



## **National Network of Constituent Organizations**

### **Increasing Academic Rigor in High Schools – Network Perspectives** Review Draft

#### **I. Introduction: Purpose and Approach**

The purpose of this paper is to inform the National Network of Constituent Organizations' (Network) efforts to determine how its members can, individually and collectively, further the goal of increasing academic rigor with their constituents nationwide. The National High School Alliance (HS Alliance) has prepared this scan and analysis of how each member of the Network is defining, framing, and engaging their constituents around the issue of increasing rigor in high schools. Armed with a better understanding of how each of these organizations is addressing this issue, members of the Network will be better able to craft strategies that reflect a shared vision for all youth and coordinated across the national, state and local levels. The June 2006 Network meeting, for which this paper was prepared, is intended to assist Network members and their constituents in furthering the goal of increased rigor.

To provide a national context for the debate on rigor, this paper first provides a brief summary of the current research and policy trends, followed by a summary of Network members' positions based on a scan of their relevant resources and publications. The paper concludes with suggestions for next steps. Appendices include summaries of Network publications and selected source material.

To prepare this paper, the HS Alliance reviewed the current literature of national policy and research organizations to identify expert perspectives on what constitutes a rigorous high school curriculum. Relevant publications produced by each of the Network organizations were also scanned in order to determine how each is framing the issue of rigor, to identify the commonalities and differences among them, and to provide suggestions for how the Network members can use this information to support their constituents in addressing rigor in a coherent, coordinated way.

#### **II. National Context: Perspectives on Increasing Academic Rigor**

Increasing academic rigor is at the fore of the Bill and Melinda Gates Foundation's and National Governor's Association's Honor States initiative and is perhaps the most commonly heard rallying cry among policymakers responding to public dissatisfaction with the quality of the nation's high schools. There is a widespread awareness that not only are students not completing high school, but that those who do are not being challenged, and are not equipped with the knowledge and skills they need to be

successful in post-secondary education and work. As states struggle to develop policy for reform in this complex arena, non-profit organizations and educators at all levels are working to increase rigor as well. But what is meant by increasing rigor? Is there an emerging consensus about what needs to change, and what success looks like? What does increased rigor look like within the context of effective schools that provide the structures and supports to engage and motivate students?

Consensus appears to exist among most policymakers and practitioners that raising expectations for all students is the foundation upon which an effective high school education must be built and that increasing academic rigor must be one of the key strategies for doing so, along with strategies such as personalizing school environments, developing educator capacity, and engaging community members. Raising expectations is critical for all students, but particularly for those who have been consigned to the “general,” remedial, or other non-academic tracks in which coursework is less demanding and disconnected from any viable post-secondary pathway. These students are at highest risk for dropout. Moreover, according to a growing body of research, effective preparation for success in the 21<sup>st</sup> century economy is the same for all students – regardless of their plans after high school. In short, raising expectations for all students is necessary for motivating and engaging students and ensuring they are prepared for college, careers, and productive lives and academic rigor is needed to embody these higher expectations. While there is a consensus that rigor is needed, there are many different views about how it is defined and how to achieve it.

State policymakers and national organizations have identified a number of strategies for increasing academic rigor for all high school students. These strategies can be grouped into four major themes which emerge from a review of the scholarship on this issue. Discussed in turn below, these are, 1) raising graduation requirements, 2) upgrading the content and skills developed through existing courses, 3) aligning course content and requirements with the skills necessary for higher education and employment, and 4) providing additional support for at-risk students.

### *Raising Graduation Requirements*

There is general agreement that increasing graduation requirements is necessary, but not sufficient, to increase academic rigor for all students. Increasing graduation requirements must be accompanied by other policies that upgrade the content of curricula and by policies that support students in meeting more rigorous standards. The argument that more rigorous requirements are needed for all is not based on the premise that all students should go to college, but on updated goals for high school. First, the possibility of college should remain open to every student throughout high school. No student should be taking a course of study that will leave him or her ineligible for post-secondary study -- or be discouraged from aspiring to college and encouraged to take dead-end coursework. Second, every student needs grounding in the primary disciplines (e.g. mathematics, science, social studies, and English/Language Arts), regardless of post-high school plans. The general education core is viewed as the basis for citizenship, for the capacity to continue learning and for adapting to the needs of the

workplace throughout life. Almost any career offers more potential for advancement to workers who start out equipped with skills in math, reading, writing, speaking, thinking, etc., and many careers that do not require a college degree nevertheless demand fluency with these skills.

