



NEW ENGLAND
SECONDARY SCHOOL
CONSORTIUM

GLOBAL BEST PRACTICES

Research Summary

INTRODUCTION

Global Best Practices: An Internationally Benchmarked Self-Assessment Tool for Secondary Learning was created by the New England Secondary School Consortium to equip high schools with a clearly articulated, step-by-step process they can follow to identify existing issues or needs, and to shape school-improvement plans and priorities.

Over the past few decades, a growing body of educational research—both in the United States and abroad—has begun to reveal what works well and what doesn't work so well in secondary schools. While this emerging consensus has not yet delivered a perfect solution for every problem that educators encounter, it has nevertheless identified a variety of leadership, organizational, and instructional practices that, when implemented well, can enhance equity, improve instructional quality, and deliver better outcomes for more students.

The difficulty, of course, is that every day new education studies are published with findings that open new avenues of inquiry and action demanding our attention. And given the sheer extent of this academic production—and the fact that it is not readily available in a single, easily accessible location—its practical utility for the busy school administrator or teacher is significantly diminished.

In undertaking a project as ambitious as *Global Best Practices*, difficult decisions must be made about what elements of secondary learning to focus on and what research studies to consider. Unavoidably, some effective strategies will be left out and important research will go unexplored. In the effort to balance inclusiveness and focus, this summary presents two types of research that were consulted during the development of the tool: [1] meta-analyses and comprehensive projects that distill useful findings from a wide range of existing research, and [2] focused investigations conducted by individuals or organizations that represent a coherent body of research in a particular area.

Our hope is that this research summary will not only become an indispensable companion to *Global Best Practices*, but that it will serve to stimulate self-reflection and professional inquiry in your school. The tool, however, is not a static document, but an ongoing project that will be revised and updated as new research and strategies emerge, and as we receive feedback from practitioners who are using it in their schools. If you have resource recommendations, please submit suggestions to gbpfeedback@newenglandssc.org.

Finally, the New England Secondary School Consortium would like to thank Michelle LaPointe, of LaPointe Analysis and Evaluation for Decisionmakers, and the National High School Center at the American Institutes for Research for the indispensable contributions they made during the development of *Global Best Practices* and this research summary.

How This Research Summary Is Organized

This document is not a work of traditional scholarship, but rather a practical, accessible presentation of selected scholarship for practicing educators. The research is presented in no particular order, although a consistent format has been used throughout. As educators familiarize themselves with this body of research, they will notice that a variety of common themes and mutually reinforcing findings will emerge. In some sections, lengthier presentations of particularly valuable findings have been included; these bulleted lists convey detailed conclusions or guidance that, due to the limitations of format and page space, were not fully presented in *Global Best Practices*. Each section begins with a title that identifies the study, project, researcher, or area of focus that will be summarized, followed by:

1. A brief overview of the study or studies, including detailed lists of selected findings.
2. The relevant dimensions of *Global Best Practices* that the research informed.
3. Websites where the research or resources can be found.
4. A formal bibliography of the research.
5. And, when applicable, a list of related research and resources that readers can consult.

Changing the Odds | Stupski Foundation's Learning System

Funded by the Stupski Foundation and executed by Mid-continent Research for Education and Learning (McREL), the Stupski Foundation Learning System is the result of a year-long effort to “capture what’s known about what it takes to ensure the success of all students, especially children of color living in poverty.” The authors reviewed more than 1,000 studies and reports on seven major components of school systems and the learning needs of underserved students. The result of this extensive research is *Changing the Odds for Student Success*, a lucid, articulate summary of the project and its findings, and eight meta-analyses on the following components of effective schooling: assessment, college readiness, curriculum, leadership, the learning needs of urban youth of color (*Our Kids*), pedagogy, student supports, and systems diagnostics. While the project is largely focused on distilling applicable research on American schools, it is inclusive of some international research and effective practices. The quality and utility of this work is exceptional, and we strongly recommend it.

Relevant Dimensions: 1.1-3.4

Websites

Changing the Odds: changetheodds.org

Stupski Foundation's Learning System reports: mcrel.org/topics/products/406

References

- Englert, K. E., Apthorp, H., & Seebaum, M. (2009). *Pedagogy: A McREL report prepared for Stupski Foundation's Learning System*. Denver, CO: Mid-continent Research for Education and Learning.
- Germeroth, C., Barker, J., Arens, S., & Wang, X. (2009). *Our kids: A McREL report prepared for Stupski Foundation's Learning System*. Denver, CO: Mid-continent Research for Education and Learning.

- Goodwin, B., McIver, M., Snyder, C., & Ryan, S. (2009). *Curriculum: A McREL report prepared for Stupski Foundation's Learning System*. Denver, CO: Mid-continent Research for Education and Learning.
- Goodwin, B. (2010). *Changing the odds for student success: What matters most*. Denver, CO: Mid-continent Research for Education and Learning (McREL).
- Iark, T., Englert, K., Frazee, D., Shebby, S., & Randel, B. (2009). *Assessment: A McREL report prepared for Stupski Foundation's Learning System*. Denver, CO: Mid-continent Research for Education and Learning.
- Igel, C., Apthorp, H., Peterson, G., Davis, T., Moore, L., & Englert, K. (2009). *Systems diagnostics: A McREL report prepared for Stupski Foundation's Learning System*. Denver, CO: Mid-continent Research for Education and Learning.
- Lefkowitz, L., Woempner, C., Kendall, J., & Frost, D. (2009). *College readiness: A McREL report prepared for Stupski Foundation's Learning System*. Denver, CO: Mid-continent Research for Education and Learning.
- Moore, L., Rease, D., & Barker, J. (2009). *Student supports: A McREL report prepared for Stupski Foundation's Learning System*. Denver, CO: Mid-continent Research for Education and Learning.

EPIC | David T. Conley | Knowledge and Skills for University Success

The substantial body of work produced by David T. Conley and the Educational Policy Improvement Center (EPIC) has identified the core knowledge and cross-disciplinary skills critical to success in college. Conley was the director of Understanding University Success, a project conducted by the Association of American Universities and the Pew Charitable Trusts, which developed the Knowledge and Skills for University Success (KSUS) standards. The KSUS project also includes a collection of highly useful collegiate-level work samples—including course syllabi, assignments, lab exercises, and tests—that high school teachers can reference when designing courses and lessons intended to prepare students for college-level work. The Standards for Success Work Samples “represent the range and types of assignments students receive when they enter college” and they “demonstrate the quality of work students are expected to produce to be successful in entry-level university courses.”

While the KSUS standards outline, in great detail, the knowledge and skills needed to succeed in college, the following list constitutes a selection of some of the core skills essential to postsecondary success in the 21st century:

- Critical-thinking, problem-solving, and analytical skills.
- An inquisitive and curious nature.
- A receptivity to critical feedback and a willingness to act on it.
- An ability to accept failure and learning from it.
- An ability to make persuasive and articulate written and oral arguments.
- The ability to weigh sources for credibility and relative importance.
- The ability to use technology to enhance learning.
- The capacity to draw independent inferences and reach conclusions (Conley, 2005).

RESEARCH SUMMARY

Recently, David Conley and the Educational Policy Improvement Center refined this list of skills and developed the Key Cognitive Strategies Model, which focuses on five types of essential and interrelated knowledge and skills that more traditional educational practices rarely teach or measure:

- Problem formulation [hypothesizing, strategizing]
- Research [identification, collection]
- Interpretation [analysis, evaluation]
- Communication [organization, construction]
- Precision and accuracy [monitoring, confirming]

Relevant dimensions: 1.1-1.8, 2.3

Websites

EPIC college-ready resources: epiconline.org/college_ready_resources

Dr. David Conley's publications: epiconline.org/publications/dr_david_conley

Standards for Success Work Samples: epiconline.org/publications/college_readiness

Knowledge and Skills for University Success: scollegereadiness.com/KSUS.htm

References

- Conley, D. T. (2003). *Understanding university success: A report from Standards for Success*. Eugene, OR: University of Oregon, Center for Educational Policy Research.
- Conley, D. T. (2005). *College knowledge: What it really takes for students to succeed and what we can do to get them ready*. San Francisco: Jossey-Bass.
- Conley, D. T. (2007). *Redefining college readiness*. Eugene, OR: University of Oregon, Educational Policy Improvement Center.
- Conley, D. T. (2008). What makes a student college ready? *Educational Leadership*, 66(2).
- Conley, D. T. (2009). *Creating college readiness*. Eugene, OR: University of Oregon, Educational Policy Improvement Center.
- Conley, D. T. (2010). *College and career ready: Helping all students succeed beyond high school*. San Francisco: Jossey-Bass.
- Educational Policy Improvement Center. (2010). *The key cognitive strategies*. Eugene, OR: Author.

