

# **Eight Elements of High School Improvement: A Mapping Framework**



## **Eight Elements of High School Improvement: A Mapping Framework**

Developed by the National High School Center at AIR, with contributions from (in alphabetical order): Phyllis L. Cohen; Chad Duhon; Todd D. Flaherty, Ed.D.; Lindsay Fryer; Libia S. Gil, Ph.D.; Joseph R. Harris, Ph.D.; Ayse Ikizler; Louise Kennelly; Megan Lebow; Jenny Scala; Circe Stumbo; and Susan Bowles Therriault, Ed.D.

Research on comprehensive school reform suggests that improvement strategies have the best opportunity for success and sustainability when they take into account the broad array of elements that make up the system being improved. Yet, many current high school improvement initiatives are focused only on specific priority topics (e.g., dropout prevention), specific intervention strategies (e.g., advisories, small schools), or program initiatives (e.g., Check and Connect). Although such approaches can have an important impact, their reach is too frequently limited to a subset of systemic reform elements. Implementing such initiatives may lead to success in addressing specific needs, but the probability of widespread improvement is small when initiatives are implemented in isolation from the broader education systems within which they operate.

The National High School Center's goal is to encourage researchers, policymakers, and practitioners at all levels to engage in comprehensive, systemic efforts to maximize attainment for all high school students, with a focus on those students who have been historically underserved. To this end, we have developed a framework that consists of eight core elements and provides a lens for mapping school, district, and state high school improvement efforts. The exercise of mapping should inform strategic planning and implementation efforts by illuminating the connections among elements, revealing strengths and gaps in current state and district policies, and highlighting the stakeholders who should be aware of and involved in future improvement efforts.

This document offers descriptions of the eight elements of high school improvement:

- Rigorous Curriculum and Instruction
- Teacher Effectiveness and Professional Growth
- Stakeholder Engagement
- Organization and Structure
- Assessment and Accountability
- Student and Family Involvement
- Effective Leadership
- Sustainability

Four points are important to note. First, the particular combination or separation of the elements is less significant than an understanding that these elements, which are often treated as discrete, actually are inter-related parts of a single system. Each element has an impact on the others, so understanding their interconnectivity is a critical task. Second, a major challenge of using this framework is the risk of overwhelming those involved in the work. Every high school improvement initiative does not need to have some activity in each of the elements at every moment. Rather, mapping the implications of an improvement initiative among all affected elements at the outset will lead to more strategic decisions initially and over time. Third, every high school and related high school improvement initiative is situated in a unique geographic, cultural, demographic, political, and societal context, which influences the school's vision, mission, structure, culture, and outcomes. Any efforts at high school improvement must take into account these particular school- and system-level contexts. These considerations affect each element and must be explicitly addressed when improvement strategies are devised. Fourth, if scalable and sustainable improvement is the ultimate goal, it is likely that the implementation of improvement efforts will require organizational change. No strategy can be complete without attention to the challenges of leading change within the respective organizational cultures.

## **EIGHT ELEMENTS OF HIGH SCHOOL IMPROVEMENT**

---

The eight systemic reform elements that make up the National High School Center Mapping Framework are listed below with their respective characteristics of effectiveness:

1. **Rigorous Curriculum and Instruction:** Ensure that all students have access to rigorous curricula and instruction designed to meet college and career readiness standards.

### **Alignment and Coherence**

- 1.1. Curriculum and instruction are aligned to district, state, and national standards that include college- and career-readiness.
- 1.2. Curriculum and core content courses are aligned vertically to ensure that students possess necessary prerequisite content knowledge for higher-level coursework.
- 1.3. Curriculum and core content courses are aligned horizontally to ensure similar courses include common standards.
- 1.4. Curriculum and instruction are adapted to high school organizational structures to address the needs of all students.

### **Instructional Strategies and Supports**

- 1.5. Interdisciplinary approaches are established across all content areas to improve student engagement and achievement.
- 1.6. Multiple research- and evidence-based instructional strategies are incorporated across all content areas for all students, including those with special instructional needs.
- 1.7. Curriculum and instruction are designed, modified and adjusted around student learning strengths and needs.
- 1.8. Instruction is informed by student data across all content areas and is differentiated to meet the needs of all students.
- 1.9. Academic supports, extended learning opportunities, and content and credit recovery options are provided to keep students on track for graduation.
- 1.10. Multiple approaches for teaching and learning are incorporated into instructional practices across all content areas.
- 1.11. Study skills are incorporated into instructional practices across all content areas.
- 1.12. Families and students are engaged in academic decision making and planning processes.
- 1.13. Instructional strategies and academic course offerings promote student curiosity, communication, interpersonal skills, creativity, and innovation.