Many states and districts are responding by eliminating differentiated diplomas and requiring a college preparatory curriculum for all students. States like Texas, Arkansas, and Indiana have adopted a college preparatory curriculum as the default curriculum for all students. A growing number of states are increasing the number of Carnegie units required to earn a diploma and specifying that students complete specific, higher level courses to graduate. Achieve, High Schools that Work, ACT and other national organizations have specified minimum requirements for what they consider a rigorous high school diploma.

### *Changing Instruction to Focus on Higher Level Content and Skills*

A second aspect of the rigor debate is defined by the actual content of instruction, regardless of course title. A prescribed program of study that gives all students a comparable basis for work or further study is a critical starting point, but sequence alone cannot ensure excellence, rigor, or preparedness; course title obviously does not equate to strong content. As a result, content needs to be examined to ensure that students are being challenged to think critically and develop higher order problem solving skills. Courses and instructional methods should be modified to ensure they provide students with the competencies they need to be successful in post-secondary education and work.

To increase students' access to higher level content, some states and districts are reviewing the content of their standards and curriculum to ensure the bar is set appropriately high. Many states are also increasing access to honors, Advanced Placement, and International Baccalaureate courses, as well as encouraging dual/concurrent enrollment and other means of exploring postsecondary study while in high school. Although some analysts debate whether some of these courses offer rigorous instruction, they do in fact provide access to college level content and there is some evidence that students who take these courses are more successful in postsecondary education. Many states are also attempting to upgrade the quality and content of instruction by upgrading the quality and content of exit exams or implementing performance based assessments that measure students' proficiency in specific content areas. This strategy is based on the theory that teachers will teach what will be assessed, and that high quality assessments lead to high quality instruction.

### *Aligning Course Content and Requirements with Higher Education and Work*

A large proportion of American youth do not leave high school prepared to succeed in college courses or the workforce. The Education Trust and others have noted that there is significant variation state by state in graduation requirements, and that there is very little consensus between the secondary and post-secondary communities about what

should be required of high school graduates in terms of the actual course content. High school assessment and graduation requirements often bear little connection to college entrance requirements. This lack of alignment is a significant problem for many students, who may in good faith complete high school graduation requirements, only to discover too late that many post-secondary choices are already foreclosed for them.

Moreover, the effort to integrate academic and career objectives is long standing, but has had only limited success in many of the nation's high schools. Analysts argue that treating these two high school objectives as separate endeavors, relevant to two different sets of students, does a disservice to all. They call for the elimination of vocational courses and programs that are isolated and dead-end, and for the substantial restructuring of all career and technical education to include strong academic components as well.

A recent report from ACT provides empirical evidence that high school students need the same skills whether they are headed to college or the workforce. This report is one of an increasingly large body of literature that indicates that students should be educated to the same high standards regardless of their post high school plans.

#### *Institutionalizing Supports for Students at Risk*

As is reflected in the HS Alliance's *Call to Action*, the focus on increasing academic rigor should be part of an integrated approach to improving high schools that puts high expectations for all youth at the center. Thus, strategies to increase rigor must function as part of a comprehensive plan that also includes strategies to provide the structures and supports that will transform the learning environment into one that engages and motivates students and provides support for students at risk.

A number of strategies have been developed for supporting the academic and social development of all students, with emphasis on those who are at highest risk for dropout. Some focus on restructuring high schools so that students learn in a more personalized atmosphere and have the individualized attention of adults who are trained to recognize and address problems. Restructured high schools can offer students the chance to pursue their own interests and strengths and to see how those interests can translate into college and workplace skills.

Other strategies include focusing attention on the pipeline through which students reach high school, ensuring that elementary and middle school students receive the grounding they need to succeed in high-level courses when they reach ninth grade. Focusing on ninth grade, a key transition year for preventing dropouts, has been identified by many observers as a critical opportunity to equip students to succeed with a more demanding program, and to develop interest-based academic and career pathways. The challenges vary from urban to rural districts, with the proportion of non-native English speakers in the population, the degree of transience, and other issues, so each district or state must develop strategies that suit the context in which its students are learning.