Related Research + Resources

The Partnership for 21st Century Skills “skill maps” provide practical, research-based guidance for high school teachers looking to incorporate cross-content skills into their curriculum and instruction.

- Partnership for 21st Century Skills. (2008). *21st century skills map: English*. Tucson, AZ: Author.
- Partnership for 21st Century Skills. (2009). *21st century skills map: Geography*. Tucson, AZ: Author.
- Partnership for 21st Century Skills. (2009). *21st century skills map: Science*. Tucson, AZ: Author.
- Partnership for 21st Century Skills. (2009). *21st century skills map: Social studies*. Tucson, AZ: Author.
- Partnership for 21st Century Skills. (2010). *21st century skills map: The arts*. Tucson, AZ: Author.

National Staff Development Council | Status of Professional Learning

“Research shows that teacher quality is the single most powerful influence on student achievement, and yet teachers in the United States receive far less professional development, mentoring, and planning time than teachers in the world’s high-achieving nations. In order for our students to succeed, their teachers must also be supported to succeed. Studies have shown that teacher success can be fostered through high-quality professional development—professional development that is sustained, connected to practice and school initiatives, focused on academic content, and supportive of strong working relationships among teachers.”

—From *Professional Learning in the United States*

In 2008, the National Staff Development Council enlisted a team of researchers from the Stanford Center for Opportunity Policy in Education to undertake a three-part Status of Professional Learning research study intended to measure the effectiveness of professional learning in education. The first two phases of the study have been completed. This comprehensive research project investigated professional learning communities and teacher professional development both in the United States and abroad. Given the utility of this research for schools and educators, several of its major findings and conclusions are worth mentioning in detail here:

- Sustained, intensive professional development for teachers is related to gains in student achievement.
- Collaborative approaches to professional development—particularly school-embedded professional learning groups—can promote improvement not only in the classroom, but throughout a school.
- Effective professional development tends to share four high-impact attributes: [1] it is intensive and ongoing; [2] it is focused on the teaching and learning of specific academic content; [3] it is connected to and aligned with other school initiatives; [4] it builds strong working relationships among teachers.
- The importance of providing support for new teachers is growing in the United States—many high-performing countries have robust new-teacher support systems in place.
- Most professional learning in the United States appears to consist primarily of short-term conferences and workshops, which are beneficial, but less likely to lead to significant improvements in school culture, working relationships, or student performance and outcomes.
- Teachers need substantial professional development in a given area—close to fifty hours—to improve instructional skills and student learning; most professional development in the United States is significantly shorter than the fifty hours required to transform practice.
- Teachers in the United States report relatively little professional collaboration on curriculum design and instructional practices, and when collaboration is present, it tends to be weak and not focused on strengthening teaching and learning in the classroom.
- American teachers report that the professional development available to them is not useful; the most useful professional learning opportunities tend to be content-related and practice-specific.
- The top professional-development priorities identified by teachers are [1] learning more about the content they teach; [2] improving classroom-management skills; [3] teaching students with

RESEARCH SUMMARY

special needs; and [4] using technology effectively to enhance teaching and learning.

- In general, teachers do not receive adequate training in teaching special education or limited English proficiency students.
- American teachers, unlike many of their colleagues around the world, bear much of the cost of their own professional development.
- The United States is far behind other countries when it comes to providing public school teachers with opportunities to participate in extended learning opportunities and productive collaborative learning communities that allow teachers to work together on instructional planning, learn from one another through mentoring or peer coaching, conduct research on the outcomes of classroom practices, and collectively guide curriculum, assessment, and professional-learning decisions.
- Nations that outperform the United States on international assessments invest heavily in professional learning for teachers, and they build time into the school work day for ongoing, sustained teacher development, collaboration, and planning.
- American teachers spend much more time teaching students and have significantly less time to plan and learn together, and to develop high-quality curriculum and instruction, than teachers in other nations (American teachers spend roughly eighty percent of their total working time engaged in classroom instruction, compared to sixty percent in other countries).
- Teachers in the United States have limited influence on crucial areas of school governance and decision-making, particularly when it comes to curriculum design, assessment practices, professional development, and school policies (Wei, Darling-Hammond, Andree, Richardson & Orphanos, 2009).

Relevant dimensions: 1.8, 2.2, 2.8, 3.1

Websites

Status of Professional Learning: learningforward.org/stateproflearning.cfm

References

- Darling-Hammond, L., Wei, R. C., Andree, A., Richardson, N., & Orphanos, S. (Spring 2009). State of the profession: Study measures status of professional development. *Journal of Staff Development*, 30(2), 42-50.
- Wei, R. C., Darling-Hammond, L., & Adamson, S. (2010). *Professional learning in the United States: Trends and challenges*. Dallas, TX: National Staff Development Council.
- Wei, R. C., Darling-Hammond, L., Andree, A., Richardson, N., & Orphanos, S. (2009). *Professional learning in the learning profession: A status report on teacher development in the United States and abroad*. Dallas, TX: National Staff Development Council.

Related Research + Resources

The Center for Comprehensive School Reform and Improvement compiled an excellent research-based online guide to professional learning communities: centerforcsri.org/plc. [NOTE: Although this program is now defunct and the website is no longer maintained, the professional learning community resource remains active and available to the public.]

For additional meta-analyses of research literature that seek to answer questions about the implementation and efficacy of professional learning communities, we recommend:

- Feger, S., & Arruda, E. (2008). *Professional learning communities: Key themes from the literature*. Providence, RI: Brown University, Education Alliance.
- Stoll, L., Bolam, R., McMahon, A., Wallace, M., & Thomas, S. (2006). Professional learning communities: A review of the literature. *Journal of Educational Change*, 7(4), 221-258.
- Vescio, V., Ross, D., & Adams, A. (January 2008). A review of research on the impact of professional learning communities on teaching practice and student learning. *Teaching and Teacher Education*, 24(1), 80-91.

U.S. Department of Education | National Center for Education Statistics

A major national longitudinal study conducted by the U.S. Department of Education found that “the academic intensity of the student’s high school curriculum still counts more than anything else in precollegiate history in providing momentum toward completing a bachelor’s degree” (Adelman, 2006—the finding also affirmed an earlier study: Adelman, 1999). Other related federal studies arrived at similar findings: the level of academic challenge in high school courses has the most significant effect on both secondary and postsecondary success (Roey, Caldwell, Rust, Blumstein, Krenzke, Legum, Kuhn, Waksberg & Haynes, 2001; Tuma & Geis, 1995); students who complete a rigorous high school course of study demonstrated a consistent advantage, when it came to collegiate success and persistence, than peers who were enrolled in less-challenging courses (Horn & Kojaku, 2001); and strong academic preparation in high school significantly decreases the gap in postsecondary success between first-generation students (those whose parents have no education beyond a high school diploma) and students from more highly educated familial backgrounds (Warburton, Bugarin & Nuñez, 2001).

