Removing Roadblocks to Rigor

Linking Academic and Social Supports to Ensure College Readiness and Success
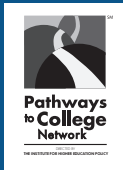
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Pathways to College Network

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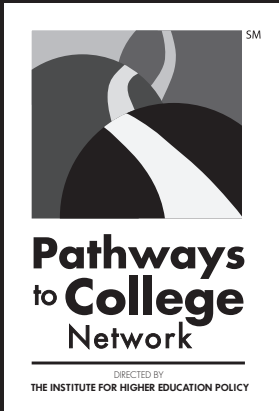
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Executive Summary

Today's leaders in government, higher education, secondary schools (middle and high school), and local communities are constantly seeking new ways to improve student achievement at all levels and to increase higher education attainment. To accomplish these important goals, education stakeholders have pushed to increase academic rigor and set high expectations for all students. Much progress is being made in promoting academic rigor in schools and raising standards for college degree attainment. However, less attention has been given to the academic, social, developmental, and financial needs of students that must be addressed in order for them to respond to high expectations and achieve rigorous academic standards. Without strategies to support students in nurturing their talents, building new skills, and mastering tough challenges, many will be unable to meet these increased academic demands.

The Pathways to College Network—a partnership of national organizations and funders working to improve postsecondary opportunities for underserved populations—is undertaking a national initiative to ensure that such student needs are addressed. As a first step, Pathways commissioned this paper to focus on one piece of the initiative: an understanding of what we mean by "academic and social support." The paper proposes a unifying framework in which academic and social support policies and practices go hand-in-hand with increased expectations and student success. Social support builds the networks, connectedness, and motivation which underpin students' willingness and capacity to take advantage of academic strategies such as tutoring, learning communities, and other helpful policies and practices. In other words, social support provides the foundation on which students are most likely to benefit from academic support strategies.

A *network* of academic and social supports is critical to ensure that all students—regardless of their socio-economic background or previous educational experience—have the opportunity to succeed at high levels. However, conversations about academic rigor often miss the importance of providing adequate support for students to meet such standards. A detailed understanding of the types of academic and social support and how they work in tandem with academic standards must be a part of these conversations. This paper offers a broad definition of academic and social support aligned with rigor, as follows:

> *Academic and social support comprises intentional strategies that enable students at all levels to benefit from academically rigorous curricula. These strategies are interrelated, developmentally appropriate, and provide integrated, coordinated, and comprehensive support in order to improve student achievement. Academic and social support strategies fall into one or more of the following categories: emotional, informational, instrumental, appraisal, and structural.*

Adapted from a previous typology developed by House[1], these categories are not mutually exclusive and reflect the interdependent dynamics of an integrated concept of academic and social support.

There are numerous, specific examples of support strategies in schools and higher education institutions that illustrate the various aspects of academic and social support included in this definitition. While it is helpful to categorize these examples in order to best inform policies and practices, many of them fall into more than one category.

Emotional support

Emotional support fosters self-esteem and trust by providing students with empathy, caring, love, respect, concern, and a willingness to listen. Examples of emotional support include:

- Individual counseling
- Group and peer support
- Mentoring
- Social-emotional standards
- Proactive advising
- Activities that develop strong, supportive interpersonal connections among students, parents, faculty, and school staff

Instrumental support

Instrumental support is perhaps the most "active" type of support. This category encompasses specific behaviors that help students reach a particular outcome or goal, including giving students the chance to spend time with a caring adult, as well as providing them with in-kind or monetary support, or other types of direct help. Examples of instrumental support include:

- Workshops that teach study skills, financial literacy, test-taking strategies, time management, critical reading, career exploration, organization, and planning skills
- Summer transition programs – middle to high school, high school to college, two-year to four-year colleges, undergraduate to graduate school
- Tutoring programs, on-line tutorials, math, and writing centers
- Supplemental course instruction to improve students' academic performance
- Developmental guidance curricula

- Offering college credit courses for high school students (IB, AP, dual enrollment)
- State and national career development standards
- Need-based financial aid
- ACT/SAT/AP/IB test fee waivers
- Admissions test preparation

Informational support

Informational support refers to an exchange of information that can help students meet academic goals by providing them with advice, suggestions, directives, and information. Examples of informational support include:

- Education plans for achieving college goals
- Advisories focused on preparing for future options and success
- Freshman orientation programs, success seminars
- Academic advising
- Job shadowing and internships
- Guidance with college admission and financial aid application process
- College planning and financial aid information for parents
- Career exploration and placement services
- Early college awareness programs, campus visits

Appraisal support

Appraisal support involves the transfer of information derived through assessment; it provides affirmation, feedback, social comparison, and facilitates self-evaluation. Examples of appraisal support include:

- Assessments of student progress toward meeting academic standards that trigger support for struggling students
- PSAT, ACT's PLAN, Accuplacer, WorkKeys, and the Collegiate Learning Assessment to identify students' academic strengths and needs
- Data systems to help monitor student performance
- Early warning systems with mid-term reports sent to parents

- Mid-semester progress reports sent to students and their academic advisors
- Early subject area testing program to identify students with potential for AP/IB participation
- Activities that recognize academic achievement

Structural support

Structural support reflects formal and informal structures that embed support into social institutions or programs. These structures foster positive outcomes for students, such as community and school engagement, self-confidence, resiliency, social networking, internal motivation, and academic achievement. Examples of structural support include:

- Full service schools
- Student support services aligned with educational instruction
- Culturally relevant practices and strategies
- Learning centers that provide tutoring, skill-building, and other academic support
- Ninth grade academies and first-year college programs
- Small learning communities
- College-going culture in middle and high schools
- Strong partnerships between academic and student services offices
- Offices of postsecondary planning and support
- Dropout prevention and recovery programs

Recommendations for Educators and Policymakers

Ultimately, policies and practices that integrate a range of support strategies hold the most promise for increasing student achievement and success. Students need a network of individuals and resources embracing multiple strategies to provide them with effective academic and social supports. By fostering self-confidence, resiliency, and internal motivation, social support creates the conditions that allow students to take advantage of effective academic support strategies and develop the

skills, knowledge, and abilities necessary for them to realize their hopes and dreams.

