related to workplace expectations, norms, standards, challenges, and opportunities.

Example Supports for Technical Learning

Support	Student/Individual	School/Setting	District/System
• In-class opportunities for practice and mastery • Trainings, workshops, or classes for students • Mentoring or tutoring related to career-specific research, problem, or project • Faculty-supported student enterprises and experiences that build career-specific skills • Preparation to meet workplace requirements, with precise content determined to meet requirements of field • Opportunities for peer collaboration • Scaffolded curriculum • Guidance, instruction, and assessment from supervisors • Feedback on projects from professionals	Students are supported to master technical skills; enhance academic knowledge where necessary to thrive in workplace; gain academic motivation.	School works closely with employers to identify critical career-specific skills and knowledge, and supports teachers to be able to offer individual supports and classroom experiences that prepare students to excel in work-related tasks.	District provides support for schools related to teacher training; supports schools to identify career-specific skills; provides resources necessary to ensure skill acquisition, such as lab space or computer hardware and software.

• Intentional mentoring by caring adults who embrace a belief system that values the potential of each student to succeed in the workplace, related to specific internships or work placement and developed in close collaboration between the school (often supported by the district) and community members.
• Advising from school staff with multiple roles (such as connecting students to appropriate workplace learning, assistance developing plans and contact lists related to internship searches, and support in addressing challenging workplace situations).
• Time for students to meet with school advisors about out-of-school learning to ensure progress toward goals and shared expectations, in conjunction with communication among students, supervisors, and internship teachers to allow for clarity and agreement on expectations for each.
• Understanding of, and resources and referrals related to, students' basic needs to ensure equitable opportunities for success in the workplace (e.g., transportation, appropriate clothes, health and wellness programs, food and shelter).

To effectively design and implement supports that enhance students' workplace competencies, schools and districts have important roles to play. Promising system-level practices include:
• Implementation of a flexible school schedule that allows for internships and other community-based experiences (including time for related supports).
• Personnel, time, and resources dedicated to ensuring that students are able to select internships that reflect their interests; and to incorporate work experience into their learning plans.
• Resources and policies that emphasize equity in placement, addressing (and eliminating) biases and inherent tendencies to place "better" students in internships in order to maximize chances of successful employer experiences.
• Dedicated staffing and resources for internship development and school-site supervision/mentoring for students in placements ("internship or work-based learning coordinator" or "employment outreach specialist"); staff responsibilities may include acting as an interface between the student and the supervisor, as well as providing the student with myriad supports (e.g., transportation arrangements, integration of workplace experience with educational goals).
• Community advisory committees to provide connections to mentors, conduct mock interviews, facilitate field trips, and support outreach for career events, job shadows, and internships.
• Partnerships with CBOs that provide training for students in workplace skills (e.g., communication, working well with others).
• Identification of, and commitment to, provision of training and coaching for community/work-based mentors and supervisors (based on the understanding that there are certain skills, mindsets, and cultural competencies required to be an effective mentor).

• An approach to development and implementation of a set of supports for workplace learning that is closely integrated with supports for academic learning, technical learning, career and college knowledge, and social and emotional learning; and that is underpinned by a commitment to a safe and supportive school climate.

Additional Resources:
• Cervone, B. & Cushman, K. (2012). Teachers at Work: Six Exemplars of Everyday Practice. Students at the Center: Competency Education Research Series. Boston, MA: Jobs for the Future.
• Richardson, N. & Feldman, J. (2014). Student-Centered Learning: Life Academy of Health and Bioscience. Stanford, CA: Stanford Center for Opportunity Policy in Education.
• Saunders, M., Hamilton, E., Fanelli, S., Moya, J., Cain, E. (2013). Linked Learning: A Guide to Making High School Work. Los Angeles, CA: UCLA's Institute for Democracy, Education, and Access.
• Hoffman, N. (2015). Let's Get Real: Deeper Learning and the Power of the Workplace. Students at the Center: Deeper Learning Research Series. Boston, MA: Jobs for the Future.