Relevant Dimensions: 1.1-1.4, 2.3

Websites

National Center for Education Statistics: nces.ed.gov

The Toolbox Revisited: www2.ed.gov/rschstat/research/pubs/toolboxrevisit

U.S. Department of Education: ed.gov

What Works Clearinghouse: ies.ed.gov/ncee/wwc

Doing What Works: dww.ed.gov

References

- Adelman, C. (1999). *Answers in the toolbox: Academic intensity, attendance patterns, and bachelor’s degree attainment*. Washington, DC: U.S. Department of Education.
- Adelman, C. (2006). *The toolbox revisited: Paths to degree completion from high school through college*. Washington, DC: U.S. Department of Education.
- Horn, L. & Kojaku, L. K. (2001). *High school academic curriculum and the persistence path through college*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

RESEARCH SUMMARY

- Roey, S., Caldwell, N., Rust, K., Blumstein, E., Krenzke, T., Legum, S., Kuhn, J., Waksberg, M., & Haynes, J. (2001). *The 1998 high school transcript study tabulations: Comparative data on credits earned and demographics for 1998, 1994, 1990, 1987, and 1982 high school graduates*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.
- Tuma, J., & Geis, S. (1995). *High school and beyond: 1992 descriptive summary of 1980 high school sophomores 12 years later*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.
- Warburton, E. C., Bugarin, R., & Nuñez, A-M. (2001). *Bridging the gap: Academic preparation and postsecondary success of first-generation students*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Organisation for Economic Co-operation and Development (OECD)

The OECD, a major source of high-quality research on international education systems, conducted an extensive review of educational equity in ten countries. The findings from this project are summarized in *No More Failures: Ten Steps to Equity in Education*, which proposes ten evidence-based measures for reducing school failure and dropout rates at the policy level:

- Limit early tracking and streaming, and postpone academic selection.
- Manage school choice so as to contain the risks to equity.
- In upper secondary education, provide attractive learning alternatives, remove dead ends, and prevent dropouts.
- Offer second chances to gain from education (for dropouts, adult learners, etc.).
- Identify and provide systematic help to those who fall behind at school and reduce year repetition.
- Strengthen the links between school and home to help disadvantaged parents help their children to learn.
- Respond to diversity and provide for the successful inclusion of migrants and minorities within mainstream education.
- Provide strong education for all, giving priority to early childhood provision and basic schooling.
- Direct resources to students and regions with the greatest needs.
- Set concrete targets for more equity, particularly related to low school attainment and dropouts.

The OECD's Teaching and Learning International Survey (TALIS) is an ambitious twenty-three-country survey that is attempting to provide the first internationally comparative perspective on the conditions of teaching and learning. The project's first report, *Creating Effective Teaching and Learning Environments: First Results from TALIS*, focuses on lower secondary education in both the public and private sectors and examines professional development; teacher beliefs, attitudes and practices; teacher evaluation and feedback; and school leadership.

The OECD has also investigated effective formative assessment strategies, teacher recruitment and

development, and digital learning technologies, among other areas of research, across participating OECD countries. Several of these reports informed the development of *Global Best Practices*.

Relevant dimensions: 1.1-3.4

Websites

Organisation for Economic Cooperation and Development: oecd.org

Selected References

- Field, S., Kuczera, M., & Pont, B. (2007). *No more failures: 10 steps to equity in education*. Paris: Organisation for Economic Co-operation and Development.
- Grubb, N., Marit Jahr, H., Neumuller, J., & Field, S. (2005). *Equity in education: Thematic review, Finland*. Organisation for Economic Cooperation and Development
- Organisation for Economic Co-operation and Development (2001). *Learning to change: ICT in Schools*. Paris: Author.
- Organisation for Economic Co-operation and Development (February 2004). *The quality of the teaching workforce (Policy Brief)*. Paris: Author.
- Organisation for Economic Cooperation and Development. (2004). *Completing the foundation for lifelong learning: An OECD survey of upper secondary schools*. Paris: Author.
- Organisation for Economic Co-operation and Development (2005). *The definition and selection of key competencies: Executive summary*. Paris: Author.
- Organisation for Economic Co-operation and Development (November 2005). *Formative assessment: Improving learning in secondary classrooms (Policy Brief)*. Paris: Author.
- Organisation for Economic Co-operation and Development. (2005). *Teachers matter: Attracting, developing and retaining effective teachers*. Paris: Author.
- Organisation for Economic Co-operation and Development. (2007). *Evidence in education: Linking research and policy*. Paris: Author.
- Organisation for Economic Co-operation and Development. (2008). *Improving school leadership: Executive summaries*. Paris: Author.
- Organisation for Economic Co-operation and Development. (2009). *Beyond the textbooks: Digital learning resources as systemic innovation in the Nordic countries*. Paris: Author.
- Organisation for Economic Co-operation and Development (2009). *Creating effective teaching and learning environments: First results from TALIS*. Paris: Author.
- Organisation for Economic Co-operation and Development. (2009). *Education today: The OECD perspective*. Paris: Author.
- Pont, B., Nusche, D., & Moorman, H. (2008). *Improving school leadership, volume 1: Policy and practice*. Paris: Organisation for Economic Co-operation and Development.
- Pont, B., Nusche, D., & Hopkins, D. (Eds.) (2008). *Improving school leadership, volume 2: Case studies on system leadership*. Paris: Organisation for Economic Co-operation and Development.

Väljärvi, J., Kupari, P., Linnakylä, P., Reinikainen, P., Sulkunen, S., Törnroos, J. & Arffman, I. (2003). *The Finnish success in PISA—and some reasons behind it*. Paris: Organisation for Economic Co-operation and Development.

Research on High-Impact Schools

An emerging focus in education research is the investigation of schools that have achieved significant performance gains and improved student outcomes despite serving large numbers of low-income, minority, or disadvantaged students. These studies are revealing about which organizational or instructional practices can accelerate learning and student performance in the face of significant challenges. The following four studies were particularly useful during the development of *Global Best Practices*.

After reviewing data on more than 360 California high schools, the authors of *High Schools for Equity: Policy Supports for Student Learning in Communities of Color* identified five predominantly minority urban high schools with graduation and postsecondary-enrollment rates that exceeded the state average. In addition to delivering personalized, rigorous, and relevant college-preparatory coursework and instruction to every student, all five schools shared a few common high-impact attributes: they provided weekly common planning time, consistent professional development, and summer retreats for grade-level and departmental faculty teams to engage in collaborative professional development focused on instructional improvement. The study determined that, given the demographics of and challenges faced by these large urban schools, they would not have been able to meet the needs of their students without common planning time, structured professional inquiry, and the ongoing refinement of practice.

The Education Trust found that high-impact high schools—schools that have achieved strong performance growth relative to other schools serving students with similar demographics—set consistently higher academic expectations for students regardless of past performance; remove barriers to higher-level courses and encourage students to challenge themselves; focus on academics, not rules; maintain and express consistent views about academic goals; and prepare students for success in college and work, rather than merely preparing them to graduate, among other findings (Education Trust, 2005a).

A second Education Trust study found four foundational characteristics of high-impact schools:

- They start with data.
- They focus on instruction.
- They find ways to connect students to adults in the building.
- They organize themselves around the belief that all students can and will learn (Education Trust, 2005b).

A study of seventy-four average and higher performing high schools in ten states identified fundamental teaching and learning practices that are shared across higher performing schools, including:

- Setting explicit academic goals that are aligned with and often exceed state standards.
- Focusing professional development activities to support a culture of collaboration.
- Embracing broader learning objectives beyond subject matter and using differentiation strategies to reach students at all levels.

- Interpreting student-achievement data to make decisions about teaching.
- Recognizing student and teacher achievement within a context of support (Dolejs, 2006).

Relevant Dimensions: 1.1-3.4

References

- Dolejs, C. (2006). *Report on key practices and policies of consistently higher performing high schools*. Washington, DC: National High School Center, American Institutes for Research.
- Education Trust. (2005a). *Gaining traction, gaining ground: How some high schools accelerate learning for all students*. Washington, DC: Author.
- Education Trust. (2005b). *The Power to change: High schools that help all students achieve*. Washington, DC: Author.
- Friedlaender, D., & Darling-Hammond, L. (2007). *High schools for equity: Policy supports for student learning in communities of color*. Stanford, CA: School Redesign Network, Stanford University.
- Friedlaender, D., & Darling-Hammond, L. (May 2008). Creating excellent and equitable schools. *Educational Leadership*, 65(8), 14-21.