Recommendations for school and higher education leaders and policy-makers who wish to implement research-based academic and social support strategies incude:

- Integrate and coordinate academic and social support strategies focused on enabling students to meet rigorous academic standards.
- Enhance training and make more efficient use of school counselors and college support services staff, especially those who work with underserved students.
- Infuse principles of adolescent development into training programs for teachers, principals, and higher education faculty professional development programs.
- Provide more incentives for secondary teachers and postsecondary faculty to engage with students in meaningful ways.
- Make timely, frequent assessments a priority so that secondary school teachers, college faculty, and support staff can identify and address academic problems to help students early on.
- Pay special attention to institutional context and how social relationships within institutions foster emotional support and academic achievement.

Introduction

Most scholars, practitioners, and policymakers in education agree that rigorous academic preparation is essential for today's young people to meet the demands of 21st century life and careers. Unfortunately, the present reality is that far too many students falter at various stages along the "education pipeline" from middle and high school through college. One-third of all ninth-graders in the United States do not finish high school in four years. Only 60 percent of high school graduates go to college full-time the following fall, and about one-fifth of these students earn associate's degrees in three years or bachelor's degrees in six years.[2] Many of those who drop out along the way are students who are underserved by the nation's education system, including low-income students, under-represented minorities, those who are the first generation in their families to go to college, and students with disabilities.

Leaders in government, higher education, secondary schools (middle and high schools), and local communities have sought new ways to improve student achievement at all levels and to increase higher education attainment. To accomplish these important goals, education stakeholders have pushed to increase academic rigor and set high expectations for all students. Much progress is being made in promoting academic rigor in schools and raising standards for college degree attainment. However, less attention has been paid to the academic, social, developmental, and financial needs of students that must be addressed in order for students to respond to high expectations and to achieve rigorous academic standards. Without strategies to support students in nurturing their

talents, practicing new skills, and mastering tough challenges, many will be unable to meet increased academic demands.

Concerned about the lack of focus on students' needs for support in order to meet rigorous academic standards at the secondary and postsecondary levels, the Pathways to College Network—a partnership of national organizations and funders working to improve postsecondary opportunities for underserved populations—is undertaking a national initiative to ensure that such student needs are addressed. The initiative will engage policymakers and education leaders in providing academic, social, and financial support as a major strategy to increase the numbers of underserved students graduating from high school college-ready and completing college degrees. As a first step in this effort, Pathways commissioned a paper to focus on one piece of this initiative: an understanding of what we mean by "academic and social support" that enables students from economically and educationally disadvantaged backgrounds to succeed in academically rigorous programs.

This paper offers a unifying framework in which academic and social support policies and practices go hand-in-hand with increased expectations and student success.[i] It proposes

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[i] Though financial support is beyond the scope of this paper, it is important to emphasize the success of all curricular improvements and support strategies rest on the availability of adequate financial resources to cover college costs. Additional research is necessary to explore the fundamental relationship among financial, social, and academic support strategies to help students meet high academic standards throughout the educational pipeline.

a broad definition of integrated academic and social support that helps all students meet the demands of rigorous academic curricula. To inform policies and practices, the paper also provides examples of effective academic and social support strategies at both the secondary and postsecondary levels.

What is academic and social support? Most discussions of academic and social support suggest that they are two separate constructs, usually offered—and perhaps experienced—independently of one another.

- *Academic support* typically refers to the formal and informal strategies that build, strengthen, and promote students' mastery of subject matter and skill development through deliberate activities, structures, policies, and expectations.

- *Social support* consists of strategies that foster and fortify social networks, school-connectedness, self-confidence, and academic motivation through intentional services, behaviors, structures, and expectations.

This paper takes a more unitary approach to the concept of academic and social support and offers an integrated definition that attempts to capture their dynamic interaction. Social support builds the networks, connectedness, and motivation which underpin students' willingness and capacity to take advantage of academic strategies such as tutoring, learning communities, and other helpful policies and practices. In other words, social support provides the foundation on which students are most likely to benefit from academic support strategies.

An important element of this unifying framework of academic and social support is the notion that effective support strategies should incorporate the principles of youth development. Though we all know that fifth graders, twelfth graders, and college sophomores have very different academic and social needs, many education reform efforts

fail to take into account the developmental experience of children, adolescents, and young adults. Programs that incorporate the fundamentals of youth development promote the physical, psychological, social and cognitive competencies that facilitate a healthy transition to adulthood.

The academic and social support framework presented in this paper is a broad continuum, along which schools and higher education institutions have a signal opportunity to provide students at all educational levels the kind of academic and social support that best meets their developmental needs. To provide context for this framework, the paper uses research from multiple fields, including education, sociology, and psychology published in peer-reviewed journals, major policy reports, public opinion surveys, and other seminal work over the past 15 years.[ii] The first section reviews features of academic rigor as described in the research on college readiness and postsecondary learning engagement and success. The second section introduces an integrated definition of academic and social support to clarify what is meant by this concept. Then, to illustrate the concept in a more concrete way, the paper outlines promising policies and practices found in secondary schools and postsecondary institutions that can help high school and college students meet rigorous academic standards. Finally, the last section provides specific recommendations for practitioners and other stakeholders.

[ii] A complete annotated bibliography of research reviewed for this paper is available online at the Pathways to College Network's website (www.pathwaystocollege.net).

Features of Academic Rigor

The importance of rigorous academic learning experiences to prime students for future success is well documented. Common features of academic rigor include emphasizing vertical course alignment from pre-school through college; instituting a systemic, rigorous college-preparatory curriculum; promoting skills and habits that enable success in college and work; including assessment as part of a rigorous curriculum; and requiring students to complete challenging academic requirements.