Example Supports for Workplace Learning

Support	Student/Individual	School/Setting	District/System
• Internships, including mentoring and support by supervisors • Career counseling and mentoring by teachers, academic counselors, and community members • Strategies for communication, collaboration, and problem-solving • Trainings and workshops for students related to workplace expectations; e.g., norms, standards, challenges, opportunities. • Job search support (including identification of appropriate experiences and placemement)	Students are ensured that workplace experiences provide best possible support for their academic and career success; gain understanding related to workplace norms and requirements.	School manages relationships between organizations, business community, and other partners; supports, recruits, and trains supervisors to be good mentors; commits to equity and excellence, including support for, and management of, relationship between student/employee and supervisor/employer.	District provides coaching and support for schools related to internships, ensuring equity and excellence; provides consistent communications with community partners; manages school-employer relationships; prepares employers to work with students and negotiates learning expectations; maintains partnerships with local postsecondary institutions.

Supports that Foster the Development of College and Career Knowledge

CAREER KNOWLEDGE

Students' decisions about how to prepare for and pursue career and other postsecondary options are shaped at least in part by their interests and goals for the future. Thus, the intentional development of career knowledge — opportunities and requirements for entry into various professions or trades — is a critical step toward making informed decisions about career plans. Linked Learning places workplace learning at the core and thus sets the stage for students to gain career knowledge. As noted earlier, Linked Learning opportunities in community-based settings such as internships or other work experiences can enable students to build positive relationships with adults in a wide range of professions. This enhances social and emotional competencies, while expanding a student's perspective and knowledge of postsecondary education and career options. It is also a timely point of intervention given the fact that middle adolescence (high school age) is a time when youth gain the ability to plan for the future (Halpern, Heckman, & Larson, 2013), and research indicates that having a post-graduation plan is a predictive indicator of college readiness (John W. Gardner Center for Youth and their Communities, 2014). In addition to enhancing their sense of work as a future option, relationships with supervisors and others at the job setting may offer opportunities for students to begin to gather specific college knowledge, such as educational requirements for certain career pathways.

College knowledge refers to the information "formal and informal, stated and unstated, necessary for both gaining admission to and navigating within the postsecondary system" (Conley, 2007, p. 17). This includes information about:

• The process of college admissions, including curriculum, testing, and application requirements.
• The full array of postsecondary options available, including vocational and career schools, two- and four-year colleges, and universities.
• The set of schools that constitute a good match based on the academic, social, and personal needs of the student.
• Understanding how the culture of college (values, expectations, behaviors) is different from that of high school.

Questions about how to pay for college and the process of applying for financial aid play a prominent role in student college-going behavior. In particular, completing the Free Application for Federal Student Aid (FAFSA) is the "first and most important step" for students to seek financial assistance for college (Davidson, 2013, p.38) and a strong predictor of college attendance (Roderick, Nagaoka, Coca, & Moeller, 2008). Yet, research shows that a large proportion of students in the lowest income range — the group most in need of financial aid and most likely to receive it — do not complete a FAFSA (King, 2006) and that FAFSA's complexity and length (more than 100 questions eliciting information on family income, assets, and family composition) deters many low income, first generation, and minority students from applying (National Economic Council, 2009).

The 2009 "What Works Clearinghouse" Practice Guide (Tierney, Bailey, Constantine, Finkelstein, & Hurd, 2009) advances the following recommendations for how high schools and districts can promote college and career knowledge:
• Provide hands-on opportunities for students to explore different careers, and assist them in aligning postsecondary plans with their career aspirations.
• Ensure that students understand what constitutes a college-ready curriculum by ninth grade.
• Provide mentoring for students by recent high school graduates who enrolled in college or other college-educated adults.
• Facilitate student relationships with peers who plan to attend college through a structured program of extracurricular activities.
• Engage and assist students in completing critical steps for college entry.
• Ensure students prepare for, and take, the appropriate college entrance or admissions exam early.
• Assist students in their college search.
• Coordinate college visits.
• Assist students in completing college applications.
• Increase families' financial awareness, and help students apply for financial aid.
• Organize workshops for parents and students to inform them prior to the 12th grade about college affordability, scholarship and aid sources, and financial aid processes.
• Help students and parents complete financial aid forms prior to eligibility deadlines.

Based on their qualitative research, Welton and Martinez (2013) argue for a culturally responsive approach to promote college access among students of color, one that takes into account their context and cultural knowledge. Grounded in the suggestions of the high school students of color who participated in their research, Welton and Martinez provided the following recommendations: a) establish relationships built on trust and genuine caring; b) integrate college-level work and resources into all courses; and c) encourage students to earn college credit in high school. Further, Welton and Martinez advanced the following "researchers' recommendations:"
• Provide increased college supports for immigrant students and their families.
• Ensure that all school personnel recognize and validate that students of color possess college assets and potential.

