

2. The Role of College Knowledge and Institutional Context in Defining College Readiness

High schools play a critical role in ensuring that their students are prepared and positioned for academic success in college. A substantial limitation in the research on college readiness indicators is that almost all of the studies to-date have focused only on indicators of academic preparedness, even though two of the most prominent models for college readiness indicator systems, the Four Keys and College Readiness Indicator System, both include college knowledge and skills as being key components of college readiness.⁵³

There is a need to develop and validate indicators of college knowledge and skills. College knowledge and skills are included as potential indicators of college readiness because students' aspirations and participation in the financial aid, college search, and college choice processes in high school shape their eventual college outcomes.⁵⁴ The transition to college also often requires students to have the college knowledge and skills needed to navigate a new, less structured environment than the high school students attended. Students encounter new demands such as choosing courses, balancing time needed to study with other interests and responsibilities, and adapting to a social culture that may be very different from what the students have experienced. College knowledge remains poorly measured and considerably less is known about the potential predictive power of college knowledge.

It is not clear how "college readiness" depends on the post-secondary context. College graduation also is influenced by the characteristics of higher education institutions themselves, and the programs and majors into which students enroll. It is not clear what it means to be "college ready" given the myriad differences in the types of post-secondary programs and institutions that exist. What knowledge and skills students need is highly contextual; the knowledge needed to navigate a large public university differs from a small liberal arts college, a Black student attending a historically Black college will have a different social transition than if the student had enrolled in a predominately White institution, requiring different social supports and strategies. The need for college knowledge may also depend on the student herself, and the degree to which she has peer and family social capital to support her transition and navigation through college.

Colleges and programs and majors within colleges also vary in the academic readiness they require. Colleges can also develop supports and systems to help students more effectively make the transition to college, such that the degree to which students need knowledge about navigating the college process may depend on the institution they attend. As a result, there is a great deal still to be learned about how to design college readiness indicator systems in a way that captures all of this complexity.

Practitioners and Policymakers Need Greater Clarity on What It Means to Be College Ready and How That May Differ By Higher Education Institution Characteristics.

- How should college knowledge and skills be measured and how predictive are college knowledge indicators of college attainment?
- How do the college knowledge and skills needed to navigate colleges vary by institutional characteristics?
- How does the academic readiness needed to succeed academically vary by institutional characteristics and major?

⁵³ Borsato et al. (2013); Conley (2007; 2012); Gurantz & Borsato (2012).

⁵⁴ Avery & Kane (2004); Conley (2005); DesJardins, Ahlburg, & McCall (2006); Goodman, Hurwitz, & Smith (2015); Hoxby & Avery (2013); Page & Scott-Clayton (2015).

3. The Relationships of School-Level Indicators of School Climate with Educational Attainment and Achievement

At the school level, indicators can be used to create and sustain a framework for ongoing school improvement. Aggregations of student-level indicators provide a means for monitoring progress toward school goals around students' achievement and educational attainment. Indicators of school climate provide a big-picture perspective of the larger organizational context that influences the ability of students and teachers to be effective. Yet, there are many unanswered questions about how measures from the surveys of school organization and climate are related to improvement over time, and in different contexts, and how they should be used together with indicators of student achievement.

There is a need for more research on the relationship of school climate measures to indicators of educational attainment. Research suggests that school climate holds considerable potential for improving students' educational outcomes. Surveys are able to provide a nuanced picture of a school organization, and the ways in which teachers and students are experiencing their work. A number of studies have shown that student and teacher reports about the conditions in their schools are predictive of later outcomes.⁵⁵ However, there has not been a study that has systematically examined the relationship of school climate to the indicators of educational attain-

ment, such as attendance and grades. Studies validating the use of surveys to measure classroom instruction and school climate have predominantly focused on elementary and middle grade test scores as outcomes.