### **College- and Career-Readiness**

- 1.14. Academic and workplace literacy skills are embedded across all content areas.
- 1.15. Opportunities and academic supports are provided to enable all students to succeed in rigorous courses designed for college- and career-readiness.
- 1.16. College- and career-readiness skills are integrated across all content areas.

2. **Assessment and Accountability:** Implement coherent assessment and accountability systems that cover a broad range of formal and informal assessment policies and practices and that are consistent and coherent.

**Multiple Assessment Strategies**

- 2.1. Assessment systems are implemented across all content areas to identify student needs, to monitor student progress, and to inform instruction.
- 2.2. Students with special needs and those at risk of failure are identified early and are matched with appropriate interventions.
- 2.3. Continuous progress monitoring for student mastery across all content areas is supported through formal and informal assessment measures.
- 2.4. Formative assessments are embedded across all content areas and are aligned with standards and summative assessments.
- 2.5. Multiple assessment strategies are implemented across all content areas.
- 2.6. Higher order learning skills necessary for college and career readiness are measured.

**Data for Decision Making**

- 2.7. Timely and periodic access to data is provided to district leaders, principals, instructional staff, counselors, students, and families so that they can monitor and evaluate student knowledge and skills, plan for future educational programs, and adapt instruction to meet the needs of students.
- 2.8. Relevant data are routinely used by school staff and students to make decisions about student progress toward college and career goals.
- 2.9. Instructional staff members are provided opportunities to collaboratively analyze student work and other student-level data for instructional planning.
- 2.10. Ongoing reviews are conducted to determine the impact of instructional and student support interventions and to modify them, if necessary.
- 2.11. Information about students who transfer, drop out, or graduate from high school and information on students' post-high school outcomes is used to inform decisions about high school improvement strategies and initiatives.
- 2.12. An early warning system is established to identify students who may be at-risk for dropping out of high school and to match students to appropriate interventions.
- 2.13. Longitudinal data are analyzed to inform high school improvement strategies and initiatives.
- 2.14. Indicators and benchmarks are used to set goals and target resources aimed at improving high school outcomes.

**Evaluation and Accountability**

- 2.15. Data systems are used to track collective and individual teacher and student data to inform high school improvement strategies and initiatives.
- 2.16. An instructional staff evaluation system is implemented that includes accountability provisions at the high school, district, and state levels.



3. **Teacher Effectiveness and Professional Growth:** Implement teacher effectiveness and professional development systems that recognize a teacher's need for deep content and pedagogical knowledge and skills and include a broad set of recruitment, induction, professional growth, and retention policies and practices.

#### **Developing Effective Teachers**

- 3.1. All teachers continuously build their content knowledge and pedagogical and classroom management skills to meet the needs of all students.
- 3.2. Teachers have developed the necessary skills and tools needed to analyze and interpret data to make instructional decisions and adjustments.
- 3.3. Competitive compensation is offered to teachers via transparent and fair evaluation systems that incorporate student growth and achievement measures as indicators of effectiveness.
- 3.4. Teachers' classroom management and instructional leadership skills are developed and connected to school-wide expectations.

#### **Promoting Student-Centered Teaching**

- 3.5. Knowledge of adolescent development, varied pedagogy for high school students, and strategies for motivating and working effectively and empathetically with all students is developed.
  - 3.6. Professional development opportunities are targeted and based on high-quality standards for staff development and adult learning.
  - 3.7. Collaboration is achieved among teachers and instructional staff members to meet student needs by connecting instructional and support activities across all content areas and categorical programs.
  - 3.8. Professional development opportunities are job-embedded at the school and classroom levels, aligned to high school improvement strategies and initiatives, and offered throughout the school year.
4. **Student and Family Involvement:** Engage families in providing all students with positive conditions for learning that address the whole child, including physical, social, and emotional needs.