In short, there are a number of strategies and policies for increasing academic rigor, but less agreement about how academic rigor should be defined and what it looks like. Many analysts and policymakers would agree to raising expectations for all students, increasing graduation requirements, improving the content and quality of curricula and instruction, aligning curricula with requirements for postsecondary education and work, and providing supports for students who need help in meeting more challenging requirements. There is less information, however, describing the characteristics of rigorous courses and outlining how to align requirements with postsecondary education and work.

### III. Addressing Academic Rigor: Scan of Network Resources and Policies

The organizations comprising the National Network of Constituent Organizations<sup>1</sup> represent the voices of important constituents in high school redesign and therefore play an important role in communicating about strategies for increasing academic rigor to their constituents. Network members address several of the strategies identified previously in their publications and outreach, and many are currently developing materials that could incorporate greater emphasis on these strategies in the future.

Our scan of Network publications is an attempt to evaluate how the organizations are currently communicating about the issue of increasing academic rigor as a foundation for discussion and for planning future work in this area. The HS Alliance collected publications, including reports and newsletters, from all Network members that included a discussion of increasing academic rigor. We reviewed each of these publications to identify key messages and common themes. Our findings based on this analysis are described below. Detailed profiles of each of the organizations' publications are provided in Appendix A and references for all of the publications reviewed are provided in Appendix B.

*Network organizations typically recognize, and advocate for, the importance of a rigorous high school program.*

All of the network organizations have publications that include a discussion of academic rigor or highlight policies and practices that increase academic rigor. While each organization talks about different aspects of the issue, every organization emphasizes its importance.

Several of the Network members' products define a rigorous curriculum by referencing *Answers in the Tool Box* (Adelman, 1999), which assesses the rigor of high school course work and its importance in predicting whether students earn a postsecondary credential. Common points highlighted from the Adelman research include:

- The rigor of the high school curriculum is the most important predictor of college completion—it is more important than parent education level or family income;
- An intensive academic curriculum had the strongest effect for African American and Latino students; and
- Students completing a college preparatory curriculum are more likely to succeed in college and less likely to need remedial coursework.

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<sup>1</sup> National Network of Constituent Organization Members includes the following organizations: Council of Chief State School Officers, National Association for the Advancement of Colored People, National Association of Secondary School Principals, National Association of State Boards of Education, National Conference of State Legislatures, State Higher Education Executive Officers. National Council of La Raza was also a participant in this meeting and in the review of resources.

Several of the organizations cite other research to support the importance of focusing on increasing rigor. For example, NCSL cites the Achieve poll (American Diploma Project, 2004) of recent high school graduates, college instructors, and employers, which finds that most recent high school graduates report being only moderately challenged in high school. NCSL also cites research (Adelman 2005), which demonstrates that students who take remedial courses earn college degrees at lower rates than other students. SHEEO cites a study (Somerville and Yi, 2002) that finds that high school graduation requirements have little relationship to the requirements of higher education institutions. SHEEO also discusses a body of research that demonstrates that student skills and knowledge grow more in rigorous college-preparatory courses than in other courses and their failure rates are not higher in more rigorous courses.

*Network organizations discuss the issue of academic rigor in ways that reflect their individual missions and constituencies.*

Consistent with the interests of their state policy constituents, the NASBE and CCSSO newsletters highlight promising state policies and programs. NAACP presents the issue in terms of its importance to minority students and their success in college. NCLR stresses its importance to the success of ELL students. NASSP, the organization working most directly with schools, defines the characteristics of academic rigor and presents an assessment tool that schools can use to evaluate their level of academic rigor.

*No NNCO organization, other than Achieve, has their own policy that specifically defines a rigorous curriculum in terms of course requirements.*

As one might expect, organizations with a national policy focus do not endorse a particular curriculum or set of courses, which is generally the purview of states and districts. Some of the Network members' publications summarize state efforts in this area, but do not define or endorse a particular curriculum. SHEEO recommends K-12 and higher education come to agreement on a rigorous course of study that enables students to meet standards and prepares them for higher education.