Vertical alignment of courses

An important aspect of academic rigor is the need for the vertical alignment of courses from pre-school through college (P-16) so that completion of a course signifies students have mastered the content and skills they need to succeed at the next level in a subject or discipline. Curricular alignment is especially critical given that communication and collaboration across elementary, middle, and high schools or between postsecondary institutions and K-12 education are not pervasive features of the American education system.[3] This shortcoming of our overall P-16 system is underscored by findings from an extensive survey indicating that postsecondary instructors have far more specific expectations for college-preparatory coursework than high school teachers seem to identify as critical to their students' college-readiness.[4] This apparent gap in expectations may help to explain why so many students are inadequately prepared for the academic demands of higher education: approximately 43 percent of students at two-year colleges and 29 percent of students at four-year colleges are placed in remedial courses upon enrolling in postsecondary institutions.[5]

Curriculum content

There is fairly broad consensus as to which specific courses should be included in a rigorous college-preparatory curriculum. A high school course pattern defined as "rigorous" by numerous organizations—including High Schools That Work, the College Board, and ACT—calls for: four years of English; three years of social studies; four years of math, including geometry, Algebra I and II, and preferably at least one other advanced mathematics course, such as trigonometry, pre-calculus, calculus, or statistics; three years of laboratory science, including biology, chemistry and physics; and two years of foreign language.

Analysis of transcripts and other data from the National Education Longitudinal Study found that students who progressed beyond Algebra II in high school had greater momentum towards bachelor degree attainment than their peers. In addition, students who participate in certain gateway courses may significantly increase the probability of earning college degrees. For example, students who complete American Literature are six times more likely to finish college, students who take general chemistry are four times more likely, and those who complete pre-calculus, micro/macroeconomics, introduction to philosophy, or world civilization are more than three times as likely to graduate from a postsecondary institution than their peers who did not participate in these courses.[6]

Acquiring skills and knowledge

Despite the emerging consensus on what constitutes a college-preparatory curriculum, course completion alone does not necessarily

signify the mastery of certain subjects and/or acquisition of particular skills. Some advocates emphasize a primary focus on the acquisition of skills, knowledge, and habits leading to college and argue that academic rigor should be defined as the degree to which students are ready to succeed in college and work.[7] In 2003, the Standards for Success project developed a comprehensive set of college-readiness standards in six subject areas, focusing on the knowledge, skills, and cognitive strategies necessary for college-level success in these academic disciplines.[8] This project hypothesized that college-readiness has four facets: contextual skills and awareness; academic behaviors; key content; and key cognitive strategies.[9] Secondary school academic requirements that emphasize college-readiness have been embraced by some states in recent years. For example, Rhode Island has instituted performance-based graduation requirements that measure competencies, skills, and curricular knowledge instead of course completion.[10]

On the postsecondary level, several national organizations are working with higher education institutions to adopt rigorous standards for student learning outcomes in undergraduate majors, and in the areas of intellectual and practical skills, knowledge of human cultures and the physical and natural world, and personal social responsibility.[11] For example, the National Forum on College-Level Learning piloted the use of statewide assessments of student learning outcomes across public four-year higher education institutions to give policymakers a concrete sense of how well institutions were serving various groups and regions. By focusing on college-level learning, this information can also help policymakers track the degree to which students are being well-trained in professions that serve the state's welfare.

Assessment

Assessment is a key feature of a rigorous academic program. Constructive and consistent feedback allows students to monitor how well they are doing and gauge how much they still need to learn. Teachers also benefit from assessments that monitor student progress and indicate the effectiveness of various teaching approaches, and school districts and postsecondary institutions can use data gleaned from assessments to monitor academic progress on a larger scale and identify patterns and/or gaps in achievement among groups of students. In addition, assessment data at the secondary and postsecondary levels can be used to create "early warning systems" that identify students who—based on key indicators like test scores, grades, and attendance—may be at risk of dropping out.

Requiring challenging courses

Policy-related research on academic rigor calls attention to the importance of holding all students to high standards rather than allowing some students to progress through high school and higher education without mastering difficult academic work. Some argue that state policymakers should require completion of rigorous courses for high school graduation statewide, with students allowed to opt out only with parental consent. This position is predicated on the belief that all or most students can meet high academic expectations if given the opportunity to learn.

Each of these aspects of rigor speaks to the importance of policies and practices that emphasize high academic achievement in both secondary school and college. However, conversations about rigor often miss the crucial importance of providing adequate support for students to meet such standards. A network of academic and social supports is critical to ensure that all students—regardless of their socio-economic background or previous educational experience—have the opportunity to succeed at high levels. The following section explores the relationship between academic and social supports, proposes a unifying framework with five categories of academic and social support strategies, and offers an organizing definition for an integrated concept of academic and social support aligned with academic rigor.

A Unifying Framework and Organizing Definition

As noted earlier, most discussions of academic and social support categorize these strategies as separate entities, suggesting that such supports are commonly delivered and experienced independently of one another. In practice, however, academic and social supports are interrelated, intertwined, and experienced simultaneously. For example, one study of students and teachers in Chicago middle schools found that social support fosters academic motivation, builds confidence, and makes academic achievement attainable. Using Chicago Public Schools' data, researchers observed a positive relationship among strong social support, academically challenging work, and increased test scores. This suggests that social support builds psychological comfort that allows students to take risks, admit errors, ask for help, and learn from setbacks along the way to educational success.[12]

An important component of the proposed definition is the notion that effective academic and social support strategies should operate from a youth development perspective. Programs that embrace principles of youth development promote the physical, psychological, social, and cognitive competencies necessary for development across all areas of a young person's life. In addition to learning strategies that encourage emotional regulation, persistence, and motivation to learn, other important features of youth development include healthy behaviors, positive mental health, resilience, sense of purpose or religiosity, social competence, and creativity. Academic and social support strategies that incorporate all of these youth development principles stand the greatest chance of having a positive impact on classroom performance.