The research base on the use of surveys as tools for school improvement is very limited. One of the most widely-cited studies that validates the use of surveys as indicators of school improvement, *Organizing Schools for Improvement*, is based on survey reports from 20 years ago, only includes data from one place (Chicago), and only examines elementary schools.⁵⁶ There has been a proliferation of school climate surveys under the Every Student Succeeds Act (ESSA), which potentially provides an opportunity to examine the relationship between school context and high school and college indicators across geographic locations.⁵⁷ And there is evidence that school improvement efforts based on surveys have led to improvement in student outcomes.⁵⁸ In cities such as Chicago and New York, surveys have been continually administered for many years, allowing the opportunity to examine their use in different contexts and with different types of supports. Chicago and New York have also developed extensive student-level indicator systems over time, and we have yet to learn how schools use these different types of indicators in practice, if there is an ordering for what aspects of school climate should be worked on, or how changes in setting-level indicators lead to changes in student-level outcomes.

Practitioners Need to Better Understand How Measures of School Climate Relate to Early Warning and College Readiness Indicators.

- What is the longitudinal relationship of the survey measures of school climate with early warning and college readiness indicators?
- Is there a sequencing to how school climate measures improve?
- How do schools seeking to improve their school climate use data to strengthen their school organization and improve student achievement?

⁵⁵ Allensworth et al. (2009); Bryk et al. (2010); Kane, Taylor, Tyler, & Wooten (2010).

⁵⁶ Bryk et al. (2010).

⁵⁷ Under ESSA, state accountability plans have to include four academic indicators, as well as a fifth indicator which potentially could include measures of school climate, student engagement, and other factors that could be measured by surveys.

⁵⁸ Sun et al. (2017).

4. How Indicators Are Being Used to Improve Educational Attainment

The use of indicators has become a central component in school, district, and state efforts to improve students' educational attainment. It has become clear that districts and states need to do more than provide systems that include indicators that fit our criteria of being predictive, useable and clear, available at the real-time/right-time, and causally linked to attainment. The criteria of malleability won't be a reality unless schools have the knowledge and skills to interpret and act on the indicators and the time and resources to develop systems and structures for using them. Too often, schools are left on their own to develop strategies for using indicator systems and there is little evidence on what effective approaches are.

The NCS and New Visions models highlight the importance of organizing schools in ways that enable practitioners, particularly through teacher teams, to manage, interpret, and act on the information provided by indicator systems. The two models also demonstrate the essential role practitioner knowledge and skills plays in effective indicator use. However, beyond these two models, there is currently little documentation of

how indicators are being used, and little-to-no systematic evidence on which approaches are effective for improving students' educational attainment, what systems and structures are needed to support these efforts, and how to develop the capacity of practitioners to use and act on indicators. There is a need to document what it is that schools are doing, particularly in those places where students' outcomes are showing considerable improvement.

Furthermore, given the important role that intermediary organizations have played in supporting the use of indicators in Chicago and New York, it would be useful to better understand how such organizations effectively support schools in the use of indicator systems, and what happens when schools do not have support. It could be that change is unlikely without an external partner, or it could be that change is simply slower without external support, or that it is not really needed and change can happen through district efforts alone. Research could identify the functions that such organizations play that are different than internal district functions. It also is not clear to what extent these organizations have been successful in Chicago and New York because they were voluntary partners to schools.



Practitioners Need to Know How to Effectively Use Indicator Systems.

- How are school practitioners currently using indicator systems and what are effective approaches to using indicator systems?
- What systems and structures are needed in schools and districts to effectively use indicator systems?
- How can the skills and knowledge to effectively use indicator systems be developed and what is the potential role for intermediary organizations in supporting school practitioners?
- What is the role of intermediary organizations in building the capacity of practitioners to use indicator systems?



Conclusion

Meeting the goals that have been set across the country to graduate all students ready for college will take extraordinary changes in schools. For decades, only about half of students graduated high school in this country, and less than a fifth of those students earned a college degree. As states, districts, and schools work to improve educational attainment, their success will likely be determined by the answers to the questions above. This is not an agenda that can be answered by researchers in one place. It will require learning across geographic contexts, across school and district conditions. And it will require researchers and practitioners learning from each other. The gains that we have started to see in districts across the country show that change is possible, even if there is still considerable work to be done, and questions to be answered, to reach the ambitious and important goals of graduating all students ready to succeed in college and career.