Mid-Continent Research for Education and Learning | Leadership

Mid-Continent Research for Education and Learning analyzed educational leadership studies conducted over a thirty-year period and identified twenty-one school leadership responsibilities and attributes that are significantly associated with student achievement. The nearly seventy studies involved 2,894 schools, approximately 1.1 million students, and 14,000 teachers. The principal findings from the review are worth listing here. An effective school leader:

- Fosters shared beliefs and a sense of community and cooperation.
- Establishes a set of standard operating procedures and routines.
- Protects teachers from issues and influences that would detract from their teaching time and focus.
- Provides teachers with materials and professional development necessary for the successful execution of their jobs.
- Is directly involved in the design and implementation of curriculum, instruction, and assessment practices.
- Establishes clear goals and keeps those goals in the forefront of the school's attention.
- Is knowledgeable about current curriculum, instruction, and assessment practices.
- Has quality contact and interactions with teachers and students.
- Recognizes and rewards individual accomplishments.
- Establishes strong lines of communication with teachers and among students.
- Is an advocate and spokesperson for the school to all stakeholders.

RESEARCH SUMMARY

- Involves teachers in the design and implementation of important decisions and policies.
- Recognizes and celebrates school accomplishments and acknowledges failures.
- Demonstrates an awareness of the personal aspects of teachers and staff.
- Is willing to actively challenge the status quo.
- Inspires and leads new and challenging innovations.
- Communicates and operates from strong ideals and beliefs about schooling.
- Monitors the effectiveness of school practices and their impact on student learning.
- Adapts leadership behaviors to the needs of the current situation and is comfortable with dissent.
- Is aware of the details and undercurrents in the running of the school and uses this information to address current and potential problems.
- Ensures that faculty and staff are aware of the most current theories and practices and makes the discussion of these a regular aspect of the school culture (Waters, Marzano & McNulty, 2003).

The findings from this study were also expanded into a book that has become a seminal reference in the field: *School Leadership that Works: From Research to Results*.

Relevant dimensions: 3.1-3.4

References

- Waters, J. T., Marzano, R. J., & McNulty, B. A. (2003). *Balanced leadership: What 30 years of research tells us about the effect of leadership on student achievement*. Aurora, CO: Mid-continent Research for Education and Learning.
- Marzano, R. J., Waters, J. T., & McNulty, B. A. (2005). *School leadership that works: From research to results*. Aurora, CO: Mid-continent Research for Education and Learning.

Learning from Leadership Project | CAREI at the University of Minnesota

In July 2010, the Center for Applied Research and Educational Improvement at the University of Minnesota completed a multiyear study on school leadership funded by the Wallace Foundation. In addition to an extensive review of research completed in 2004, the study investigated a national sample of 180 schools in 43 school districts across nine states that varied in size, student demographics, geography, curriculum standards, leadership policies, and accountability systems. Surveys, interviews, classroom observations, and data analysis informed the report. The strength of this research project is its focus on the impact of leadership on student learning and instructional efficacy. Selected findings include:

- Collective leadership has a stronger influence on student learning than any individual source of leadership.
- Almost all people associated with high-performing schools have greater influence on school decisions than those in low-performing schools. High-performing schools have “fatter” or “thicker” decision-making structures, not simply “flatter” ones, and leadership in these schools is more “intense.”

- Compared to all teacher respondents, teachers from high-performing schools attribute greater influence to teacher teams, parents, and students.
- In all schools, principals and district leaders exercise the most influence on decisions. However, they do not lose influence as others gain it. In other words, influence in schools is not a fixed sum or a zero-sum game. Collective leadership occurs, in part, because effective principals encourage others to participate.
- Teacher motivation had the strongest relationship with student achievement.
- Leadership practices targeted directly at teachers' instruction (i.e., instructional leadership) have significant, although indirect, effects on student achievement.
- When principals and teachers share leadership, teachers' working relationships are stronger and student achievement is higher.
- Leadership effects on student learning occur largely because leadership strengthens professional community; teachers' engagement in professional community, in turn, fosters the use of instructional practices that are associated with student achievement.
- The professional community effect may reflect the creation of a supportive school climate that encourages student effort above and beyond that provided in individual classrooms.
- The variable of principal-teacher trust is less significant than instructional leadership and shared leadership; still, it is part of a shared leadership culture that is associated with high-achieving schools.
- While there are many sources of leadership in schools, principals remain the central source.
- No single pattern of leadership distribution is consistently linked to the quality of student learning.
- Teachers in high-performing (high student achievement) schools of all grade levels, K-12, report high levels of instructional climate.
- Principals whose teachers rate them high on instructional climate emphasize the value of research-based strategies and are able to apply them in their own school setting.
- Secondary school teachers rarely report that school-level leaders engage in instructional actions; this is the case for their principals, department heads, and other teacher leaders in their building. Teachers described a clear difference in principal behavior between those who "popped in" or were "visible," as compared with principals who were very intentional about each classroom visit and conversation, with the explicit purpose of engaging with teachers about well-defined instructional ideas and issues (Louis, Leithwood, Wahlstrom & Anderson, 2010).

Relevant dimensions: 1.8, 2.1-2.2, 2.6-2.8, 3.1-3.4

Websites

Learning from Leadership: cehd.umn.edu/CAREI/Leadership

References

- Louis, K. S., Leithwood, K., Wahlstrom, K. L., & Anderson, S. E. (2010). *Learning from leadership: Investigating the links to improved student learning* (Final Report). Minneapolis, MN: University of Minnesota, Center for Applied Research and Educational Improvement.

RESEARCH SUMMARY

Louis, K. S., Leithwood, K., Wahlstrom, K. L., & Anderson, S. E. (2010). *Learning from leadership: Investigating the links to improved student learning* (Executive Summary of Research Findings). Minneapolis, MN: University of Minnesota, Center for Applied Research and Educational Improvement.

Leithwood, K., Louis, K. S., Anderson, S. E., & Wahlstrom, K. L. (2004). *Executive summary: How leadership influences student learning*. Minneapolis, MN: University of Minnesota, Center for Applied Research and Educational Improvement.

Leithwood, K., Louis, K. S., Anderson, S. E., & Wahlstrom, K. L. (2004). *Review of research: How leadership influences student learning*. Minneapolis, MN: University of Minnesota, Center for Applied Research and Educational Improvement.

School Leadership Study | Stanford University

Stanford University's School Leadership Study conducted a series of in-depth case studies of eight highly developed pre- and inservice principal-preparation programs that employ particularly effective leadership-development strategies. The study examined programmatic structures and the perceptions of participants and graduates alongside a comparison sample of principals, while also following sub-sample of participants into their schools to investigate school operations, teacher perceptions of school leadership, and trends in student performance. Given the centrality of the principal in leading and sustaining effective high school redesign, it is critical that states, districts, and schools develop leadership-training strategies and recruit the best candidates into administrative positions.

In the book *Preparing Principals for a Changing World: Lessons from Effective School Leadership Programs, which grew out of the School Leadership Study*, the authors identify several common attributes of effective principal development programs and professional development:

- A comprehensive and coherent curriculum aligned to state and professional standards, with an emphasis on instructional leadership.
- A program philosophy and curriculum that emphasize leadership of instruction and school improvement.
- The integration of active, student-centered instructional strategies, such as problem-based learning, action research, field-based projects, and portfolios.
- Faculty who are not only knowledgeable in their subject areas, but also experienced practitioners.
- Social and professional support in the form of structured mentoring and advisement programs.
- Rigorous selection processes that cultivate expert teachers with leadership potential.
- Well-design and well-supervised administrative internships.
- A professional learning continuum that continues throughout a principal's career.
- A leadership approach that is grounded in practice, including on-the-ground observation and analysis of instructional strategies, supervision, professional development.
- Collegial learning networks—principal professional learning groups, study groups, mentoring, and peer coaching—that create opportunities for support and problem solving (Darling-Hammond, LaPointe, Meyerson, Orr & Cohen, 2007).