*In their publications, NNCOs guide policymakers and practitioners by educating them about effective policies and programs.*

How does one know rigor when one sees it? NASSP talks about the characteristics of rigor and how to identify whether schools offer a rigorous curriculum. *Breaking Ranks* publications use the Pathways to College Network's "School Academic Rigor and Support Self-Assessment Tool" to assist schools in assessing their level of rigor. NASSP recommends opening honors, AP, and IB classes to all students and eliminating low level tracks, and provides examples of the types of support students might need to meet rigorous standards (including strategies such as ninth grade academies, increased instructional time, alternative schools, and smaller learning communities.)

NCSL highlights reform models that offer a rigorous curriculum-- including High Schools That Work, Talent Development, America's Choice models, and Early College High Schools-- recommending raising expectations for all students and requiring that all students complete a college or work-ready curriculum.

SHEEO also highlights effective state policies for increasing academic rigor— developing an optional state college preparatory curriculum, requiring a rigorous core preparatory curriculum for all students, and aligning high school exit exams with college placement exams.

*Similar to our findings in the literature from other national organizations, Network members agree on broad, state-level policies to increase academic rigor, but few devote much attention to defining the specifics of a rigorous curriculum or how to implement it at the school or classroom level.*

Network organizations tend to focus on state-level policies and programs that increase academic rigor, rather than school or classroom level strategies. The Network organizations appear to agree that increasing academic rigor means increasing graduation requirements, providing students with a college and work preparatory curriculum, and opening advanced courses to greater numbers of students. What is less clear from this review is what a rigorous curriculum looks like, how it should be defined, and how to achieve it. These questions are a good launching point for future action and attention.

#### **IV. Next Steps for National Network of Constituent Organizations**

We conclude that while there is significant national interest in increasing rigor for all students, there is less agreement about how specifically to define it or how to best focus scarce resources to advance the rigor agenda. It is a multifaceted and complex challenge with many components, and must be approached in a way that doesn't come at the expense of policies and strategies that provide the supports students need to remain in school and to be motivated to meet high expectations. Given this complexity, it may make more sense to focus on clarifying the discrete aspects of policy and programmatic change that, taken together, will result in an appropriately rigorous high school system.

Network members can play a number of roles in advancing the goal of increased rigor for high school students, depending on the needs of their individual constituencies and target audiences. The following presents some areas for consideration.

- Develop common definition
- Provide more/better evidence
- Refine state and district level strategies
- Develop tools for self assessment

*Develop Common Definition*

Talk of increased rigor at a conceptual level largely dominates high school reform rhetoric. But the reality may be that there is less agreement about how rigor is actually defined in operational terms. Network members could significantly further the goal of increased rigor by developing a common definition that sets a generally agreed upon framework for what rigor is and what it looks like, or at minimum, a set of criteria that could be used to develop a more common roadmap. Without such a definition or guideposts, there are several risks: one, that rigor remains “in the eye of the beholder” and second, that claims of increased rigor not match reality. In attempting to develop a shared definition, we may discover that the use of the term rigor is really a catch-all for a number of closely related and interconnected aspects of improving high school performance and expectations.

### *Provide More/Better Evidence*

As a number of Network members already do, citing research and examples about how rigor in high school and high expectations results in success in postsecondary education and career will help maintain focus and increase ballast of efforts to increase expectations. Communications experts note that messages need to be repeated over and over before they impact behavior – reinforcing the importance of increasing rigor by providing ongoing reminders and evidence to educate and motivate their members is an important role. Working with the HS Alliance, Network organizations might consider what a communications strategy would look like, what evidence and examples would be useful, and how best to disseminate them.

### *Refine State and District Level Strategies*

There are a number of state and district level policies and strategies that can be used to, over time and in combination, increase rigor. These include upgrading course requirements, raising expectations for all students, and aligning high school content with the requirements for postsecondary education and work. Network members can offer state and district strategies in all these areas. In particular, recommendations for aligning high school with the requirements of higher education and work and for evaluating the content of curricula to assess rigor is an area for consideration.

### *Provide Tools for Self Assessment*

How do we know rigor when we see it? For policymakers, community members, business leaders, and parents looking in from the outside, assessing rigor is difficult. Similarly, it is a challenge for educators at the district, school and classroom level to assess progress and identify strengths and weaknesses along the rigor continuum. The role of providing tools for assessing policy and performance is a new one for most of the Network, but one that has the potential for deepening their constituents' thinking and understanding of this issue. How can Network organizations guide their constituents in identifying rigor when they see it? What is the potential for replication? The HS Alliance

has developed draft tools for assessing rigor for use at the state and local levels, in the context of the support and resources that students need to be successful.