References

- Allensworth, E.M., (2013)**
The use of ninth-grade early warning indicators to improve Chicago schools. *Journal of Education for Students Placed at Risk (JESPAR)*, 18(1), 68-83.
- Allensworth, E.M., & Easton, J.Q. (2005)**
The on-track indicator as a predictor of high school graduation. Chicago, IL: University of Chicago Consortium on Chicago School Research.
- Allensworth, E.M., & Easton, J.Q. (2007)**
What matters for staying on-track and graduating in Chicago Public Schools. Chicago, IL: University of Chicago Consortium on Chicago School Research.
- Allensworth, E.M., & Clark, K. (2018)**
Are grades an inconsistent measure of achievement across high schools? An examination of the concurrent and predictive validity of GPAs relative to standardized test scores (Working Paper). Chicago, IL: University of Chicago Consortium on School Research.
- Allensworth, E.M., Correa, M., & Ponisciak, S. (2008)**
From high school to the future: ACT preparation—too much, too late. Chicago, IL: University of Chicago Consortium on Chicago School Research.
- Allensworth, E.M., Gwynne, J.A., Moore, P., & de la Torre, M. (2014)**
Looking forward to high school and college: Middle grade indicators of readiness in Chicago Public Schools. Chicago, IL: University of Chicago Consortium on Chicago School Research.
- Allensworth, E.M., & Luppescu, S. (2018)**
Why do students get good grades, or bad ones? The influence of the teacher, class, school, and student (Working Paper). Chicago, IL: University of Chicago Consortium on School Research.
- Allensworth, E.M., Ponisciak, S., & Mazzeo, C. (2009)**
Schools teachers leave: Teacher mobility in Chicago Public Schools. Chicago, IL: University of Chicago Consortium on Chicago School Research.
- An, B. (2013)**
The impact of dual enrollment on college degree attainment: Do low-SES students benefit? *Educational Evaluation and Policy Analysis*, 35(1), 57-75.
- Avery, C., & Kane, T.J. (2004)**
Student perceptions of college opportunities: The Boston COACH Program. In C.M. Hoxby (Ed.), *College choices: The economics of where to go, when to go, and how to pay for it* (pp. 355-394). Chicago, IL: University of Chicago Press.
- Balfanz, R. (2011)**
Back on track to graduate. *Educational Leadership*, 68(7), 54-58.
- Balfanz, R., & Byrnes, V. (2006)**
Closing the mathematics achievement gap in high-poverty middle schools: Enablers and constraints. *Journal of Education for Students Placed at Risk (JESPAR)*, 11(2), 143-159.
- Balfanz, R., Byrnes, V., & Fox, J.H. (2015)**
Sent home and put off track: The antecedents, disproportionalities, and consequences of being suspended in the 9th grade. In D.J. Losen (Ed.), *Closing the school discipline gap: Equitable remedies for excessive exclusion* (pp. 17-30). New York, NY: Teachers College Press.
- Balfanz, R., Herzog, L., & MaCliver, D.J. (2007)**
Preventing student disengagement and keeping students on the graduation path in urban middle-grades schools: Early identification and effective interventions. *Educational Psychologist*, 42(4), 223-235.
- Baltimore Education Research Consortium (BERC). (2011)**
Destination graduation: Sixth-grade early warning indicators for Baltimore City Schools: Their prevalence and impact. Baltimore, MD: BERC.
- Borsato, G.N., Nagaoka, J., & Foley, E. (2013)**
College readiness indicator systems framework. *Voices in Urban Education*, 38, 28-35.
- Bowen, W.G., Chingos, M.M., & McPherson, M.S. (2009)**
Crossing the finish line: Completing college at America's public universities. Princeton, NJ: Princeton University Press.
- Bowers, A.J. (2009)**
Reconsidering grades as data for decision making: More than just academic knowledge. *Journal of Educational Administration*, 47(5), 609-629.
- Bowers, A.J. (2010)**
Grades and graduation: A longitudinal risk perspective to identify student dropouts. *The Journal of Educational Research*, 103(3), 191-207.
- Bowers, A.J. (2011)**
What's in a grade? The multidimensional nature of what teacher-assigned grades assess in high school. *Educational Research and Evaluation*, 17(3), 141-159.
- Bowers, A.J., Sprott, R., & Taff, S.A. (2013)**
Do we know who will drop out?: A review of the predictors of dropping out of high school: precision, sensitivity, and specificity. *The High School Journal*, 96(2), 77-100.