Additional Resources:
• Bettinger, E.P., Long, B.T., Oreopoulos, P., & Sanbonmatsu, L. (2012). The role of application assistance and information in college decisions: results from the HR Block FAFSA experiment. Quarterly Journal of Economics, 127(3), 1205-1242.
• George-Jackson, C. & Gast, M. J. (2015). Addressing Information Gaps: Disparities in Financial Awareness and Preparedness on the Road to College. Journal of Student Financial Aid, 44(3), 3.

• Holland, N. E. (2010). Postsecondary education preparation of traditionally underrepresented college students: A social capital perspective. Journal of Diversity in Higher Education, 3(2), 111–125.

• Venezia, A. & Kirst, M. W. (2005). Inequitable Opportunities: How Current Education Systems and Policies Undermine the Chances for Student Persistence and Success in College. Educational Policy, 19(2), 283–307.

• Wimberly, G. L. & Noeth, R. J. (2005). College readiness begins in middle school. Washington, DC: ACT.

Example Supports to Advance College and Career Knowledge

Support	Student/Individual	School/Setting	District/System
Application Assistance and Financial Aid			
• Information and assistance • Personalized college/career counseling • Addressing "under match" • College essay writing • College readiness services • SAT / ACT / AP test prep programs	Students and their families receive technical assistance in various aspects of college and financial aid applications, including information about appropriate options.	Teachers / counselors acquire and maintain knowledge, requiring time and resources; school develops appropriate programs.	District provides schools with necessary resources to support a comprehensive and effective set of interventions.
College and Career Knowledge and Expectations			
• Individual assessment and consultation • Senior year and pre-college counseling • Mentoring by community members, local college students, or teachers • Programs for particular student groups • College / career information center or program • Alumni presentations • Family engagement • Messaging/social media • Creating a college-going culture • College visits • College prep websites	Students receive counseling and mentoring that address their needs and aspirations, set high expectations for success, and provide motivation; expand student / family knowledge of opportunities and long-term outcomes associated with post-secondary education broadly, as well as individual institutions; expand understanding of career pathways.	School administrators, teachers, and support staff create a college-going culture and set high expectations of all students; support the counseling/ mentoring program by providing adequate time and resources; establish relationships with 2- and 4-year postsecondary institutions; prioritize family engagement.	District provides school with necessary resources; supports community-wide culture of college readiness and college completion; establishes/ maintains partnerships with local post-secondary institutions.

Supports that Foster Social and Emotional Learning

As elaborated in the main body of this report, extensive research indicates that social and emotional competencies predict positive adult outcomes and that they are malleable — they can change in response to educational interventions and are shaped by life experiences (Pellegrino & Hilton, 2012; Farrington, Roderick, Allensworth, Nagaoka, Keyes, Johnson, & Beechum, 2012). Experiencing success in postsecondary education, careers, and life, requires that students acquire a range of social and emotional competencies, including the ability to manage their own emotions, work well with others, and persist in the face of setbacks. Given the rapidly emerging educator interest and knowledge in this domain of learning, we expand our analysis here to illuminate important aspects of social and emotional learning (SEL) as well as point to promising practices for advancing SEL skills in schools.

KEY SOCIAL EMOTIONAL COMPETENCIES

Academic Mindsets

School Connectedness. Research shows that students who feel connected to school are less likely to engage in risk behaviors, such as early sexual initiation, drug use, and gang involvement, and are more likely to have better school attendance and do better in school. The national Centers for Disease Control and Prevention (CDC) recommend that schools use the following strategies to increase the extent to which students feel connected to school:
• Create decision-making processes that facilitate student, family, and community engagement; academic achievement; and staff empowerment.
• Provide education and opportunities to enable families to be actively involved in their children's academic and school life.
• Provide students with the academic, emotional, and social skills necessary to be actively engaged in school.
• Use effective classroom management and teaching methods to foster a positive learning environment.
• Provide professional development and support for teachers and other school staff to enable them to meet the diverse cognitive, emotional, and social needs of children and adolescents.
• Create trusting and caring relationships that promote open communication among administrators, teachers, staff, students, families, and communities.

Stereotype Threat. Students from groups that have been negatively stereotyped about their intellectual ability are particularly vulnerable to feeling disconnected from school. Findings from research on stereotype threat (Steele & Aronson, 1995; see Nguyen & Ryan, 2008 for a meta-analysis) indicate that the fears minority students experience may undermine their performance on academic tasks and ultimately erode their commitment to education and sense of belonging at school. There are several strategies that educators can use to reduce stereotype threat.