## Appendix A-Organizational Profiles

The following profiles each Network organization's major publications that include a discussion of rigor.

### **Organization: Council of Chief State School Officers**

Publication: *State Indicators of Science and Mathematics Education*

#### **Bottom Line**

CCSSO publications summarize state standards, policies, and assessments; they do not define rigor or include their own policy on rigor.

#### **Key Points**

- Research on differences in student achievement has shown that the number and level of secondary courses completed by students explain the degree of student achievement
- Provides summary of rates of math and science course taking by state, and describes state policies in relation to math and science course taking.

Publication: *Supporting Secondary School Redesign*

#### **Key Points**

- Includes an update on the State Scholar's Initiative
- Provides a federal update--describing Academic Competitiveness Grants and National SMART grants
- Highlights state programs that implement strategies to increase academic rigor. Georgia's Secondary School Redesign Efforts and Pennsylvania's Project 720 are featured
- Several of the resources and publications it provides focus on increasing academic rigor.

### **Organization: National Association for the Advancement of Colored People**

Publication: *Lost Opportunities: Racial and Ethnic Disparities in Higher Education*

#### **Bottom Line**

One of the best ways to close the attainment gap between minority and non-minority students is to ensure that all young people complete a solid academic curriculum in high school. NAACP refers to a rigorous curriculum as "at least four years of English, four years of mathematics, three years of science, social studies and one honors/AP course."

### **Key Points**

- Cites Adelman, 1999 as the basis for its conclusions, which include:
  - A rigorous curriculum: “the only variable which eliminates the college-going and completion rate gap for first generation students”
  - Defined as: At least four years of English, four years of mathematics, three years of science, social studies and one honors/AP course
  - One of best ways to close the attainment gap between minority and non-minority students is to ensure that all young people complete a solid academic curriculum in high school.
- Academic tracking often plays a role in preventing minority students from receiving a rigorous curriculum
- Minority students often do not have the same access to AP courses as other students.

### **Organization: National Association of Secondary School Principals**

Publication: *Breaking Ranks II: Strategies for Leading High School Reform*

### **Bottom Line**

A rigorous curriculum is “the bedrock of learning.” The report cites the Adelman study and its definition of a rigorous curriculum: “at the top of the achievement scale were high school students who took more than one AP course; more than three years of both English and mathematics (including math beyond Algebra 2); a minimum of two years each of laboratory sciences, foreign languages, and history; and no remedial math or remedial English courses.” *Breaking Ranks* emphasizes the importance of aligning the rigorous curriculum with standards and assessments and outlines some strategies for increasing academic rigor for all students.

### **Key Points**

- “A rigorous curriculum is the bedrock of learning—personalized or otherwise. Its benefits are clear.” Findings cited include the following:
  - The completion of a solid academic core was more strongly correlated with a bachelor’s degree than high school test scores, grade-point averages, or class rank
  - An intensive academic curriculum had the strongest effect for African American and Latino students
  - Finishing a mathematics course beyond the level of Algebra 2 more than doubled the odds that a student would earn a bachelor’s degree.
- The challenge for schools is to align curriculum, instruction, and assessment so that students know what standards they need to meet and then are given the support to become engaged in achieving those standards
- Provides examples of the types of support students might need to meet rigorous standards, including ninth grade academies, increased instructional time, alternative schools, and smaller learning environments
- Recommends opening honors, AP, and IB classes to all students.

- School Academic Rigor and Support Self-Assessment Tool helps schools identify characteristics of rigor. Statements characterizing rigor include the following:
  - School has a challenging curriculum that engages students
  - There is a rigorous core curriculum that reflects college readiness standards
  - Students cannot get by with taking low-level, unchallenging courses
  - Graduation requirements reflect school expectations that all students complete a rigorous academic program
  - There are a substantial number of advanced placement (AP) classes
  - The school has eliminated low-level or remedial-type sections of core courses.

Publication: *Breaking Ranks in the Middle: Strategies for Leading Middle Level Reform*

### **Bottom Line**

This publication defines characteristics of a rigorous curriculum and the types of skills students should develop within that curriculum.