- Brookhart, S.M. (1991)**
Grading practices and validity. *Educational Measurement: Issues and Practice*, 10(1), 35-36.
- Bruce, M., Bridgeland, J.M., Fox, J.H., & Balfanz, R. (2011)**
On track for success: The use of early warning indicator and intervention systems to build a grad nation. Washington, DC: Civic Enterprises.
- Bryk, A.S., Sebring, P.B., Allensworth, E.M., Luppescu, S., & Easton, J.Q. (2010)**
Organizing schools for improvement: Lessons from Chicago. Chicago, IL: University of Chicago Press.
- Burke, M., Parnell, A., Wesaw, A., & Kruger, K. (2017)**
Predictive analysis of student data. Washington, DC: NASPA.
- Camara, W.J., & Echternacht, G. (2000)**
The SAT [R] I and high school grades: Utility in predicting success in college. Research Notes.
- Coca, V. (2014)**
New York City goes to college: A first look. New York, NY: The Research Alliance for New York City Schools.
- Coca, V., Johnson, D.W., Kelley-Kemple, T., Roderick, M., Moeller, E., Williams, N., & Moragne, K. (2012)**
Working to my potential: The postsecondary experiences of CPS students in the International Baccalaureate Diploma Programme. Chicago, IL: University of Chicago Consortium on Chicago School Research.
- Colyvas, J.A. (2012)**
Performance metrics as formal structures and through the lens of social mechanisms: When do they work and how do they influence? *American Journal of Education*, 118(2), 167-197.
- 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, CA: Jossey-Bass.
- Conley, D.T. (2007)**
Redefining college readiness. Eugene, OR: Educational Policy Improvement Center.
- Conley, D.T. (2012)**
College and career ready: Helping all students succeed beyond high school. San Francisco, CA: Jossey-Bass.
- Corrin, W., Sepanik, S., Rosen, R., & Shane, A. (2016)**
Addressing early warning indicators: Interim impact findings from the Investing in Innovation (i3) Evaluation of Diplomas Now. New York, NY: MDRC.
- Cross, L.H., & Frary, R.B. (1999)**
Hodgepodge grading: Endorsed by students and teachers alike. *Applied Measurement in Education*, 12(1), 53-72.
- Davis, M., Herzog, L., & Legters, N. (2013)**
Organizing schools to address early warning indicators (EWIs): Common practices and challenges. *Journal of Education for Students Placed at Risk (JESPAR)*, 18(1), 84-100.
- DesJardins, S.L., Ahlburg, D.A., & McCall, B.P. (2006)**
An integrated model of application, admission, enrollment, and financial aid. *The Journal of Higher Education*, 77(3), 381-429.
- Dougherty, C., Mellor, L., & Jiang, S. (2006)**
The relationship between Advanced Placement and college graduation. Austin, TX: National Center for Educational Accountability.
- Easton, J.Q., Johnson, E., & Sartain, L. (2017)**
The predictive power of ninth-grade GPA. Chicago, IL: University of Chicago Consortium on School Research.
- Fairchild, S., Scaramellino, D., Carrino, G., Carrano, J., Gunton, B., & Donohue, B. (2013)**
Navigating the data ecosystem: A case study of the adoption of a school data management system in New York City. New York, NY: New Visions for Public Schools.
- Faria, A.M., Sorensen, N., Heppen, J., Bowdon, J., Taylor, S., Eisner, R., & Foster, S. (2017)**
Getting students on track for graduation: Impacts of the Early Warning Intervention and Monitoring System after one year (REL 2017-272). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest.
- Farrington, C.A., Roderick, M., Allensworth, E.M., Nagaoka, J., Keyes, T.S., Johnson, D.W., & Beechum, N.O. (2012)**
Teaching adolescents to become learners: The role of noncognitive factors in shaping school performance: A critical literature review. Chicago, IL: University of Chicago Consortium on Chicago School Research.
- Geiser, S., & Santelices, M.V. (2007)**
Validity of high-school grades in predicting student success beyond the freshman year: High-school record versus standardized tests as indicators or four-year college outcomes (Research & Occasional Paper Series: CSHE.6.07). Berkeley, CA: Center for Studies in Higher Education.
- Geiser, S., & Studley, W.R. (2002)**
UC and the SAT: Predictive validity and differential impact of the SAT I and SAT II at the University of California. *Educational Assessment*, 8(1), 1-26.
- Gleason, P., & Dynarski, M. (2002)**
Do we know whom to serve? Issues in using risk factors to identify dropouts. *Journal of Education for Students Placed at Risk (JESPAR)*, 7(1), 25-41.
- Goodman, J., Hurwitz, J., & Smith, J. (2015)**
College Access, initial college choice and degree completion. (NBER Working Paper No. 20996). Cambridge, MA: National Bureau of Economic Research. Retrieved from <http://www.nber.org/papers/w120996>
- Gurantz, O., & Borsato, G.N. (2012)**
Building and implementing a college readiness indicator system: Lessons from the first two years of the CRIS Initiative. *Voices in Urban Education*, 35, 5-15.