Accordingly, *developmentally appropriate* policies and practices targeted to help students successfully navigate transitions at crucial stages along the education pipeline—such as the progression from middle to high school, high school to postsecondary education, and two- to four-year colleges—are essential. The need for academic and social supports to be developmentally appropriate is underscored by the fact that adolescence in particular is a period of "storm and stress" characterized by heightened emotionality, mood swings, and increased conflict with parents and other authority figures.[13]

The impact of stress can be reduced by implementing social support that promotes internal resilience, making individuals better able to cope with stress and manage challenging transitions.[14] Resilient adolescents and young adults are less likely to be derailed from their academic goals. For example, extensive survey and interview data on high-achieving students of color who received Gates Millennium scholarships suggest that successful high school-to-college transitions hinged on students' academic preparation, internal motivation, resilience, and access to key sources of support (parents, friends, school personnel, and scholarship programs).[15] Developmentally appropriate academic and social supports— that take into account different stages of the maturation process and wide variations of youth experience—are especially critical for underserved students whose development is significantly influenced by the effects of poverty.

It is crucial that schools, community-based organizations, and colleges integrate and

coordinate their efforts to ensure that students benefit from academic and social support services offered at many points along the education pipeline. For instance, the Harvard Family Research Project promotes complementary learning, a systemic approach that intentionally integrates both school and non-school supports as a necessary condition for academic achievement.[16] In a group of high-performing New York City public schools—where students are "beating the odds" in terms of high school graduation, postsecondary enrollment, and success in their first year of college—teachers and parents collaborate to provide a comprehensive network of academic and social supports while setting and communicating high academic expectations. Tutoring, extended learning time, and mentorship are integrated into students' daily routines in and out of the classroom.[17] On the postsecondary level, a study of four-year colleges and universities with higher-than-predicted completion rates found that these institutions offered students integrated, high-quality support along with encouragement to engage with faculty and peers inside and outside the classroom.[18] Similarly, a study of community colleges found academic and social integration to be a key feature of program effectiveness.[19] Indeed, students all along the educational pipeline need a network of individuals and resources embracing multiple strategies in order to provide them with effective academic and social support leading to academic success.

According to James House, four different types of social support can mitigate the negative effects of stress on one's physical and psychological health: emotional, instrumental, informational, and appraisal support.[20] In order to provide a unifying framework for our integrated approach to academic and social support, we have adapted this typology and added a fifth category termed "structural" support. These categories are not mutually exclusive and reflect the interdependent dynamics of an integrated concept of academic and social support. Accordingly, we propose the following broad definition of academic and social support aligned with rigor:

Academic and social support comprises intentional strategies that enable students at all levels to benefit from academically rigorous curricula. These strategies are interrelated, developmentally appropriate, and provide integrated, coordinated, and comprehensive support in order to improve student achievement. Academic and social support strategies fall into one or more of the following categories: emotional, informational, instrumental, appraisal, and structural.

The five categories of support can be understood as follows:

- *Emotional support* fosters self-esteem and trust by providing students with empathy, caring, love, respect, concern, and a willingness to listen.

- *Instrumental support* is perhaps the most "active" type of support. This category describes specific behaviors that help students reach a particular outcome or goal, including giving students the chance to spend time with a caring adult, as well as providing them with in-kind or monetary support, or other types of direct help.

- *Informational support* refers to an exchange of information that can help students meet academic goals by providing them with advice, suggestions, directives, and information.

- *Appraisal support* involves the transfer of information derived through assessment; it provides affirmation, feedback, social comparison, and facilitates self-evaluation.

- *Structural support* reflects formal and informal structures that embed support into social institutions or programs. These structures foster positive outcomes for students, such as community and school engagement, self-confidence, resiliency, social networking, internal motivation, and academic achievement.

Promising Policies and Practices

To illustrate the various aspects of academic and social support included in this organizing definition, this section provides examples of support strategies in schools and higher education institutions. These strategies are not exhaustive but present a sampling of academic and social support policies and practices being implemented to varying degrees along the P-16 continuum. They reflect a wide array of approaches to motivate, engage, assist, and prepare students to meet high academic standards and succeed in challenging coursework on both secondary and postsecondary levels.

While strategies are organized under one of the five different types of support described above—emotional, informational, instrumental, appraisal, and structural—it is important to note that most of these policies and practices fall into more than one category. For example, Extended Learning Time (ELT) is categorized as structural support because extended time for enrichment activities is embedded in schools and after-school programs. But ELT also fosters informational and instrumental support by creating space for students to benefit from a range of other strategies such as tutoring, mentorship, and positive peer relationships. Similarly, ELT can be classified—as can other strategies—as either a policy or a practice, depending on the context in which it is administered. In Massachusetts, ELT became a state policy in 2006 after the state legislature appropriated funding for districts to add 30 percent more school time. However, when schools take advantage of state grants to offer additional learning time, ELT may be characterized as a practice.

Emotional Support

In order to thrive in school and college, students need to be surrounded by a network of adults and peers who care about their academic success. Strategies to promote emotional support typically focus on building these relationships by developing strong interpersonal connections between students and school or college staff to reinforce high academic expectations and assist students in meeting them. Policies and practices that enable emotionally supportive relationships can have a positive impact on academic achievement by helping students develop the capacity for strategic thinking, problem-solving, information-seeking, experimentation, and optimism—all of which are associated with positive academic behaviors. Such relationships also mitigate the effects of negative emotions such as anger, blame, denial, anxiety, and hopelessness. Emotional support strategies are operational all along the education pipeline and include advisories, mentoring, and individual or group counseling (*Table I*).