### **Key Points**

- “Successfully implementing a rigorous curriculum relies on engaged students who are willing to be challenged and to challenge themselves “
- Describes a rigorous curriculum as one that is authentic, thoughtful and reflective, individualized, and creates dissonance in the learner. There are further characteristics described within each of these categories
- Standards are frequently a minimum benchmark. Teachers should incorporate “appropriate challenge and rigor for all students to develop higher level critical thinking, problem-solving skills, and adaptive learning that will meet their needs in a rapidly changing world.”

### **Organization: National Association of State Boards of Education**

Publication: NASBE’s High School Redesign Initiative Newsletter

### **Bottom Line**

In this publication NASBE summarizes state progress on this issue, but doesn’t outline what a rigorous curriculum is for its members.

### **Key Points**

- Includes an update on the Action Agenda based on information from Achieve; it reports on progress related to raising standards, increasing graduation requirements, high school testing, and data and accountability systems
- Includes updates of state progress including the following:
  - a description of Maine—the first state to implement the SAT as its college readiness assessment, and
  - Michigan—the state board approved draft English/language arts and mathematics high school content expectations that were vetted by reps of higher education.

- Provides a summary of the ACT's report *ACT's Reading Between the Lines: What the ACT Reveals about College Readiness in Reading*.

**Organization: National Council of La Raza**

Publication: *Improving Assessment and Accountability for English Language Learners in the No Child Left Behind Act*

**Bottom Line**

Rigorous course work is needed to challenge and motivate ELL students and help them meet high standards.

**Key Points**

- Rigorous courses can help motivate students to improve their performance
- ELL students need access to rigorous coursework to meet challenging standards.

**Organization: National Conference of State Legislatures**

Publication: *Effective High School Reform: Research and Policy That Works*

**Bottom Line**

A rigorous curriculum is one of the most important factors in predicting whether a student will graduate high school and earn a college degree. Components of a rigorous high school curriculum include higher expectations for all students, with support for low-performing students through intervention programs and extended learning opportunities, and a requirement that each student complete a college- or work-ready curriculum in order to graduate from high school.

**Key Points**

- Cites research about the importance of a rigorous curriculum including the following point: "Research shows that the rigor of high school curriculum is one of the top indicators for whether a student will graduate from high school and earn a college degree. In fact, a study by the U.S. Department of Education found that the rigor of high school course work is more important than parent education level, family income, or race/ethnicity in predicting whether a student will earn a postsecondary credential"
- Cites the Achieve (2005) poll of employers, high school students, and college professors demonstrating that high school students aren't being challenged. "Unfortunately, most recent high school graduates report being only moderately challenged in high school. In the 2005 survey of almost 1,500 recent graduates, just 24 percent of graduates said they were significantly challenged during high school"
- Describes components of a rigorous high school curriculum including challenging instruction, high expectations, support for low-performing students, and rigorous course requirements

- Highlights strategies for increasing academic rigor, including raising expectations for all students and requiring all students to complete a college- or work-ready curriculum
- Highlights several research-based reform models including High Schools That Work, Talent Development, America's Choice models, and Early College High Schools.

### **Organization: State Higher Education Executive Officers**

Publication: *Student Success: Statewide P-16 Systems*

#### **Bottom Line**

K-12 and higher education need to agree on a rigorous course of study that will both enable students to meet state standards and assure that they are prepared for higher education. They also need to align high school exit exams and college entrance exams. Currently there is little consensus across the two systems about the knowledge and skills students need to be successful after high school graduation.

#### **Key Points**

- The promise of the K-12 standards movement to refocus high schools on the core academic skills necessary to succeed in postsecondary education has failed because higher education was not a partner in the standard setting process
- States need to come to agreement on a single system of standards and assessments that is rigorous enough to prepare students for college level study. (SHEEO position)
- Cites research about the importance of taking a rigorous curriculum including the following points:
  - “Students who take more college preparatory courses are much more likely than other students to master the skills and knowledge necessary to succeed in postsecondary study”
  - “The single most important determinant of whether students succeed in college is the quality and intensity of the curriculum they take in high school”
  - “Students who complete a full college preparatory curriculum are less likely to require remedial coursework in college”
  - “Completion of a rigorous college preparatory curriculum is the single most important predictor of who will complete college.”
- Cites research which demonstrates the importance of a rigorous curriculum for students' learning and preparation for careers
  - Students' skills and knowledge grow more in rigorous college-preparatory courses than in other courses and their failure rates are not higher in more rigorous courses
  - Employers' expectations for students' knowledge and skills are similar to those required for higher education.
- K-12 and higher education need to agree to a rigorous course of study that will both enable students to meet state standards and assure that they are equipped with the skills and knowledge for further study.