- Gwynne J., Lesnick, J., Hart, H., & Allensworth, E.M. (2009)**
What matters for staying on-track and graduating in Chicago Public Schools: A focus on students with disabilities. Chicago, IL: University of Chicago Consortium on Chicago School Research.
- Gwynne J., Pareja, A.S., Ehrlich, S.B., & Allensworth, E.M. (2012)**
What matters for staying on-track and graduating in Chicago Public Schools: A focus on English language learners. Chicago, IL: University of Chicago Consortium on Chicago School Research.
- Hartman, J., Wilkins, C., Gregory, L., Gould, L.F., & D'Souza, S. (2011)**
Applying an on-track indicator for high school graduation: Adapting the Consortium on Chicago School Research indicator for five Texas districts (Issues & Answers Report, REL 2011–No. 100). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest.
- Hess, G.A., Jr., Lyons, A., Corsino, L., & Wells, E. (1989)**
Against the odds: The early identification of dropouts. Chicago, IL: Chicago Panel on Public Policy and Finance.
- Hiss, W.C., & Franks, V.W. (2014)**
Defining promise: Optional standardized testing policies in American college and university admissions. Arlington, VA: The National Association for College Admission Counseling.
- Hough, H., Kalogrides, D., & Loeb, S. (2017)**
Using surveys of students' social-emotional skills and school climate for accountability and continuous improvement: Policy Brief 17-1. Stanford, CA: Policy Analysis for California Education.
- Hoxby, C., & Avery, C. (2013)**
 The missing “one-offs”: The hidden supply of high-achieving, low-income students. *Brookings Papers on Economic Activity*, 2013(1), 1-65.
- Jackson, K.C. (2014)**
 Do college-prep programs improve long-term outcomes? *Economic Inquiry*, 52(1), 72-99.
- Kane, T.J., McCaffrey, D.F., Miller, T., & Staiger, D.O. (2013)**
Have we identified effective teachers? Validating measures of effective teaching using random assignment. Seattle, WA: Bill & Melinda Gates Foundation.
- Kane, T.J., Taylor, E.S., Tyler, J.H., & Wooten, A.L. (2010)**
Identifying effective classroom practices using student achievement data (NBER Working Paper No. 15803). Cambridge, MA: National Bureau of Economic Research. Retrieved from <http://www.nber.org/papers/w15803>
- Karp, M.M. (2011)**
Toward a new understanding of non-academic student support: Four mechanisms encouraging positive student outcomes in the community college (CCRC Working Paper No. 28. Assessment of Evidence Series). New York, NY: Community College Research Center, Columbia University.
- Kautz, T. & Zanoni, W. (2014)**
Measuring and fostering non-cognitive skills in adolescence: Evidence from Chicago Public Schools and the OneGoal Program (Unpublished manuscript). Chicago, IL: Department of Economics, University of Chicago.
- Kelley-Kempe, T., Proger, A., & Roderick, M. (2011, September 9)**
Engaging high school students in advanced math and science courses for success in college: Is advanced placement the answer? Presented at the fall conference of the Society for Research on Educational Effectiveness, Washington, DC.
- Kelly, S. (2008)**
 What types of students' effort are rewarded with high marks? *Sociology of Education*, 81(1), 32-52.
- Kieffer, M.J., & Marinell, W.H. (2012)**
Navigating the middle grades: Evidence from New York City. New York, NY: The Research Alliance for New York City Schools.
- Klopfenstein, K. (2004)**
 The Advanced Placement expansion of the 1990s: How did traditionally underserved students fare? *Education Policy Analysis*, 12(68), 1-15.
- Kobrin, J.L., Patterson, B.F., Shaw, E.J., Mattern, K.D., & Barbuti, S.M. (2008)**
Validity of the SAT® for predicting first-year college grade point average (Research Report No. 2008-5). New York, NY: College Board.
- Kuncel, N.R., Credé, M., & Thomas, L.L. (2005)**
 The validity of self-reported grade point averages, class ranks, and test scores: A meta-analysis and review of the literature. *Review of Educational Research*, 75(1), 63-82.
- Kurlaender, M., Reardon, S.F., & Jackson, J. (2008)**
Middle school predictors of high school achievement in three California school districts. Santa Barbara, CA: University of California, California Dropout Research Project.
- Lehr, C., Sinclair, M., & Christenson, S. (2004)**
 Addressing student engagement and truancy prevention during the elementary school years: A replication study of the Check & Connect Model. *Journal of Education for Students Placed at Risk (JESPAR)*, 9(3), 279-301.
- Li, Y., Scala, J., Gerdeman, D., & Blumenthal, D. (2016)**
District guide for creating indicators for early warning systems. San Francisco, CA: REL West at WestEd.