Table I: Examples of Emotional Support	Practice	Policy
Individual counseling	✓	
Group and peer support	✓	
Mentoring	✓	
Social-emotional standards		✓
Proactive advising	✓	
Activities that develop strong, supportive interpersonal connections among students, parents, faculty, and school staff	✓	✓

Emotional support also promotes *student engagement*, which is characterized by time spent on schoolwork, intensity of effort, and ability to stay on task—as well as feelings of enthusiasm, optimism, curiosity, interest, and the capacity to find meaning in one's activities. Given these characteristics, it is not surprising that student engagement has been linked to academic achievement on both the secondary and postsecondary levels. In one study, urban middle school students who exhibited high levels of engagement were found to be 75 percent more likely to have high grades and good school attendance records and were 23 percent less likely to display poor results in these areas.[21] A study at the postsecondary level concluded that high levels of engagement were associated with stronger grades in the first year of college and increased the likelihood that freshmen would return for a second year.[22]

Several high-profile state policies that foster emotional support have emerged in recent years. The most prominent is the Illinois' *Children's Mental Health Act*, which charged the Illinois Board of Education with incorporating social and emotional development standards into state learning requirements. These requirements are organized around three goals: self-awareness and self-management, social awareness and relationship skills, and responsible decision-making.[23] New York State also is developing voluntary guidelines for teaching social and emotional skills, and school districts across the nation, from Anchorage to New Haven, CT, are requiring this type of instruction in their classrooms.

School and community-based practices that foster emotional support are evident in some large-scale programming. The Harlem Children's Zone provides a network of support programs for students in this historically African American, low-income New York City neighborhood—including talented, caring teachers and support staff who create an enriching environment where students know that adults care about them. Another compelling example of the relationship between emotional support and academic achievement can be found in the I Have A Dream (IHAD) program. IHAD programs "adopt" cohorts of low-income, middle school students and provide them with financial, academic, and social resources with the goal of encouraging college enrollment. Data gathered from students, parents, and staff suggest that the long-term emotional support provided by IHAD program coordinators enabled students to overcome the impact of risk associated with abuse or gang membership and get solidly on track for academic success.[24]

Emotional support practices are also found in schools and after-school programs across the country. For example, many secondary schools have *advisory programs* in which students are assigned to a teacher or staff member to assist them in reaching their academic and personal goals. Advisories are predicated on the belief that every student should have at least one adult in school to act as his or her advocate. Though few quantitative, systemic studies have been conducted on advisories, their use in schools is associated with positive outcomes such as reducing drop-out rates, developing a sense of belonging, and enhancing teacher-student relationships.[25] Similarly, an analysis of data collected from public postsecondary institutions with large numbers of Pell Grant recipients found that colleges with higher-than-expected graduation rates distinguished themselves by designating faculty or staff as "first responders" to student needs. Having access to a knowledgeable, concerned adult helped students surmount academic, social, and financial challenges that might otherwise have derailed their success in college.[26]

Mentoring programs have long been a mainstay in efforts to provide students with basic elements of emotional support through close, one-on-one relationships with family members, teachers, counselors, or other caring adults. For example, mentoring is at the heart of Philadelphia's acclaimed Sponsor-A-Scholar (SAS) program in which mentors offer guidance and support to students beginning in ninth grade to help them

successfully complete high school and enter college. Financial incentives and academic support are also central to the program, which has sent virtually all of its graduates to college. SAS has been replicated successfully in other major cities such as Milwaukee and Albany.

Socio-emotional learning is defined as instruction which promotes the set of abilities that allows students to work with others, learn effectively, and serve essential roles in families, communities, and places of work.[27] According to the Collaborative for Academic, Social, and Emotional Learning, socio-emotional learning practices promote academic success in two ways: 1) they create safe, caring, well-managed, and participatory learning environments that foster a greater attachment to school; and 2) they provide students with important social and emotional competencies such as self-awareness, social awareness, self-management, relationship skills and responsible decision-making, which lead to less risky behavior and more assets of positive youth development.[28] Extensive analysis of data collected from socio-emotional learning programs confirmed this connection by demonstrating that participants in these programs exhibited significant gains in achievement.[29]

Instrumental Support

Instrumental support comprises specific actions and measures that can be taken to help students meet academic goals. It can take many forms and be delivered in a wide range of ways: through outreach programs, supplemental instruction, need-based financial aid for college, standardized test fee waivers, admissions test preparation, and tutoring, as well as orientation and bridge programs (*Table II*). Although financial assistance is beyond the scope of this paper, it is an essential component of an effective support network. For example, adequate financial aid is absolutely critical for low-income students to be able to enroll and succeed in college.

Many instrumental support policies promote rigorous course standards by providing students with tools to sustain their progress, such as

Table II: Examples of Instrumental Support		
	Practice	**Policy**
Workshops that teach critical reading, test-taking strategies, and other skills needed for success in colleges	✓	✓
Summer bridge programs	✓	✓
Supplemental course instruction	✓	
Tutoring programs, on-line tutorials, and math and writing centers	✓	
Developmental guidance curricula	✓	✓
College credit courses for high school students (IB, AP, dual enrollment)	✓	✓
State and national career development standards		✓
Need-based financial aid		✓
ACT/SAT/AP/IB test fee waivers		✓

transition programs, tutoring, or developmental coursework. More than two-thirds of states offer some type of pre-college outreach program to help students prepare for higher education in middle and high school.[30] Recent studies have suggested that states adopt policies focused on the goals of college and work preparation, ensuring that all ninth-graders are prepared to succeed in high school and beyond. Such policies—which can be categorized as instrumental—include expansion of research-based reading programs and funding of academically rigorous programs.[31]

Instrumental support practices in secondary schools include tutoring, study skill workshops, transition programs from middle to high school, and supplemental instruction. Instrumental support is also provided through developmental guidance curricula taught by school counselors. Such courses are designed to increase career and postsecondary awareness, promote identity

development, and foster socio-emotional development. Many high schools offer opportunities for students to experience college-level work and earn credit toward degrees, such as dual enrollment programs, Advanced Placement (AP) courses, and International Baccalaureate (IB) curricula. Schools also provide assistance with college and financial aid applications, admissions test preparation, and test fee waivers. Afterschool and community programs may provide out-of-school time activities (including sports, arts, and mentoring programs) as well as medical and social services that can facilitate academic success by promoting social, emotional, and physical health.