Relevant dimensions: 1.8, 2.8, 3.1-3.4

Websites

School Redesign Network publications: srnleads.org/resources/publications.html

References

- Darling-Hammond, L., LaPointe, M., Meyerson, D., Orr, M. T., & Cohen, C. (2007). *Preparing school leaders for a changing world: Lessons from exemplary leadership development programs*. Stanford, CA: Stanford University, Stanford Educational Leadership Institute.
- Darling-Hammond, L., Meyerson, D., LaPointe, M., & Orr, M. T. (2010). *Preparing principals for a changing world: Lessons from effective school leadership programs*. Stanford, CA: Stanford University, Stanford Educational Leadership Institute.
- Davis, S., Darling-Hammond, L., LaPointe, M., & Meyerson, D. (2005). *School leadership study: Developing successful principals (Review of Research)*. Stanford, CA: Stanford University, Stanford Educational Leadership Institute.
- LaPointe, M., Darling-Hammond, L., Meyerson, D. (2007). *Preparing school leaders for a changing world: Case studies of exemplary programs*. Stanford, CA: Stanford University, Stanford Educational Leadership Institute.

Standards-Based Education

A review of the history of standards-based reform in the United States reached several conclusions:

- When tests have high stakes, the importance of standards is decreased.
- Existing state tests do not measure all standards.
- When strong sanctions are attached to specific measurable outcomes, school and teaching practices become distorted.
- Standards-based reforms allocate responsibility and accountability in ways that can conflict with more traditional educational governance structures.
- Alignment of programs and school or teacher autonomy can become conflicting goals.
- State-by-state variation in learning standards poses challenges to implementing standards-based reforms (Hamilton, Sketcher & Yuan, 2009).

One meta-analysis found that high-stakes tests primarily constrict curriculum to tested topics, fragment knowledge into test-related elements, correlate with higher rates of teacher-centered instruction, and contribute to teacher turnover (Au, 2007). Another extensive review of research literature on standards-based curricula, instructional guidelines, and assessments reached four main conclusions. Standards-based strategies can:

- Have a positive influence on student achievement.
- Can influence teachers to adopt reform-oriented instructional practices.
- Can shape the content and quality of classroom pedagogy.
- Can benefit at-risk students, who tend not to be held to high expectations or have access to

RESEARCH SUMMARY

high-quality instruction (Lauer, Snow, Martin-Glenn, Van Buhler, Stoutemyer & Snow-Renner, 2005).

References

- Au, W. (2007). High-stakes testing and curricular control: A qualitative metasynthesis. *Educational Researcher*, 36(5), 258-267.
- Hamilton, L., Sketcher, B., & Yuan, K. (2009). *Standards-based reform in the United States: History, research, and future directions*. Washington, DC: RAND Corporation.
- Lauer, P.A., Snow, D., Martin-Glenn, M., Van Buhler, R.J., Stoutemyer, K., & Snow-Renner, R. (2005). *The influence of standards on K-12 teaching and student learning: A research synthesis*. Denver, CO: Mid-continent Research for Education and Learning.

Related Research + Resources

The work of William Schmidt, one of the principal voices of support for the Common Core State Standards, has established a strong connection between student achievement and the formulation of aligned learning standards and curricula within and across grade levels. In high-performing countries, focused, coherent, and consistent standards and curricular frameworks—which establish high expectations for students and yet allow teachers flexibility in their implementation—appear to play a central role in student achievement. One of professor Schmidt’s fundamental arguments—supported by international research—is that, in a deeply interconnected and interdependent world, the United States needs to develop standards that are not only compatible with international standards, but that are based on sound evidence of what is required for success in the 21st century.

References

- Schmidt, W. H., Houang, R. T., & Shakrani, S. (2009). *International lessons about national standards*. Washington, DC: Thomas B. Fordham Institute.
- Schmidt, W. H., McKnight, C. C., Houang, R. T., Wang, H. C., Wiley, D. E., Cogan, L. S., & Wolfe, R. G. (2001). *Why schools matter: A cross-national comparison of curriculum and learning*. San Francisco, CA: Jossey-Bass.
- Schmidt, W. H., Wang, H. C., & McKnight, C. C. (2005). Curriculum coherence: An examination of U.S. mathematics and science content standards from an international perspective. *Journal of Curriculum Studies*, 37(5), 525-559.

Richard Halverson | Data-Driven Instructional Systems

For guidance on using student and school data to shape curricula, instructional programs, and school decision-making, several research-based models are available to secondary schools. One model we recommend is the work of Richard Halverson and the University of Wisconsin’s Data-Driven Instructional Systems (DDIS) project, a nine-school study that is investigating “how expert school leaders design systems of structures, people, and practices to help teachers translate testing data into information for everyday use.” The study examines how these schools collect and distribute a wide range of achievement and behavioral data; build on locally developed systems and comprehensive school reforms; provide organized opportunities for reflection and design; and build formative feedback systems to measure the success of internal program design.

Relevant dimensions: 1.5, 1.8, 2.7-2.8

Websites

Data-Driven Instructional Systems: ddis.wceruw.org

References

See the DDIS resource page for a full bibliography: ddis.wceruw.org/resources.htm

Stanford Center for Opportunity Policy in Education | Assessment

Performance Assessment: Measuring Student Achievement so that Students Succeed is a Stanford Center for Opportunity Policy in Education (SCOPE) project led by Linda Darling-Hammond, Frank Adamson, and Susan Shultz. The project examines “experiences with and lessons learned from large-scale performance assessment in the United States and abroad, including technical advances, feasibility issues, policy implications, uses with English language learners, and costs.” While much of this work is focused on large-scale implementations of performance assessments, its findings are nevertheless highly instructive for schools or districts looking to design a local performance-assessment system.

One of the SCOPE reports identified five attributes of effective performance-assessment systems:

- Scorers who have sufficient knowledge of the skills being measured and the rating criteria being applied.
- Tasks designed with a clear idea of what constitutes poor and good performance.
- Scoring guides that minimize the level of inference scorers must make when applying the criteria to student work.
- Sufficient training for teachers in applying the criteria to real examples of student work.
- A system for monitoring the scoring process to maintain calibration over time (Stecher, 2010).

Similarly, an Organisation for Economic Co-operation and Development report found several common features of effective formative assessment that are worth mentioning here since they are focused on classroom practices, not policies:

- A classroom culture that encourages interaction and the use of assessment tools.
- Establishment of learning goals, and tracking of individual student progress toward those goals.
- Use of varied instruction methods to meet diverse student needs.
- Use of varied approaches to the assessment of student understanding.
- Feedback on student performance and adaptation of instruction to meet identified needs.
- Active involvement of students in the learning process (Field, Kuczera & Pont, 2007).

The SCOPE report, *Performance Assessment: The State of the Art*, is a particularly useful research-based overview of performance-assessment strategies in the United States and internationally. The SCOPE project also builds on previous research on multiple-measure approaches to student assessment conducted by Linda Darling-Hammond in collaboration with colleagues from the School Redesign Network at Stanford University (Darling-Hammond, Rustique-Forrester & Pecheone, 2004).

Relevant dimensions: 1.5, 2.7-2.8

Websites

SCOPE assessment publications: edpolicy.stanford.edu/pages/pubs/perf_assessment.html

References

- Darling-Hammond, L., & Adamson, F. (2010). *Beyond basic skills: The role of performance assessment in achieving 21st century standards of learning*. Stanford, CA: Stanford University, Stanford Center for Opportunity Policy in Education.
- Darling-Hammond, L., & McCloskey, L. (December 2008). Assessment for learning around the world: What would it mean to be internationally competitive? *Phi Delta Kappan*, 90(4), 263-272.
- Darling-Hammond, L., & Wentworth, L. (2010). *Benchmarking learning systems: Student performance assessment in international context*. Stanford, CA: Stanford University, Stanford Center for Opportunity Policy in Education.
- Darling-Hammond, L., & Wood, G. (October 2008). *Assessment for the 21st century: Using performance assessments to measure student learning more effectively*. Washington, DC: The Forum for Education and Democracy.
- Field, S., Kuczera, M., & Pont, B. (2007). *No more failures: 10 steps to equity in education*. Paris: Organisation for Economic Co-operation and Development.
- Lane, S. (2010). *Performance assessment: The state of the art* (SCOPE Student Performance Assessment Series). Stanford, CA: Stanford University, Stanford Center for Opportunity Policy in Education.
- Stecher, B. (2010). *Performance assessment in an era of standards-based educational accountability*. Stanford, CA: Stanford University, Stanford Center for Opportunity Policy in Education.
- Darling-Hammond, L., Rustique-Forrester, E., & Pecheone, R. L. (2004). *Multiple measures approaches to high school graduation*. Stanford, CA: Stanford University, School Redesign Network.