Additional Resources:
• ReducingStereotypeThreat.org: www.reducingstereotypethreat.org
• Farrington, C. A. (2013). Academic mindsets as a critical component of deeper learning. Chicago, IL: University of Chicago.

Growth Mindset. Research based on the work of psychologist Carol Dweck has shown that, compared to peers who view their academic ability as a fixed quantity that cannot be changed (fixed mindset), students who believe they can increase their academic ability with effort (growth mindset) are more likely to do well in school (Dweck, Walton, & Cohen, 2011). Providing students with the right kinds of praise and encouragement and emphasizing the value of mistakes on the road to learning are examples of practices that promote a growth mindset culture in the classroom.

Additional Resources:
• Dweck, C. S. (2015, September 15). Carol Dweck revisits the 'Growth Mindset'. Education Week, 35(5), 20-24.

Academic Self-Efficacy. Academically confident students are more likely to embrace challenging tasks, persist in the face of obstacles, and succeed academically (Klassen & Usher, 2010; Wigfield, Eccles, & Rodriguez, 1998) than those who lack confidence in their academic abilities. Showing students how new assignments resemble recent work on which they succeeded and comparing student performance to the goals set for that student rather than comparing the student to others are examples of teacher practices that promote self-efficacy.

Additional Resources:
• Margolis, H. & McCabe, P.P. (2006). Improving self-efficacy and motivation: What to do, What to say. Intervention in school and clinic, 41(4), 218-227.

SELF-REGULATED LEARNING AND STUDY SKILLS

Research suggests that students who are self-regulating learners set more ambitious learning goals for themselves and achieve at higher levels in the classroom (e.g., Zimmerman & Martinez-Pons, 1986; Zimmerman & Risemberg, 1997). Zumbrunn and colleagues (Zumbrunn, Tadlock, & Roberts, 2011) identified the following strategies to create self-regulating learning environments:
• Explicitly explain strategies to students and model their use.
• Guide students in setting goals and monitor strategy use and progress toward goals.
• Provide feedback on what students did well, areas where they need to improve, and steps they can take to improve.
Study skills can be taught using four clusters of related strategies (Gettinger & Seibert, 2002):
• Repetition or rehearsal strategies.
• Procedural or organization-based study skills (e.g., time management, material organization, study habits).
• Cognitive-based study skills (e.g., acquire background knowledge, connect new ideas to what is already known, and develop new schemata).
• Meta-cognitive study skills (e.g., ability to assess the need for studying, plan, implement, monitor, and evaluate their study approaches).

Additional Resources:
• Nilson. L.B. (2013). Creating Self-regulated Learners: Strategies to Strengthen Students' Self-awareness and Learning Skills. Stylus Publishing, LLC.
• Schunk, D.H. & Zimmerman, B.J. (Eds.). (1998). Self-regulated Learning: From teaching to self-reflective practice. New York: Guilford Press.

EMOTION REGULATION

Emotion regulation refers to "the processes responsible for monitoring, evaluating, and modulating emotional reactions in order to accomplish individual goals and facilitate adaptive social functioning" (Larsen, Vermulst, Geenen, van Middendorp, English, Gross, et al., 2013, p. 185). Emotion regulation involves keeping in check strong and unpleasant feelings that may lead to counterproductive social responses and behavior (Ormrod, 2008).

Additional Resources:
• Stepping Stones: A Resource on Youth Development by the Ontario Ministry of Children and Youth Services [Link]

SOCIAL SKILLS

Social skills refer to the ability to interact effectively and to establish and maintain healthy relationships with diverse individuals and groups. They include communication skills, collaborative skills, and conflict resolution (CASEL, 2015).

Additional Resources:
• Bell, S. (2010). Project-based learning for the 21st century: Skills for the future. The Clearing House, 83(2), 39-43.
• Slavin, R. E. (2014). Making cooperative learning powerful. Educational Leadership, 72(2), 22–26.
Strategies and Practices that advance SEL skills

ADVISORIES

While it takes different forms at different schools, the establishment of advisory programs is a common element at many Linked Learning sites (Saunders et al., 2013), as well as in high schools that embrace a commitment to social and emotional learning and student-centered learning (Cervone & Cushman, 2015). Advisories allow for identification of a range of students' needs (from academic support, to basic needs, to social and emotional skills), through the establishment of relationships with caring adults and peers. In this way, the concept and practice of advisories (no matter the precise format) establishes a platform for the development of the key social and emotional competencies described above.