On the postsecondary level, many colleges offer summer bridge and intensive orientation programs, tutoring and supplemental instruction, financial aid and work-study to meet college costs, mentoring programs, and time management workshops. For example, the Access to Success program at Indiana University Southeast matches participants with mentors who accompany them to classes, help them take notes, and oversee small group debriefing sessions. As part of Purdue University's Horizon Program, freshmen take a required four-credit orientation course, "Strategies for Effective Academic Performance." Through this course, students receive assistance linking study skill and time management strategies to academic success.

Informational Support

Informational support typically entails providing helpful knowledge to students in the form of advice, suggestions, directives, or facts for use in developing plans to achieve goals, meet deadlines, complete applications, and clarify misperceptions. Providing students with information about college admissions and financial aid is especially important, as many students—especially those whose parents did not go to college and those from low-income families—are uninformed about postsecondary opportunities.

Policies that foster informational support take many forms, including college planning, career exploration, and parent outreach (*Table III*). Some states use social networking sites to convey expectations and information to students. For example, the Delaware Department of Education's *Yes You Can* campaign uses MySpace to communicate timely postsecondary information and planning advice to students. Other states, like Indiana, require all ninth graders to map out career plans and design a program of study that will enable them to graduate from high school and fulfill admissions requirements for a state postsecondary institution.

In high schools across the country, students access information about postsecondary options through college fairs, college visits, brochures, websites, and workshops. These supports are provided by teachers and school counselors and through participation in outreach and community-based programs. One of the ways high schools promote a college-going culture is by devoting visual and physical space to college planning information. Other informational support programs

Table III: Examples of Informational Support		
	Practice	**Policy**
Education plans for achieving college goals	✓	✓
Advisories focused on preparing for future options and success	✓	✓
Freshman orientation programs, success seminars	✓	✓
Academic advising	✓	✓
Job shadowing and internships	✓	
Guidance with college admission and financial aid application procecss	✓	
College planning and financial aid information for parents	✓	✓
Career exploration and placement services	✓	✓
Early college awareness programs and campus visits	✓	✓

engage families in the college planning process by providing them with information to support their children's aspirations and help them navigate the college admissions and financial aid processes. On the postsecondary level, extended orientation programs provide students with information on how to find their way around complex campuses, meet registration and financial aid deadlines, use library and research facilities, get involved with extracurricular activities, take advantage of job placement programs form relationships with professors, and utilize tutoring and other support services. Similarly, first-year seminar programs are designed explicitly to provide new students with practical information in a classroom setting, including the personal involvement of the seminar instructor.

Appraisal Support

Appraisal support involves assessment, affirmation, feedback, social comparison, or self-evaluation. It raises students' awareness of their own interests, abilities, and progress towards meeting rigorous academic standards, as well as their readiness for mastering new subjects or skills. Appraisal support includes the ways in which teachers and school administrators assess individual and collective student progress and intervene appropriately (*Table IV*). In its absence, students and educators may be working hard to achieve their goals without the information they need to assess progress effectively.

As previously mentioned, assessment is a key feature of a rigorous academic program. Though not without its critics, one of the most prominent examples of an appraisal support policy is the assessment mandate of the 2001 federal law, No Child Left Behind, which required schools and districts to monitor and publicize students' academic progress as measured by standardized tests and as defined by state standards. In addition to standardized tests, other appraisal strategies include tools such as Accuplacer, WorkKeys, and the Collegiate Learning Assessment (CLA). The CLA is designed as a holistic measure of how well students at different postsecondary institutions are able to complete

Table IV: Examples of Appraisal Support		
	Practice	**Policy**
Assessments of student progress toward meeting academic standards that trigger support for struggling students	✓	✓
Data systems to help monitor student performance		✓
PSAT, ACT's PLAN, Accuplacer, WorkKeys and the Collegiate Learning Assessment	✓	✓
Early warning systems with mid-term reports sent to parents	✓	✓
Mid-term progress reports for students, academic advisors, and parents	✓	✓
Early subject area testing program to identify students AP/IB participation potential	✓	✓
Activities that recognize academic achievement	✓	

"real-world" tasks that are considered important outcomes of a college education.[32] Because it measures students' abilities to complete critical tasks, the CLA reflects a new direction in appraisal support that recognizes the value of assessment in relation to students' ability to meet the demands of college and work life. The value of assessments that measure real-world skills has been emphasized across a range of research studies.[33]

Advocates for the use of assessment as a diagnostic tool stress that the timing and consistency of appraisal support often matter as much as its form and content. Secondary school teachers and college faculty who do not assess students frequently miss vital opportunities to identify and assist those who are struggling. Students who are allowed to go all the way to fail a final exam no longer have the chance to improve and must repeat the course. In the K-12 system, schools can use data to identify individual risk factors and then to aggregate risk factors according to: rates of decline in achievement,

attendance and behavior; the impact of interventions; and school-level outcomes such as graduation rates and the percentage of students on track by grade. "Early warning systems" at the secondary and postsecondary levels use data to determine which students may be at risk of failing a course or dropping out and enable educators to intervene proactively before it is too late.[34] Examples of timely appraisal support on the postsecondary level include Winston Salem State University's faculty-based early warning systems for first-year, readmitted, and transfer students and Wheaton College, where the Student Life Department convenes weekly meetings with academic advisors and residence life staff to identify students in need of support.

Structural Support

Structural support represents academic and social support programs and services that are "hard-wired" into students' educational experiences. At both policy and practice levels, structural supports are those embedded, systemic strategies designed to help all students engage in their academic experience and meet the demands of challenging academic work (*Table V*).