Jonathan Cohen | National School Climate Center

The research conducted by Jonathan Cohen and the National School Climate Center offers a strong evidence-based argument for the critical importance of developing and maintaining positive school cultures—the characteristics and quality of the learning environment and the interactions among educators, students, parents, and community members. The connection between school climate and student performance is well documented, and school communities looking to improve student engagement, achievements, aspirations, and outcomes must attend to their cultural dynamics and dispositions. School climate has also been connected to civic engagement, multicultural sensitivity, and the social and emotional development of the student, among other critical dimensions of holistic education. The core components of a positive school culture, as identified by the National School Climate Standards, include:

- Developing a shared vision and plan for promoting, enhancing, and sustaining a positive school climate.

- Developing policies that promote social, emotional ethical, civic, and intellectual learning as well as systems that address barriers to learning.
- Promoting practices that promote the learning and positive social, emotional, ethical, and civic development of students and student engagement as well as addressing barriers to learning.
- Creating an environment where all members are welcomed, supported, and feel safe in school: socially, emotionally, intellectually, and physically.
- Developing meaningful and engaging practices, activities, and norms that promote social and civic responsibilities and a commitment to social justice.

A particularly useful summary of Cohen's work on school climate is "The New Standards for Learning," which appeared in the September 2010 issue of *Principal Leadership*.

Relevant dimensions: 2.1-2.2, 3.3-3.4

Websites

National School Climate Center: schoolclimate.org

National School Climate Standards: schoolclimate.org/climate/standards.php

NSCC recommended reading: schoolclimate.org/educators/reading.php

Selected References

- Cohen, J. (Summer 2006). Social, emotional, ethical and academic education: Creating a climate for learning, participation in democracy and well-being. *Harvard Educational Review*, 76(2), 201-237.
- Cohen, J., Shapiro, L., & Fisher, M. (2006). Finding the heart of your school: Using school climate data to create a climate for learning. *Principal Leadership*, 7(4), 26-32.
- Cohen, J., & Pickeral, T. (April 18, 2007). Measuring and improving school climate: A commentary. *Education Week*, 26(33), 29-30.
- Cohen, J. (2008). *Measuring and improving school climate: Evidence-based strategies to promote effective risk prevention, health promotion and learning in youth*. Report on emotional and behavioral disorders in youth: Evidence-based assessments—Interventions for the real world, 8(2), 37-50.
- Cohen, J., McCabe, E. M., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, teacher education and practice. *Teachers College Record*, 111(1), 180-213.
- Cohen, J., & Geier, V. (January 2010). School climate research summary. *School Climate Brief*, 1(1). New York: Center for Social and Emotional Education.
- Cohen, J. (September 2010). The new standards for learning. *Principal Leadership*, 11(1), 28-32.

Asia Society | Vivien Stewart

The Asia Society has emerged as a leading advocate of international benchmarking in education policy and the internationalizing of instruction and curriculum in American schools. Vivien Stewart, vice president

RESEARCH SUMMARY

for education at the Asia Society, is a leading researcher in the field; she publishes widely on the subject and has organized several conferences intended to promote international benchmarking and the global exchange of best practices. The Asia Society website is a rich repository of writing, presentations, and resources that cover everything from national policy recommendations to secondary lesson plans.

Relevant dimensions: 1.1-3.4 (particularly 1.6)

Websites

Asia Society Education and Learning: asiasociety.org/education-learning

Learning with the World: asiasociety.org/education-learning/learning-world

Resources for schools: asiasociety.org/education-learning/resources-schools

References

- Asia Society. (2006). *Math and science education in a global age: What the U.S. can learn from China*. New York, NY: Author.
- Asia Society. (2007). *Learning in a global age: Knowledge and skills for a flat world*. New York, NY: Author.
- Asia Society. (2008). *Going global: Preparing our students for an interconnected world*. New York, NY: Author.
- Asia Society. (2008). *New skills for a global innovation society: Asia-Pacific leaders forum on secondary education*. New York, NY: Author.
- Asia Society. (2010). *International perspectives on U.S. education policy and practice: What can we learn from high performing nations?* New York, NY: Author.
- Schleicher, A., & Stewart, V. (October 2008). Learning from world-class schools. *Educational Leadership*, 66(2), 44-51.
- Stewart, V. (2005). *Education in China: Lessons for U.S. educators*. New York, NY: Asia Society.
- Stewart, V. (November 2005). A world transformed: How other countries are preparing students for the interconnected world of the 21st century. *Phi Delta Kappan*, 87(3), 229-232.
- Stewart, V. (April 2007). *Becoming citizens of the world*. *Educational Leadership*, 64(7), 8-14.
- Stewart, V. (November 2008). World-smart students. *Phi Delta Kappan*, 90(3), 203-205.

National Middle School Association | Transition into High School

The National Middle School Association published an extensive summary research literature on the middle-to-high-school transition programs, which found the following:

- High school dropout rates are significantly lower in school districts that have explicit middle-school-to-high-school transition programs.
- Ninth-grade course failures and dropout rates exceed all other grade levels—a primary rationale for developing robust transition programs and strategies.
- Students often experience a decrease in achievement when they transition from middle school to high school.

- One national study found that students of color and students from lower socioeconomic backgrounds attended schools that were significantly less likely to offer transition programming.
- The transition from middle-to-high-school transition is accompanied by both anticipation and anxiety, and social matters such as bullying, getting lost, and establishing peer relationships in high school can overshadow concerns about academics. Still, concerns about homework load or course difficulty are often present.
- Behavior problems, such as suspensions and expulsions, appear to increase significantly early in the ninth-grade year.
- In one study, middle-level students identified academic ability as especially important to success in secondary school. After entering high school, the students added time management, ability to stay on task, social skills, and behavior as essential elements of success.
- Parent monitoring, positive interventions, and increased communication with the high school can facilitate student transition.
- Successful transition programs involve collaboration between eighth- and ninth-grade schools and personnel, and address the alignment of programs and expectations.
- Ongoing, support-intensive transition programs will have greater impact than isolated information sessions, and successful transition programs address the information gap by providing students and families with a wealth of information about the academic, social, and organizational similarities and differences between middle school and high school. Effective strategies can include: expanding the number and duration of visits between schools; allowing students to spend a day with secondary school students; inviting secondary school students and teachers to speak at the sending middle schools; and providing peer mentoring to incoming students, among others.
- Programs designed to reduce high school dropout rates must address the challenges associated with the transition to high school, including providing targeted early interventions to promote academic recovery for underperforming or failing students.
- Effective transition programs address curriculum (e.g., the academic rigor of courses); facilities (e.g., the location of classrooms, restrooms); safety and discipline (e.g., rules and the school's discipline code); and the provision of accurate organizational and logistical information to incoming students (Smith, 2006).

Relevant dimensions: 1.2, 2.4-2.5

Websites

NSMA research summary: nmsa.org/research

References

Smith, J. S. (2006). *Research summary: Transition from middle school to high school*. Westerville, OH: National Middle School Association.

Teacher Preparation | International Comparisons

In *How the World's Best-Performing School Systems Come Out on Top*, Michael Barber and Mona Mourshed identify three features that are common to the education systems in highest-performing countries:

- They get the right people to become teachers—*the quality of an education system cannot exceed the quality of its teachers.*
- They develop them into effective instructors—*the only way to improve outcomes is to improve instruction.*
- They put in place systems and targeted support to ensure that every child is able to benefit from excellent instruction—*the only way for the system to reach the highest performance is to raise the standard of every student* (Barber & Mourshed, 2007).