#### **Student and Family Supports**

- 4.1. Formal and informal guidance programs for students are provided.
- 4.2. Health, physical education, and extra-curricular activities are provided to enhance student wellness.
- 4.3. Family-focused supports, wraparound services, and outreach that engage family members in programs and services are provided.
- 4.4. Supports and opportunities for social and emotional learning are provided.
- 4.5. Students are supported as they transition into and out of high school.

#### **Student Engagement**

- 4.6. Opportunities for student leadership in the classroom, school, and community are provided.
- 4.7. A positive school climate is fostered, including school safety and a respectful environment.
- 4.8. The strengths and resources of students' families and communities are respected and acknowledged.

5. **Stakeholder Engagement:** Involve school and community stakeholders to leverage their interests, skills, and resources for—and create a sense of ownership of—high school improvement strategies and initiatives.

**Cultivating Partnerships**

- 5.1. The interests, skills, and resources of multiple stakeholders within and outside the school are engaged in high school improvement strategies and initiatives.
- 5.2. PK-20 collaboration is fostered to enhance opportunities for secondary and post-secondary teaching and learning.
- 5.3. Partnerships with stakeholders are fostered to enhance teaching and learning opportunities.
- 5.4. All appropriate stakeholders are involved during critical planning and decision-making activities to foster buy-in and ownership for high school improvement strategies and initiatives.

**Communication and Information-Sharing**

- 5.5. Multiple communication strategies are implemented that are culturally and linguistically appropriate and support engaged communication and conversation with all stakeholders.
- 5.6. High school improvement needs are communicated to policymakers and leaders at state and local levels.

6. **Effective Leadership:** High school improvement strategies and initiatives require high-quality instructional and organizational leadership that improves student achievement.

**Leadership Development**

- 6.1. A distributed leadership approach is implemented to support high school improvement.
- 6.2. School leaders are equipped with instructional knowledge and skills to work with instructional staff to develop strategies which meet curricular and instructional goals.

**Organizational Management**

- 6.3. All high school improvement strategies and initiatives are aligned and effectively guided by a high school improvement team.
- 6.4. Policies are implemented that have a clear focus and that support the necessary changes to address the identified strengths and needs of all students.
- 6.5. School leaders are equipped with knowledge of organizational change to support high school improvement strategies and initiatives.

7. **Organization and Structure:** Ensure that the school organizational and operational structures are designed and revised to support student needs.

**Organizational Innovations**

- 7.1. A variety of physical and operational structures that are aligned with high school improvement initiatives are utilized to support effective teaching, learning, and personalization.
- 7.2. Organizational structures to support collaboration among instructional teams are implemented.
- 7.3. Time management and scheduling approaches are implemented to enhance and/or extend learning time to better meet the needs of students.

- 7.4. Innovative organizational structures are implemented to distribute administrative responsibilities traditionally performed by the high school administrative team.
- 7.5. School-wide structures are implemented that support effective classroom management skills across all content areas.

#### **Instructional Innovations**

- 7.6. Organizational structures to support instructional innovations are implemented to actively engage all students in the core curriculum.
  - 7.7. Organizational structures are implemented to increase opportunities to learn through nontraditional educational settings.
8. **Sustainability:** Identify and commit adequate resources for supporting continuous high school improvement strategies and initiatives.

#### **Resources**

- 8.1. High school improvement priorities are defined, and needed resources for sustainability over time are allocated.
- 8.2. Appropriate time and necessary fiscal support are provided so that high school improvement strategies and initiatives can be implemented and take hold.
- 8.3. Resources and human capital are secured to implement and sustain high school improvement strategies and initiatives.
- 8.4. Facilities and materials are continually assessed and upgraded to keep pace with evolving standards and technology.

#### **Strategies**

- 8.5. Staffing patterns are aligned to support high school improvement strategies and initiatives.
- 8.6. Relationships with stakeholders are cultivated to support high school improvement strategies and initiatives.
- 8.7. Cultural changes that accompany high school improvement strategies and initiatives are promoted and supported.

#### **Knowledge**

- 8.8. Effective practices for high school improvement are identified, implemented, and sustained.
- 8.9. Teachers and principals continuously develop their knowledge and skills to incorporate high school improvement strategies and initiatives within their instructional leadership practices.