States have implemented a range of structural support policies, including: Extended Learning Time, which encompasses block scheduling; after-school or summer programs that focus on academics; personalized learning environments such as small schools and career academies; and drop-out prevention and recovery programs. Accelerated instruction programs such as AP and IB curricula are widely available; early college high schools are designed so that students can earn both a high school diploma and one or two years of college credit simultaneously. Articulation agreements between two- and four-year colleges are a well-established example of structural support that provides opportunities for more students to earn bachelor's degrees without spending time and money to repeat coursework. Vermont, for example, displays all grades earned at in-state colleges on a single transcript so

Table V: Examples of Structural Support		
	Practice	**Policy**
Full service schools that provide health and social services to students	✓	✓
Student support services aligned with educational instruction	✓	✓
Culturally relevant practices and strategies	✓	
Learning centers that provide tutoring, skill-building, and other academic support	✓	
Ninth grade academies and first-year college programs environments	✓	✓
Small learning communities	✓	✓
Strong partnerships between academic and student service offices	✓	✓
School district offices of postsecondary planning and support	✓	✓
Dropout prevention and recovery programs	✓	✓

that credits earned at multiple institutions are easily organized and applied towards students' accumulated postsecondary coursework.

Structural support practices consist of a wide range of strategies to help students meet rigorous academic standards. These practices include establishing formalized study groups, building student-oriented service centers, and giving students laptops so they have access to advanced technological tools. A structural support practice that has gained momentum in higher education is the development of learning communities. Colleges promote learning communities structurally by offering co-registration or block scheduling that allow students to take two or more "linked courses," which often have a disciplinary or thematic focus—such as science, history, or selected readings in literature. A

study of learning communities serving low-income students at community colleges found that students participating in them were significantly more engaged in the classroom and with their classmates and faculty, confident in their perceptions of the encouragement they experienced on campus, and positive in their estimation of their intellectual goals.[35]

Embedding support strategies into institutional structures can create environments and cultures that provide multiple reinforcements to meet a range of student needs. For example, students in schools that offer Extended Learning Time may find themselves simultaneously participating in enrichment activities, receiving targeted academic support, and forging meaningful connections with adults and peers; each of these activities is systemically embedded into their everyday routine. It is also important to recognize that support strategies to target a specific population often represent beneficial services for all students. Research shows that integrating culturally-relevant practices in schools and classrooms bolsters achievement for students from *all* backgrounds.[36] For example, many programs and schools have adopted the use of Individualized Education Plans for all students, a practice previously associated primarily with special education services.

Recommendations for Educators, Policymakers, and Researchers

Educators and policymakers should consider all five types of support—emotional, instrumental, informational, appraisal, and structural—as part of a comprehensive approach that helps students meet rigorous academic standards. Just as we hope that young people will be motivated to put their whole selves into learning, so too we must provide a full measure of academic and social support to give all students the tools and encouragement they need to succeed in demanding studies. This is critical at every stage along the pathway to college completion, from helping students meet the overarching goals of No Child Left Behind to ensuring that growing numbers achieve success in challenging postsecondary programs.

Recommendations for Educators and Policymakers

New policies and practices will be important to attain the goal of providing all students the support they need to achieve rigorous academic standards. Recommendations for school and higher education leaders and policymakers who wish to implement research-based academic and social support strategies incude:

- ***Integrate and coordinate academic and social support strategies focused on enabling students to meet rigorous academic standards.*** Secondary and postsecondary institutions need to align academic instruction with support services for students and families in order to ensure that students experience a comprehensive set of supports. Institutions may want to use resource mapping, a process of analysis intended to identify what is needed, available, and most effective. Mapping prevents the duplication of services and increases cooperation and integration among them. Policymakers, government, and community stakeholders should provide incentives for schools, higher education institutions, and community-based education programs to be accountable for integration and coordination of academic and social supports.

- ***Enhance training and make more efficient use of school counselors and college support services staff, especially those who work with underserved students.*** As professionals with training in adolescent development, school counselors are uniquely positioned to offer integrated academic and social support strategies. Similarly, staff of the federally-funded TRIO Student Support Services programs, which target low-income and first-generation students on college campuses, have the expertise needed to scale up integrated models of support. Policymakers as well as school district and higher education leaders should optimize the capacity of school counselors and student affairs staff to execute academic and social support strategies by requiring relevant graduate-level coursework, enhancing state-wide licensing standards, and providing appropriate professional development opportunities.

- ***Infuse principles of adolescent development into training programs for teachers, principals, and higher education faculty professional development programs.*** Policies and practices that operate from a youth

development framework are likely to build qualities such as academic motivation, resiliency, self-confidence, and efficacy. Teacher, principal, and counselor educator programs should require courses on child and adolescent development and pay careful attention to how school cultures and classrooms can provide social supports that foster effective instruction. Professional development for college faculty and staff should focus on how developmental issues affect learning styles and how to adopt teaching approaches to students with different learning styles.

- ***Provide more incentives for secondary teachers and postsecondary faculty to engage with students in meaningful ways.*** Positive student-teacher relationships are correlated with academic success. Policymakers and education leaders should create stronger incentives for teachers and college faculty to help students meet the demands of rigorous academic programs. Providing incentives for faculty to engage effectively with students is vital at postsecondary institutions, including universities where reward strucutres traditionally have been geared more towards research and scholarly publication than interaction with students.

- ***Make timely, frequent assessments a priority so that secondary school teachers, college faculty, and support staff at all levels can identify and address academic problems to help students early on.*** Assessments can be considered a form of appraisal support only if they help students meet rigorous academic standards and prepare them for the demands of further education and the workplace. Evaluations should be relevant to college- and work-readiness, and results should be shared with teachers and faculty who can tailor their teaching according to student needs.

- ***Pay special attention to institutional context and how social relationships within an organization foster emotional support and academic achievement.*** Students prosper as learners in environments that place a high value on them developing supportive social relationships with adults and peers. Schools and colleges should be physically and socially organized to encourage relationships that provide students with academic and social support. They should establish and adequately support programs, such as advisories and small learning communities, both of which facilitate development of supportive relationships. They also should reward faculty and staff for active participation in retention efforts. Likewise, schools and colleges should designate physical space where students and faculty can interact informally. Strategies such as these provide important contexts for supportive relationships to be built between students, faculty, and staff.