As other studies have documented, high-quality teacher recruitment and development strategies are defining attributes of effective education systems in the United States and around the world. In Singapore, for example, teaching is a high-status career, only the top candidates are selected into the profession, teachers are given comparatively high starting salaries, and every teacher receives at least 100 hours of paid professional development time each year (Barber & Mourshed, 2007). Similarly, principals in some high-performing systems will spend up to eighty percent of their time on instructional leadership and the demonstration of effective teaching strategies (Barber & Mourshed, 2007). While cultural and political factors may make the adoption of effective teacher-selection processes from Finland or Singapore difficult or unlikely in the United States, these high-performing examples nevertheless illustrate the critical importance of recruiting, training, and retaining a high-quality teaching faculty, and how great teaching can dramatically change educational outcomes, particularly for lower-performing students on the lower end of the socioeconomic spectrum—and not just in a single school, but across complex systems.

A more recent study by McKinsey and Co. isolated the “career features” that appear to be associated with higher-performing education systems and schools in the United States and abroad:

- A positive working environment that includes features such as adequate resources, a safe neighborhood, and orderly hallways and classrooms.
- Strong school leadership, especially principals who are genuine instructional leaders, not only building administrators.
- Consistent, high-quality professional development, with the best option being classroom-based, customized training, rather than generic sessions conducted out of school and disconnected from teachers' classrooms.
- Strong marketing that informs prospective teachers about working conditions, teaching salaries, and the importance of teaching in society.
- Paid training—ideally, a residency-style model in which tuition for two years of high-quality education training is subsidized, including one year of classroom-based training alongside a mentor teacher for which trainees receive a full salary.
- Performance bonuses for top teachers. [NOTE: while this report recommends the performance-pay option, other studies suggest that the efficacy of performance pay is mixed.]
- Higher base starting salaries as a strategy for enticing top candidates into the teaching profession.

- An accelerated professional trajectory and steeper salary scales (i.e., fewer intermediary steps to higher salaries) that encourage teachers to enhance their expertise and performance through more rapid professional advancement and the ability to increase income earlier in their careers (Auguste, Kihn & Miller, 2010).

Relevant dimensions: 1.8, 2.8, 3.1-3.4

References

- Akiba, M., LeTendre, G. K., & Scribner, J. P. (October 2007). Teacher quality, opportunity gap, and national achievement in 46 countries. *Educational Researcher*, 36(7), 369-387.
- Auguste, B., Kihn, P., & Miller, M. (2010). *Closing the talent gap: Attracting and retaining top-third graduates to careers in teaching*. London: McKinsey & Company.
- Auguste, B., Kihn, P., & Miller, M. (2010). *Closing the talent gap: The appendix*. London: McKinsey & Company.
- Barber, M., & Mourshed, M. (2007). *How the world's best-performing school systems come out on top*. London: McKinsey & Company.
- Darling-Hammond, L., & Bransford, J. (Eds.). (2005). *Preparing teachers for a changing world: What teachers should learn and be able to do*. San Francisco: Jossey-Bass.
- Ingersoll, R. (Ed.). (2007). *A comparative study of teacher preparation and qualifications in six nations*. Philadelphia, PA: Consortium for Policy Research in Education.
- Kansanen, P. (2003). *Teacher education in Finland: current models and new developments*. Bucharest, Romania: UNESCO-CEPES (European Centre for Higher Education).
- Longview Foundation for Education in World Affairs and International Understanding. (2008). *Teacher preparation in the global age: The imperative for change*. Silver Spring, MD: Author.
- Organisation for Economic Co-operation and Development. (2005). *Teachers matter: Attracting, developing and retaining effective teachers*. Paris: Author.
- Organisation for Economic Co-operation and Development. (February 2004). *The quality of the teaching workforce (Policy Brief)*. Paris: Author.
- Schmidt, W. H., Tatto, M. T., Bankov, K., Blömeke, S., Cedillo, T., Cogan, L., Han, S., Houang, R., Hsieh, F. J., Paine, L., Santillan, M., & Schwille, J. (2007). *The preparation gap: Teacher education for middle school mathematics in six countries*. East Lansing, MI: Michigan State University, Center for Research in Mathematics and Science Education.
- Tuovinen, J. E. (December 2008). *Teacher professionalism: Viewpoints on best practice, the case of Finland*. (Paper code: TUO081146). The Association of Active Educational Researchers 2008 Conference, Brisbane, Australia.
- Wang, A. H., Coleman, A. B., Coley, R. J., Phelps, R. P. (2003). *Preparing teachers around the world*. Princeton, NJ: Educational Testing Service.
- Wei, R.C., Andree, A., & Darling-Hammond, L. (2009). How nations invest in teachers. *Educational Leadership*, 66(5), 28-33.

Reducing Stereotype Threat | Equity

The work of Steven Stroessner, Catherine Good, and Lauren Webster has identified several practical organizational and pedagogical strategies for reducing performance deficits associated with ethnic, cultural, or racial stereotyping:

- Reframing the task.
- Deemphasizing threatening social identities.
- Encouraging self-affirmation.
- Emphasizing high standards with assurances of capability.
- Providing role models.
- Providing external attributions for difficulty.
- Emphasizing an incremental view of ability.

Educational equity in high schools also depends on school size, community affluence, minority or gender ratios, overcrowding issues, the quality of facilities, and other factors beyond the structure of the academic program. Issues such as gender equity, for example, might entail strategies such as providing more encouragement and support for girls in math and science, which would be aimed at counteracting historical trends that show lower performance and degree attainment among girls and young women in these academic areas. While educators must remain mindful of and responsive to the myriad influences that might adversely affect student performance or lead to inequitable learning outcomes, determining the precise causes of learning deficits and achievement gaps remains elusive, and educators looking for quick fixes, easy solutions, or perfect data are certain to be disappointed. As an educational ideal, equity—fundamental fairness in schools and improved outcomes for historically disadvantaged or underperforming students—is something to which educators must continually aspire, despite the fact that we will inevitably fall somewhat short of our objectives.

Relevant dimensions: 1.1-1.2, 2.2, 2.5, 3.4

Websites

Reducing Stereotype Threat: reducingstereotypethreat.org

References

For a complete bibliography: reducingstereotypethreat.org/bibliography.html

A Note on Ability Grouping and Tracking

For decades, educators and researchers have been engaged in a fraught debate over ability grouping in education. To date, the research has not arrived at a definitive conclusion on the practice, most likely due to the fact that “tracking” is not only defined and implemented differently from school to school, but it intersects with such complicating factors as instructional quality, student choice, socioeconomic status, and race. In addition, effective heterogeneous grouping, as a pedagogical strategy, requires teachers to employ a variety of sophisticated instructional practices, which in turn requires high-quality professional development, supportive school structures, and a conducive school culture—which can be difficult to achieve in some circumstances.

The ongoing debate on tracking will likely continue well into the future, regardless of what new findings emerge or what research is presented here (and there is indeed a huge amount of research on the topic). That said, the studies cited throughout this summary point to several core findings that illuminate the tracking issue—either directly or indirectly—and that can provide sound guidance to schools. When framing the tracking issue in *Global Best Practices*, the authors employed the following reasoning:

- In many schools and schools systems, the most disadvantaged students are disproportionately represented in lower academic tracks, where they tend to receive lower quality instruction (Education Trust, 2006). Clearly, this common outcome of ability grouping is fundamentally inequitable, since students with the greatest needs should receive the best instruction. And, of course, failing to provide the best instruction to these students merely perpetuates a cycle of generational disadvantage that benefits neither the students affected nor society in general. Tracking is not a pedagogical principal or value, but a structural strategy—it is either more helpful or less helpful in achieving desired educational and instructional goals. If a school structure is producing inequitable outcomes and leading to lower achievement for some students, it should be reconsidered or abandoned. When a school's student-performance data—from graduation and college-going rates to enrollment patterns, course failures, and behavioral issues—are analyzed alongside demographic criteria such as socioeconomic status, ethnicity, or disability, educators will often find that the decision to track or detrack becomes far less ambiguous.
- The research clearly shows that setting universally high academic expectations, and backing it up with great teaching, leads to stronger performance, higher aspirations, and improved life outcomes for the preponderance of students in nearly every educational setting. Challenging students to exceed their past performance, question and overcome negative self-beliefs, and aspire to rewarding educational, career, and life opportunities will almost certainly lead not only to higher student achievement in nearly every instance, but also to more positive and energized school cultures and more fulfilling professional experiences for teachers. If systemic tracking perpetuates lowered expectations, watered-down instruction, significant achievement gaps, and the reinforcement of negative self-images, then the practice is in clear conflict with the research on effective pedagogy, positive school culture, and student motivation.
- Public high schools are democratic, publicly funded institutions, and as such they are obligated—as a direct application of their mission and purpose—to deliver high-quality educational experiences to every student. If some students receive the best instruction a school can offer while other students do not, and if some students graduate knowing calculus while others leave with only basic math skills, these practices and outcomes are clearly at odds with the fundamental mission and obligations of a public institution of learning.
- In *The Flat World and Education: How America's Commitment to Equity Will Determine Our Future*, Linda Darling-Hammond writes: "The historical origins of tracking systems in the United States were beliefs in differential intelligence held by eugenicists and some education reformers in the early 1900s, which translated into grouping systems that would lead to specific vocations assigned by socioeconomic status" (Darling-Hammond, 2010, p. 53). Much of the early "research" on native intelligence that helped shape the tracking movement in the United States a century ago has not only been debunked, but in many cases it was found to be motivated by racial bias and executed with flawed methods that sought to confirm preexisting stereotypes. Recent studies of human cognition, however, have revealed an entirely different picture of human intelligence, learning, and ability. Modern science has proven that intelligence is highly malleable, that the brain physically changes and adapts when people learn, and that simple

RESEARCH SUMMARY

pedagogical strategies can produce remarkable gains in learning and skill acquisition. The work of psychologist Carol Dweck, for example, has delineated the difference between “fixed” and “growth” mindsets, and how these mindsets—whether cultural, pedagogical, or personal—can have a profound impact on student learning (Dweck, 2000, 2006). Her research shows that a belief in fixed intelligence and ability leads to decreased motivation and learning stagnation, while promoting a growth mindset and rewarding hard work can motivate students and dramatically improve learning. As educators, we need to ask ourselves: Do we want to base the design of our schools and curricula on flawed, century-old beliefs and psychometrics, or do we want to build new systems that are founded on what we now know about how the human brain works and how we can accelerate learning for students?

References

- Darling-Hammond, L. (2010). *The flat world and education: How America's commitment to equity will determine our future*. New York, NY: Teachers College Press.
- Dweck, C. (2000). *Self-theories: Their role in motivation, personality, and development*. Philadelphia, PA: Psychology Press.
- Dweck, C. (2006). *Mindset: The new psychology of success*. New York, NY: Random House.
- Education Trust. (2006). *Yes we can: Telling truths and dispelling myths about race and education in America*. Washington, DC: Author.

Selected Resources

For a user-friendly guide to research on secondary reform strategies, we recommend the Academy for Educational Development's High School Reform Strategy Toolkit: highschooltoolkit.com.

The Regional Education Laboratory Northeast and Islands (REL-NEI) Reference Desk service provides quick-turnaround, evidence-based responses to questions submitted by educators. REL-NEI highlights recent responses to questions submitted to the Reference Desk, and older responses are available on request: relnei.org/referencedesk.php.

The National High School Center provides a comprehensive online archive of secondary research and tools: betterhighschools.org/topics and betterhighschools.org/pubs.

The New England Comprehensive Center, one of sixteen regional centers funded by the U.S. Department of Education, provides a selection of researched-based resources aimed at helping schools meet federal requirements: necomprehensivecenter.org/resources.

The Alliance for Excellent Education produces a variety of research-based reports, policy briefs, and info briefs for educators and policy makers: all4ed.org/publication_material.

The research bibliography for the New England Association of Schools and Colleges 2011 Standards for the accreditation of public secondary schools is an important resource for New England educators: cpss.neasc.org/getting_started/bibliography_for_2011_standards.

Selected Reading on International Education Systems

- Alliance for Excellent Education. (March 2009). *Short sighted: How America's lack of attention to international education studies impedes improvement* (Issue Brief). Washington, DC: Author.
- Bales, S. N. (November 2004). How Americans think about the world and why education matters. *Phi Delta Kappan*, 86(3), 206-209.
- Bush, M. (May 2009). *International benchmarking—time* (Issue Brief). Washington, DC: Education Commission of the States.
- Cavanagh, S. (March 16, 2005). Finnish students are at the top of the world class: Country's commitment to equity narrows the gap in achievement. *Education Week*, 24(27), 8.
- Council of Chief State School Officers. (November 2006). *Global education policy statement*. Washington, DC: Author.
- DeFord, N. (May 2008). Australian snapshots. *Educational Leadership*, 65(8), 80-82.
- Dorothea, H. (November 2008). Schools without walls. *Phi Delta Kappan*, 90(3), 206-210.
- Education Commission of the States. (2009). *From competing to leading: An international benchmarking blueprint*. Washington, DC: Author.
- Hersh, R. H. (September 2009). A well-rounded education for a flat world. *Educational Leadership*, 67(1), 50-53.
- International Benchmarking Advisory Group. (2008). *Benchmarking for success: Ensuring that U.S. students receive a world-class education*. Washington, DC: National Governors Association, Council of Chief State School Officers, and Achieve, Inc.
- Jackson, A. (May 2008). High schools in a global age. *Educational Leadership*, 65(8), 58-62.
- National Center on Education and the Economy. (2007). *Tough choices or tough times: The report of the new commission on the skills of the American workforce*. Washington, DC: Author.
- Reimers, F. M. (September 2009). Leading for global competency. *Educational Leadership*, 67(1), 50-53.
- Ruzzi, B. B. (2005). *International education tests: An overview, 2005*. Washington, DC: National Center on Education and the Economy.
- Schleicher, A. & Tremblay, K. (2006). *Challenge Europe: Education and the knowledge economy in Europe and Asia*. Brussels: European Policy Centre.
- Wagner, A. (2006). *Measuring up internationally: Developing skills and knowledge for the global knowledge economy*. San Jose, CA: National Center for Public Policy and Higher Education.

ABOUT THE NEW ENGLAND SECONDARY SCHOOL CONSORTIUM

The New England Secondary School Consortium is a pioneering regional partnership committed to fostering forward-thinking innovations in the design and delivery of secondary education across the New England region. The five partner states of Connecticut, Maine, New Hampshire, Rhode Island, and Vermont believe that our bold vision, shared goals, and innovative strategies will empower us to close persistent achievement gaps, promote greater educational equity and opportunity for all students, and lead our educators into a new era of secondary schooling. The Consortium's goal is to ensure that every public high school student in our states receives an education that prepares them for success in the colleges, careers, and communities of the 21st century.

From the schoolhouse to the statehouse, the Consortium is working to develop and support bold educational strategies that empower the next generation of citizens, workers, and leaders to be prosperous and knowledgeable participants in our global community. The members of the Consortium recognize that the traditional ways of educating students are no longer aligned with today's civic and professional expectations, and that the time has come to rethink the traditional high school experience on a regional scale. By building equitable systems of public

secondary education in each of the five partner states, the Consortium plans to make the knowledge, skills, and habits of mind that were once the possession of a few the universal standard for all. To this end, the Consortium will support the development of high-performing, internationally competitive schools and educational experiences that will better mirror the lives and learning needs of today's students. No longer limited by building design, geography, or educational convention, we envision these high-performing schools becoming versatile community learning centers that prioritize individual learning needs, blend secondary and postsecondary experiences, provide engaging educational opportunities both inside and outside the classroom, and offer a variety of student-designed pathways to graduation—all while emphasizing global understanding, multicultural awareness, technological literacy, real-world applications, and other challenging 21st century skills.

The Consortium is funded by the Nellie Mae Education Foundation, the largest philanthropy in New England focused exclusively on education, in partnership with the Bill & Melinda Gates Foundation. The Great Schools Partnership, a nonprofit school-support organization based in Portland, Maine, is the Consortium's lead coordinator.

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