- Marsh, J.A. (2012)**
Interventions promoting educators' use of data: Research insights and gaps. *Teachers College Record*, 114(11), 1-48.
- Nagaoka, J., Seeskin, A., & Coca, V.M. (2017)**
The educational attainment of Chicago Public Schools students: 2016. Chicago, IL: University of Chicago Consortium on School Research.
- Nayar, N. (2015)**
How are states reporting on college and career readiness? Washington, DC: College & Career Readiness & Success Center at the American Institutes for Research.
- Neild, R., & Balfanz, R. (2006)**
Unfulfilled promise: The dimensions and characteristics of Philadelphia's dropout crisis, 2000-2005. Baltimore, MD: Johns Hopkins University, Center for Social Organization of Schools.
- Neild, R.C., Balfanz, R., & Herzog, L. (2007)**
An early warning system. *Educational Leadership*, 65(2), 28-33.
- Noble, J., & Sawyer, R. (2002)**
Predicting different levels of academic success in college using high school GPA and ACT composite score. Iowa City, IA: ACT, Inc.
- Noble, J.P., & Sawyer, R.L. (2004)**
Is high school GPA better than admissions test scores for predicting academic success in college? *College and University*, 79(4), 17-22.
- Norbury, H., Wong, M., Wan, M., Reese, K., Dhillon, S., & Gerdeman, R. (2012)**
Using the freshman on-track indicator to predict graduation in two urban districts in the Midwest Region (Issues & Answers Report, REL 2012–No.134). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest.
- Page, L.C., & Scott-Clayton, J. (2015)**
Improving college access in the United States: Barriers and policy responses (NBER Working Paper No. 21781). Cambridge, MA: National Bureau of Economic Research. Retrieved from <http://www.nber.org/papers/w21781>
- Pinkus, L. (2008)**
Using Early Warning Data to Improve Graduation: Rates Closing Cracks in the Education System. Washington DC: Alliance for Excellent Education
- Pitcher, M.A., Duncan, S.J., Nagaoka, J., Moeller, E., Dickerson, L. & Beechum, N.O. (2016)**
The Network for College Success: A capacity-building model for school improvement. Chicago, IL: Network for College Success.
- Porter, K.E., & Balu, R. (2017)**
Predictive modeling of K-12 academic outcomes: A primer for researchers working with education data. New York, NY: MDRC.
- Roderick, M. (2012)**
Drowning in data but thirsty for analysis. *Teachers College Record*, 114(11), 110309.
- Roderick, M., Kelley-Kemple, T., Johnson, D.W., & Beechum, N.O. (2014)**
Preventable failure: improvements in long-term outcomes when high schools focused on the ninth grade year. Chicago, IL: University of Chicago Consortium on Chicago School Research.
- Roderick M., Nagaoka, J., & Allensworth, E.M. (2006)**
From high school to the future: A first look at Chicago public school graduates' college enrollment, college preparation, and graduation from four-year colleges. Chicago, IL: University of Chicago Consortium on Chicago School Research.
- Rosenkranz, T., de la Torre, M., Stevens, W.D., & Allensworth, E.M. (2014).**
Free to fail or on-track to college: Why grades drop when students enter high school and what adults can do about it. Chicago, IL: University of Chicago Consortium on Chicago School Research.
- Rothstein, J.M. (2004)**
College performance predictions and the SAT. *Journal of Econometrics*, 121(1), 297-317.
- Rumberger, R. (1995)**
Dropping out of middle school: A multilevel analysis of students and schools. *American Educational Research Journal*, 32(3), 583-625.
- Sadler, P.M., & Sonnert, G. (2010)**
High school Advanced Placement and success in college coursework in the sciences. In P.M. Sadler, G. Sonnert, R.H. Tai, & K. Klopfenstein (Eds.), *AP: A critical examination of the Advanced Placement Program* (pp. 119-137). Cambridge, MA: Harvard Education Press.
- Stuit, D., O'Cummings, M., Norbury, H., Heppen, J., Dhillon, S., Lindsay, J., & Zhu, B. (2016)**
Identifying early warning indicators in three Ohio school districts (REL 2016–118). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest.
- Sun, M., Penner, E.K., & Loeb, S. (2017)**
Resource-and approach-driven multidimensional change: Three-year effects of school improvement grants. *American Educational Research Journal*, 54(4), 607-643.
- Tierney, W.G., Bailey, T., Constantine, J., Finkelstein, N., & Hurd, N.F. (2009)**
Helping students navigate the path to college: What high schools can do: A practice guide (NCEE #2009-4066). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Turner, E.O., & Coburn, C.E. (2012)