Additional Resources:
• Makkonen, R. (2004). Advisory Program Research and Evaluation. Coalition of Essential Schools. Retrieved from archive. essentialschools.org.

SOCIAL AND EMOTIONAL LEARNING (SEL) PROGRAMS

Research evidence indicates that social and emotional skills can be intentionally developed through well-designed, well-implemented SEL programs (Jones & Bouffard, 2012; Farrington et al., 2012). Based on their examination of 213 school-based, universal SEL programs, Durlak and colleagues (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011) concluded that students who participated in these programs demonstrated significantly improved social and emotional skills, attitudes, behavior, and academic performance compared to peers who did not. In particular, the study by Durlak et al. found positive results across six outcome categories: social and emotional skills (e.g., perspective taking, conflict resolution, goal setting, decision making); attitudes toward self and others (e.g., self-efficacy, school bonding); positive social behavior (e.g., getting along with others); conduct problems (e.g., aggression, disruptive behavior, school suspensions); emotional distress (e.g., depression, anxiety); and academic performance.

Durlak and his colleagues found that the most effective programs were those that incorporated four key elements represented by the acronym SAFE:
• Sequenced activities that led in a coordinated and connected way to skills
• Active forms of learning
• Focused on developing one or more social skills
• Explicit about targeting specific skills

Recently, the Collaborative for Academic, Social, and Emotional Learning (CASEL, 2015) published a guide to effective middle and high school social and emotional programs. The guide provides information on nine dedicated SEL programs that meet CASEL's criteria for the highest level of quality. They are programs designed to: "(a) intentionally and comprehensively promote students' development across [CASEL's] five social and emotional competency clusters; (b) engage students in their own social and emotional development by promoting awareness (e.g., through discussion or reflection) and providing opportunities for practice; and (c) offer programming over multiple years" (p. 3).

Additional Resources:
• Collaborative for Academic, Social, and Emotional Learning & University of Illinois at Chicago Social and Emotional Learning Research Group. (2015). Effective Social and Emotional Learning Programs: Middle and High School Edition. Chicago, IL: Collaborative for Academic, Social, and Emotional Learning
• Gresham, F.M. & Elliott, S.N. Social Skills Improvement System Overview: Linking Assessment Results to Practical Interventions. Pearson.

POSITIVE BEHAVIORAL INTERVENTIONS AND SUPPORTS (PBIS)

PBIS focuses not only on the behavior of individual students but also on the larger context of the classroom, school, and district (Sugai, Horner, Dunlap, Hieneman, Lewis, Nelson, et al., 2000). PBIS is an application of the Response to Intervention (RtI) system to social behavior and, as such, is grounded on principles such as universal screening, continuous progress monitoring, data-based decision making, and evidence-based interventions (www.pbis.org/school/swpbis-for-beginners/pbis-faqs). As is the case for RtI, PBIS is a three-tiered approach, where Tier 1 aims at prevention and supports all students; Tier 2 targets students (10-15%) not responding to primary prevention efforts who need additional support to reach behavioral goals; and Tier 3 is reserved for those students with the greatest need (5%) who require more intensive supports (Lane, Menzies, Ennis, & Bezdek, 2013).

Additional Resources:

• Check and Connect: A Comprehensive Student Engagement Intervention http://checkandconnect.umn.edu

• Check In Check Out (CICO) Behavioral Education Program

• Positive Behavioral Interventions & Supports: High School

• Hawken, L.S., Aldolphson, S.L., MacLeod, K.S., & Schumann, J. (2009). Secondary-tier interventions and supports. In W. Sailor, G. Dunlop, G. Sugai, & R. Horner (Eds.), Handbook of positive behavior support (pp. 395-420). New York, NY: Springer Publishing.

• Horner, R.H., Sugai, G., & Anderson, C.M. (2010). Examining the evidence base for school-wide positive behavior support. Focus on Exceptional Children, 42(8), 1-14.

Restorative Justice practices are increasingly being introduced in schools around the country (including the Oakland, San Francisco, and Los Angeles Unified School Districts) as an alternative to zero tolerance punitive discipline, which often fails to reduce problem behaviors and may often exacerbate them (American Psychological Association Zero Tolerance Task Force, 2008). Restorative Practices are based on three key principles: 1) repair harm; 2) reduce risk; and 3) empower community (Pavelka, 2013). Emerging research evidence positions restorative practice as a promising alternative to zero tolerance (American Psychological Association Zero Tolerance Task Force, 2008).