## REFERENCES

---

- Adelman, C. (2006). *The toolbox revisited: Paths to degree completion from high school through college*. Washington, DC: U.S. Department of Education.
- American Productivity and Quality Center. (2000). *Benchmarking best practices in accountability systems in education*. Houston, TX: Author.
- American Institutes for Research. (2005). *Toward more effective school districts: A review of the knowledge base*. Washington, DC: Author. Retrieved July 3, 2008, from <http://www.ped.state.nm.us/div/psb/dl10/AIR%20Toward%20more%20effective%20school%20districts.pdf>
- Borman, G. D., Hewes, G. M., Overman, L. T., & Brown, S. (2002). *Comprehensive school reform and student achievement: A meta-analysis* (Report No. 59). Baltimore: Johns Hopkins University/CRESPAR.
- Catsambis, S. (1998). *Expanding the knowledge of parental involvement in secondary education: Effects on high school academic success* (Report No. 27). Baltimore: Johns Hopkins University.
- Charles A. Dana Center. (2000). *Equity-driven achievement-focused school districts*. Austin, TX: Charles A. Dana Center.
- The Education Alliance at Brown University. (2007). *Developing and implementing statewide systems of support for low-performing schools*. Providence, RI: Author. Retrieved July 3, 2008, from [http://www.alliance.brown.edu/projects/csrqi/docs/CSRQI\\_Design\\_Elements\\_SSOS.pdf](http://www.alliance.brown.edu/projects/csrqi/docs/CSRQI_Design_Elements_SSOS.pdf)
- Henderson, A. T., & Berla, N. (Eds.). (1994). *A new generation of evidence: The family is critical to student achievement* (report from the National Committee for Citizens in Education). Washington, DC: Center for Law and Education.
- Hornbeck, M. (2001). *State support to lower performing schools* [Unpublished Manuscript]. Washington, DC: The Council of Chief State School Officers.
- Johnson, D. R., & Thurlow, M. L. (2003). *A national study on graduation requirements and diploma options for youth with disabilities* (Technical Report 36). Retrieved August 23, 2007, from the University of Minnesota, National Center on Educational Outcomes Web site, <http://www.education.umn.edu/NCEO/OnlinePubs/Technical36.htm>
- Learning First Alliance. (2003). *Beyond islands of excellence: What districts can do to improve instruction and achievement in all schools*. Washington, DC: Author.
- Lee, V. E., & Smith, J. B. (1995). Effects of high school restructuring and size on early gains in achievement and engagement. *Sociology of Education*, 68(4), 241–270.
- Legters, N., Balfanz, R., Jordan, W., & McPartland, J. (2002). *Comprehensive reform for urban high schools: A Talent Development approach*. New York: Teachers College Press.
- Marsh, J. (2000). *Connecting districts to the policy dialogue: A review of literature on the relationship of districts with states, schools, and communities*. Seattle, WA: Center for the Study of Teaching and Policy.
- McLaughlin, M., & Talbert, J. (2003). *Reforming districts: How districts support school reform*. Seattle, WA: Center for the Study of Teaching and Policy.



Newmann, F. M., & Wehlage, G. G. (1995). *Successful school restructuring*. Madison, WI: Center on Organization and Restructuring of Schools.

O'Day, J., & Bitter, C. (2003). *Evaluation study of the immediate intervention/underperforming schools program and the high achieving/improving schools program of the Public Schools Accountability Act of 1999*. Palo Alto, CA: American Institutes for Research.

Reeves, C. (2003). *State support to low-performing schools*. Washington, DC: Council of Chief State School Officers.

Snipes, J., Doolittle, F., & Herlihy, C. (2002). *Foundations for success: Case studies of how urban school systems improve student achievement* (report prepared for the Council of the Great City Schools). New York: MDRC.

Unger, C., Lane, B., Cutler, E., Lee, S., Whitney, J, Arruda, E., & Silva, M. (2008). *How can state education agencies support district improvement: A conversation amongst educational leaders, researchers, and policy actors*. Providence, RI: The Education Alliance at Brown University. Retrieved July 3, 2008, from <http://www.alliance.brown.edu/pubs/csrqi/Symposium.pdf>

Copyright 2008  
American Institutes for Research®  
All rights reserved.

---

Suggested citation for this document:

National High School Center. (2008). *Eight elements of high school improvement: A mapping framework* (Rev. ed.). Washington, DC: National High School Center at the American Institutes for Research. Retrieved from <http://www.betterhighschools.com/pubs/documents/EightElementsMappingFramework.pdf>