Interventions to promote data use: An introduction. *Teachers College Record*, 114(11), 1–13.

Weiss, J.A. (2012)

Data for improvement, data for accountability. *Teachers College Record*, 114(11), 1-7.

Willingham, W.W., Pollack, J.M., & Lewis, C. (2002)

Grades and test scores: Accounting for observed differences. *Journal of Educational Measurement*, 39(1), 1-37.

Zau, A., & Betts, J.R. (2008)

Predicting success, preventing failure: An investigation of the California high school exit exam. San Francisco, CA: Public Policy Institute of California.

Zwick, R., & Himelfarb, I. (2011)

The effect of high school socioeconomic status on the predictive validity of SAT scores and high school grade-point average. *Journal of Educational Measurement*, 48(2), 101-121.

ABOUT THE AUTHORS

ELAINE M. ALLENSWORTH is the Lewis-Sebring Director of the University of Chicago Consortium on School Research, where she conducts studies on students' educational attainment, school leadership, and school organization. Her research on high school graduation has been used to create early warning indicator systems in school districts across the country. She is one of the authors of the book, *Organizing Schools for Improvement: Lessons from Chicago*, which documents the ways in which organizational structures in schools influence improvements in student achievement. Dr. Allensworth has received grants from funders that include the Institute of Education Sciences, the National Science Foundation, and the Bill & Melinda Gates Foundation. She frequently works with policymakers and practitioners to bridge research and practice, serving on panels, policy commissions, working groups, and review panels at the local, state, and national level, including the U.S. Department of Education, National Academies, and National Governors' Association. Dr. Allensworth has received a number of awards from the American Educational Research Association for outstanding publications. She has briefed members of congress and their staffers on Consortium research findings, through private meetings, briefings, and congressional testimony. Her work is frequently covered in the local and national media, including the *New York Times*, *Ed Week*, *Chicago Tribune*, public radio, and *CNN*.

JENNY NAGAOKA is the Deputy Director of the UChicago Consortium, where she has conducted research for nearly 20 years. Her research interests focus on policy and practice in urban education reform, particularly using data to connect research and practice and examining the school environments and instructional practices

that promote college readiness and success. She has co-authored numerous journal articles and reports, including studies of college readiness, noncognitive factors, the transition from high school to post-secondary education, and authentic intellectual instruction. She is the lead researcher on the To&Through Project, a project that provides educators, policymakers, and families with research, data, and training on the milestones that matter most for college success. Nagaoka is the lead author of *Foundations for Young Adult Success: A Developmental Framework* (2015), which draws on research and practice evidence to build a coherent framework of the foundational factors for young adult success, and investigates their development from early childhood through young adulthood and how they can be supported through developmental experiences and relationships. Nagaoka received her BA from Macalester College and her master's degree in public policy from the Irving B. Harris School of Public Policy at the University of Chicago.