Additional Resources:

• Mirksi, L. (2011). Building safer, saner schools. Educational Leadership, 69, 45-49.

INTEGRATION OF SEL WITH DAILY SCHOOL PRACTICE

As a counterpoint to the CASEL approach, which emphasizes implementation of dedicated SEL programs in schools, Jones and Bouffard (2012) argue that, to maximize the promotion of SEL competencies, SEL needs to be incorporated in all aspects of educational practice. In particular, they advocate for a continuum of school SEL approaches "that range from routines and structures used on a daily basis, to schoolwide efforts to promote a respectful and supportive school culture, to universal SEL programming for all students, to intensive services for students in need of most support" (p. 12). The recommendations advanced by Jones and Bouffard (2012) are consistent with those emerging from Hamedani's and Darling-Hammond's (2015) in-depth study of three urban high schools that use a social justice education perspective to inform social and emotional learning. Both studies stress that effective integration of SEL development into daily educational practice requires key conditions to be in place, including leadership commitment, training, and support for educators, including support for educators' own SEL skills.

Additional Resources:

• Cervone, B. & Cushman, K. (2015). Belonging and Becoming: The power of social and emotional learning in high schools. Cambridge, MA: Harvard University Press.

Example Supports for Social and Emotional Learning

Support	Student/Individual	School/Setting	District/System
DEVELOPMENT OF ACADEMIC MINDSETS • School connectedness • Growth mindset • Academic self-efficacy / agency • Interest and relevance • Intellectual openness **DEVELOPMENT OF SOCIAL AND EMOTIONAL SKILLS** • Academic perseverance • Self-regulated learning and study skills • Emotion regulation / conscientiousness • Social skills / social awareness / respect for diversity • Decision making • Academic behaviors **SEL PROGRAMS AND ACTIVITIES** • Advisories (including relationship-building, goal setting and mapping, and setting high expectations) • Positive Behavioral Interventions and Supports (PBIS) • Restorative Justice **PHYSICAL SAFETY, EMOTIONAL SECURITY, BASIC NEEDS** • Rapid and empathetic responses • Mentor counselors • Mental health interventions • Managing of absences • Social justice / equity emphasis • Afterschool / weekend opportunities • Anti-gang programs • Health care • Information and Referrals (e.g, housing) • Emergency Responses (e.g., food) **STUDENT ENGAGEMENT** • Collaborative learning / classroom strategies • Peer mentoring / tutoring (students / peers) • "Rites of passage" or other team building • Respecting student voice • Effective communications • Exposure to cultural activities **FAMILY ENGAGEMENT** • Ongoing contacts and communication, including formal and informal (at school and at homes) • Student-led parent conferences • School activities / parent organizations • Restorative Justice programs for families	Students build healthy, supportive relationships with peers and adults (teachers, counselors) that support the development of academic competencies; develop critical social and emotional competencies through in-class and out-of-class experiences. Students are engaged in school community; benefit from sense of belonging and "safe place" to develop identity. Students participate in interventions that are fair, defined, and respectful; experience a climate that reflects school's commitment to physical safety, emotional security, and social justice; gain exposure to new experiences, feel trusted, and benefit from safe and respectful environment. Students experience new ways to engage with adults (school staff and parents/guardians) and benefit from parents' enhanced connection to school and understanding of academic expectations, challenges, and opportunities to support their children. Students gain sense of long-term potential for academic and career success.	School integrates the teaching and reinforcing of SEL skills into their mission and daily practices; provides adult training and support for developing students' SEL skills; provides support for adults' own SEL skills; develops social emotional learning programs tailored to the needs of its student population; provides adequate time, resources, and training. School commits to culture of relationship-building, acceptance, and inclusion; creates culture of high expectations for all students; encourages classroom strategies that enhance academic engagement and sense of support; operationalizes two-way communication. School commits time and resources to restorative justice and PBIS practices; pursues opportunities to open campus for students after hours; creates opportunities for cultural experiences; communicates expectations with parents/guardians and students. School implements program of family/school engagement.	District provides school with necessary resources; commits to relevant assessment that includes SEL. District provides resources to support communications. District provides resources for schools to implement programs and physical improvements to support initiatives; and provides outreach related to expanding cultural experiences.

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