Recommendations for Future Research

There is a need to shed further light on the crucial topic of academic and social support on both the secondary and postsecondary levels. Suggestions for future research include:

- ***Monitor what is already being done.*** Definitive information is needed about academic and social supports currently in place. Which institutions are providing support aligned with academic rigor? What kinds of services are being offered? Are different supports being provided in varying contexts? How do effective youth development programs operate and where are the opportunities for collaboration? Assessing and monitoring what is already being done will help foster a community of educators and policymakers who are invested in this work.

- ***Devise innovative methods for measuring the success of academic and social support strategies.*** Research is needed to devise innovative assessments that can help

educators estimate the broad impact of academic and social support strategies to improve outcomes for students. Finite resources all along the P-16 education continuum make it imperative that ineffective policies and programs are quickly identified and replaced with successful support strategies. Constructive assessments of comprehensive academic and social supports should consider the degree to which these supports are integrated into students' lives. Progressive evaluations should rely on a combination of traditional outcomes, such as test scores, grades, and other variables like safety or happiness.

- ***Examine students' perceptions of support.*** We know little about students' own perceptions of academic and social support strategies. There may be a gap between intended support and students' perceptions of caring, trust, respect, and other positive outcomes that have been associated with academic and social support. Future research should consider whether such a gap exists and what may be causing it.

- ***Explore which types of relationships among students, faculty, and peers are most likely to provide effective social support that is aligned with increased academic achievement.*** Little is known about how the type and intensity of different relationships can impact social support strategies. Are long-term relationships more effective than short-term interventions? Can programs that pass the baton from one to another successfully promote academic and social support? Do students need different types of relationships depending on their stage of development? Are all relationships positive or can some relationships actually hinder academic and social support? Additional research is necessary to understand more about which types of relationships are mostly likely to provide effective social support to help students meet the demands of rigorous courses.

- ***Further explore college access, readiness, and success processes in the context of adolescent and early adult development and mental health.*** Additional research is needed to examine the dynamics of adolescent and young adult development and how emotional, physical, and psychological factors can influence academic performance, college planning, and degree completion. Such research has tremendous potential to inform the practice of providing academic and social support for underserved students.

- ***Explore the relationships among academic, social, and financial support.*** Research is needed to explore relationships among academic, social, and financial support strategies in order to maximize their positive impact on student achievement. We need to know more about how effective academic and social support strategies can minimize the negative impact of college costs on college attendance decisions, matriculation, and completion. More research also is needed on the role that financial aid plays in shaping students' expectations about their postsecondary options.

Conclusion

Annotated Bibliography of Research on Academic and Social Support Strategies

In connection with this report, the authors prepared an annotated bibliography of 61 research studies documenting the effective practices and policies we describe. The bibliography identifies and summarizes research on the scope, characteristics, and impact of academic and social support services for students. It includes work published in the past 15 years with an emphasis on more contemporary sources. Several reports on academic rigor also are included in order to establish a context for the importance of social and academic support. The bibliography is divided into five sections:

- Defining academic rigor;
- Academic and social support in middle and high school;
- Postsecondary academic and social support services;
- Academic and social support for key transitions along the education pipeline; and
- Providing academic and social support out of school.

The research summarized was found in peer-reviewed journals, major policy reports, public opinion surveys, and other seminal work. The bibliography is not an exhaustive list of every academic and social support strategy; rather it, illustrates the rich diversity of strategies being used to help students undertake a rigorous course of study.

A copy of the bibliography can be found on the Pathways to College Network web site: www.pathwaystocollege.net

Ensuring College Readiness and Success

Students who complete academically rigorous curricula are more likely to be successful in high school, college, and careers. In order to do so, many students—especially those from underserved groups—need academic and social support to accelerate their learning and achieve at high levels. Research from the fields of education, health, psychology, and youth development suggests that effective academic and social support strategies offer considerable promise for closing the opportunity gap at both the secondary and postsecondary levels.

This paper provides an organizing definition of integrated academic and social support that attempts to capture the symbiotic relationship between academic and social support as it is aligned with increased academic rigor in schools and improved college degree completion. Policies and practices that integrate a range of support strategies hold the most promise for increasing student achievement and success. Students need a network of individuals and resources embracing multiple strategies to provide them with effective academic and social supports. Such supports must be developmentally appropriate, integrated, coordinated, and cohesive. By fostering self-confidence, resiliency, and internal motivation, social support creates the conditions that allow students to take advantage of effective academic support strategies and develop the skills, knowledge, and abilities necessary for them to realize their hopes and dreams.

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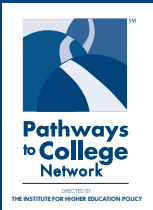
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The Pathways to College Network is an alliance of over 30 national organizations that advances college opportunity for underserved students by raising public awareness, developing new research that is both innovative and actionable, and promoting evidence based policies and practices across the K-12 and higher education sectors. Pathways' work focuses on the education pipeline from middle school through college graduation in four key areas: Academic Readiness for College, College Access and Information, Financial Aid and Affordability, and College Success. Our website provides a comprehensive collection of college access and success studies and other resources to inform policy, practice and research. Pathways is directed by the Institute for Higher Education Policy, a nonprofit organization in Washington, DC. Visit our website for more information: www.pathwaystocollege.net.

The Institute for Higher Education Policy (IHEP) is an independent, nonprofit organization that is dedicated to increasing access and success in postsecondary education around the world. Established in 1993, the Washington, D.C.-based organization uses unique research and innovative programs to inform key decision makers who shape public policy and support economic and social development. IHEP's web site, www.Ihep.org, features an expansive collection of higher education information available free of charge and provides access to some of the most respected professionals in the fields of public policy and research.

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