- A NASH and Ed Trust study looked at high school graduation requirements and then compared it with requirements from state higher education institutions and found there was very little consensus between K-12 and higher education on the courses students should take in high school
- The report highlights effective state policies for increasing academic rigor—developing an optional state college preparatory curriculum, requiring a rigorous core preparatory curriculum for all students, and aligning high school exit exams with college placement exams.

## Appendix B - NNCO Resources Reviewed

Council of Chief State School Officers. 2005. *State Indicators of Science and Mathematics Education*. Washington, DC.

Council of Chief State School Officers. 2005. *Supporting Secondary School Redesign*. Washington, DC.

Kristin, Sunny. 2005. *Effective High School Reform: Research and Policy that Works*. Denver, CO: National Conference of State Legislatures.

Lazarin, Melissa. 2006. *Improving Assessment and Accountability for English Language Learners in the No Child Left Behind Act*. Washington, DC: National Council of La Raza.

McCauley, Carlas. 2006. *NASBE's High School Redesign Initiative*. Washington, DC: National Association of State Boards of Education.

National Association for the Advancement of Colored People. 2006. *Lost Opportunities: Racial and Ethnic Disparities in Higher Education*. Baltimore, MD.

National Association of Secondary School Principals. 2006. *Breaking Ranks in the Middle: Strategies for Leading Middle Level Reform*. Washington, DC.

National Association of Secondary School Principals. 2004. *Breaking Ranks II: Strategies for Leading High School Reform*. Washington, DC.

Somerville, Janis and Yun Yi, "Curriculum and Assessment Systems" in 2003. *Student Success: Statewide P-16 Systems*. Boulder, CO: State Higher Education Executive Officers.

## Appendix C - Selected References

ACT. 2006. *Benefits of a High School Core Curriculum*. Iowa City, Iowa.

ACT. 2006. *Ready for College and Ready for Work, Same or Different*. Iowa City, Iowa.

ACT. 2006. *Ready to Succeed, All Students Prepared for College and Work*. Iowa City, Iowa.

Adelman, Clifford. 2004. *Principal Indicators of Student Academic Histories in Postsecondary Education, 1972-2000*. Washington, DC: U.S. Department of Education.

Adelman, Clifford. 1999. *Answers in the Toolbox*. Washington, DC: U.S. Department of Education.

American Diploma Project. 2004. *Ready or Not: Creating a High School Diploma that Counts*. Washington, DC: Achieve Inc.

Dounay, Jennifer. 2006. *Ensuring Rigor in the High School Curriculum: What States Are Doing*. Denver, CO: Education Commission of the States.

The Education Trust-West. 2004. *The A-G Curriculum: College-Prep? Work-Prep? Life Prep-Understanding and Implementing a Rigorous Core Curriculum for All*. Oakland, CA.

National Governors Association Center for Best Practices. 2005. *Redesigning the American High School--Getting it Done: Ten Steps to a State Action Agenda*. Washington, DC: National Governors Association.

Partnership for 21<sup>st</sup> Century Skills. 2006. *Results that Matter: 21st Century Skills and High School Reform*. Tucson, AZ.

Somerville, Janis and Yun Yi. 2002. *Aligning K-12 and Postsecondary Expectations*. Report prepared for the United States Department of Education Office of Vocational and Adult Education. Washington, DC: U.S. Department of Education.

Wagner, Tony. "Rigor on Trial" *Education Week*, January 11, 2006.

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*The National High School Alliance, established in 2002, is a partnership of over forty national organizations whose leaders share a vision for a nationwide commitment to fostering high achievement, closing the achievement gap, and promoting civic and personal growth among all youth in our high schools and communities. These partner organizations have committed to work together to achieve this vision by individually and collectively informing policy, practice, research, and promoting public engagement and awareness. The HS Alliance is supported by funding from the Bill & Melinda Gates Foundation and the Carnegie Corporation of New York, and is housed and staffed by the Institute for Educational Leadership, Washington, DC.*