DAVID W. JOHNSON is a Senior Research Analyst at the University of Chicago Consortium on School Research. His research interests focus on school culture and climate, school improvement and processes of institutional change, and postsecondary access and attainment for urban students. His dissertation research focuses on how high schools become socially organized to improve college-going among low-income, minority, and first-generation college students. Johnson holds an AM from the University of Chicago School of Social Service Administration and an MDiv from the University of Chicago Divinity School, as well as a BA from Washington University in St. Louis. Prior to joining the UChicago Consortium, Johnson taught elementary school in the Washington DC Public Schools.

This report reflects the interpretation of the authors. Although the UChicago Consortium's Steering Committee provided technical advice, no formal endorsement by these individuals, organizations, or the full UChicago Consortium should be assumed.

Directors

ELAINE M. ALLENSWORTH
Lewis-Sebring Director

CAMILLE A. FARRINGTON
*Managing Director and
Senior Research Associate*

JULIA A. GWYNNE
*Managing Director and
Senior Research Scientist*

HOLLY HART
Survey Director

KYLIE KLEIN
*Director of Research
Operations*

BRONWYN MCDANIEL
*Director of Outreach
and Communication*

JENNY NAGAOKA
Deputy Director

MELISSA RODERICK
*Senior Director
Hermon Dunlap Smith
Professor
School of Social Service
Administration*

PENNY BENDER SEBRING
Co-Founder

MARISA DE LA TORRE
*Managing Director and
Senior Research Associate*

Steering Committee

RAQUEL FARMER-HINTON
Co-Chair
University of Wisconsin,
Milwaukee

DENNIS LACEWELL
Co-Chair
Urban Prep Charter Academy
for Young Men

Ex-Officio Members

SARA RAY STOELINGA
Urban Education Institute

Institutional Members

SARAH DICKSON
Chicago Public Schools

ELIZABETH KIRBY
Chicago Public Schools

TROY LARAVIERE
Chicago Principals and
Administrators Association

KAREN G.J. LEWIS
Chicago Teachers Union

ALAN MATHER
Chicago Public Schools

TONY SMITH
Illinois State
Board of Education

Individual Members

GINA CANEVA
Lindblom Math & Science

NANCY CHAVEZ
OneGoal

KATIE HILL
Office of the Cook County
State's Attorney

MEGAN HOUGARD
Chicago Public Schools

GREG JONES
Kenwood Academy

PRANAV KOTHARI
Revolution Impact, LLC

LILA LEFF
Umoja Student Development
Corporation & Emerson
Collective

RITO MARTINEZ
Surge Institute

LUISIANA MELÉNDEZ
Erikson Institute

SHAZIA MILLER
NORC at the
University of Chicago

CRISTINA PACIONE-ZAYAS
Erikson Institute

BEATRIZ PONCE DE LEÓN
Generation All

PAIGE PONDER
One Million Degrees

**KATHLEEN ST. LOUIS
CALIENTO**
The Academy Group

AMY TREADWELL
Chicago New Teacher Center

**REBECCA VONDERLACK-
NAVARRO**
Latino Policy Forum

PAM WITMER
Illinois Network of
Charter Schools

JOHN ZEIGLER
DePaul University

UCHICAGO Consortium on School Research

1313 East 60th Street
Chicago, Illinois 60637

T 773.702.3364

F 773.702.2010

@UChiConsortium
consortium.uchicago.edu

OUR MISSION The University of Chicago Consortium on School Research (UChicago Consortium) conducts research of high technical quality that can inform and assess policy and practice in the Chicago Public Schools. We seek to expand communication among researchers, policymakers, and practitioners as we support the search for solutions to the problems of school reform. The UChicago Consortium encourages the use of research in policy action and improvement of practice, but does not argue for particular policies or programs. Rather, we help to build capacity for school reform by identifying what matters for student success and school improvement, creating critical indicators to chart progress, and conducting theory-driven evaluation to identify how programs and policies are working.



THE UNIVERSITY OF
CHICAGO

UEI URBAN
EDUCATION
INSTITUTE

