

# Improving College Readiness for Historically Underserved Students: The Role of the District Office

Education and Urban Society  
1–27

© The Author(s) 2017

Reprints and permissions:

sagepub.com/journalsPermissions.nav

DOI: 10.1177/0013124517728102

journals.sagepub.com/home/eus



**Martha Abele Mac Iver<sup>1</sup>, Douglas J. Mac Iver<sup>1</sup>,  
and Emily Clark<sup>1</sup>**

## **Abstract**

Research on the role of institutions in influencing students' readiness for college has so far focused primarily on the school level and the state policy context, with only little attention to the district. This case study, based on interview data and documents collected over the course of a year, analyzes an urban district's attempt to create a systematic approach to improving the college readiness of its students, many of whom have been traditionally underserved by the educational system. It identifies factors contributing to progress as well as challenges encountered in several critical areas: (a) leadership commitment, (b) data infrastructure, (c) building adult capacity around data use and college readiness, (d) connecting indicators with supports to promote college readiness, and (e) partnerships with community and higher education institutions.

## **Keywords**

urban education, educational leaders, students

Although the gap in college attainment has been narrowing, more than half the population of 25- to 34-year-olds in the United States does not have a

---

<sup>1</sup>Johns Hopkins University, Baltimore, MD, USA

### **Corresponding Author:**

Martha Abele Mac Iver, Johns Hopkins University, 2701 N. Charles, Suite 300, Baltimore, MD 21218, USA.

Email: mmaciver@jhu.edu

college degree, and large gaps in college attainment still remain for Blacks and Latinos in comparison with Whites (Balfanz, DePaoli, Ingram, Bridgeland, & Fox, 2016). Underrepresentation of minority and low-income students in college enrollment and completion continues to evoke widespread concern (e.g., Duncan & Murnane, 2014). As many (e.g., Green, 2006; Rendon, 2006) have argued, these students have been historically underserved by the educational system. Ensuring that more of these students leave high school ready for college, and more of them who begin college actually receive a degree, is one of the foremost educational challenges of the 21st century.

In framing the factors that influence college enrollment and success, sociologists have distinguished among individual attributes, family and neighborhood attributes, and institutions (Deil-Amen & Turley, 2007). Access to college has historically been closely tied to socioeconomic status, and the social and cultural capital of families (e.g., Gamoran, 2001). Focusing on how institutions influence college success, researchers and policymakers have noted how differences in high school organization and practices are related to their students' college outcomes (Deil-Amen & Turley, 2007). The widespread phenomenon of explicit or de facto tracking—sorting students into curricular pathways based on some measure of readiness for rigorous college preparatory instruction—continues to have negative effects on minority and low-income students (e.g., Chambers, 2009; Yonezawa, Wells, & Serna, 2002). Even if students are not tracked within a school, the tendency of schools with concentrations of low-income and minority students to have lower proportions of highly qualified teachers and lower levels of rigorous instruction also contributes to inequities in college readiness (e.g., Darling-Hammond, 2004). Such schools tend to have less of a college-going culture (Schneider, 2007). Similarly, schools serving low-income and minority students are also less likely to exhibit the “brokering” strategies of schools with higher college attendance rates: They have fewer resources devoted to the college planning process and low levels of outreach to parents related to college planning (Hill, 2008), though variations in urban school college-going cultures do exist (e.g., Roderick, Coca, & Nagaoka, 2011). Case studies of schools that successfully counter this trend and are “beating the odds” (Ascher & Maguire, 2007; McKillip, Godfrey, & Rawls, 2012) are rare. Resources for helping schools build a college-going culture are growing (e.g., McDonough, n.d.), but school cultures are highly dependent on individual leadership and vulnerable to high turnover rates in leadership and personnel, particularly in urban areas (Bosworth, Convertino, & Hurwitz, 2014).

Although state policy may be important in helping to align K-12 academic standards to the standards students need to meet to be successful in their

college courses (Perna & Armijo, 2014), Roderick, Nagaoka, and Coca (2009) argue that “state policy makers have a limited number of simple policy levers that can affect college readiness, and these are of limited efficacy” (p. 202). They outline several strategies that state and local education agencies can use to increase college readiness: (a) using valid indicators of college readiness in accountability systems, (b) building instructional capacity of high school teachers, (c) strengthening school capacity to provide information to low-income students about the college application and financial-aid process, and (d) providing clear direction and incentives to students to encourage strong academic performance in high school. These broad strategies can establish a supportive framework, but state agencies are generally too far removed from the school setting to exert much direct impact.

The local education agency or school district is a potentially more powerful institution than the state education agency in framing systemic initiatives to help schools increase college readiness and college access for historically underrepresented students (Mac Iver, 2010), but attention to district college-readiness initiatives is a relatively new development (Duffy & Darwin, 2013). There is some evidence that university–district research partnerships are beginning to focus on college-readiness indicators to help inform district initiatives focused on increasing college readiness (e.g., Durham et al., 2015; Phillips et al., 2015). Building on the research surrounding district use of data in decision making (Snipes, Doolittle, & Herlihy, 2002; Supovitz, Foley, & Mishook, 2012) and research on early warning indicators (Allensworth & Easton, 2007; Balfanz, Herzog, & Mac Iver, 2007), the Bill and Melinda Gates Foundation funded a College-Ready Education initiative in Dallas in 2008 and a college-readiness indicator system (CRIS) initiative beginning in 2011 to spur district progress in this area. The Annenberg Institute for School Reform at Brown University and the John W. Gardner Center for Youth and Their Communities at Stanford University, collaborating with the Chicago Consortium on School Research, worked with a group of five districts/school networks to develop and refine systemic approaches to increasing college readiness and success for underrepresented students.

Reflecting close parallels with the work of Conley (2007) and others, the CRIS framework focuses on three college-readiness areas (academic preparedness, academic tenacity, and college knowledge) along three dimensions (individual student, setting/school level, and system/district level; Gurantz & Borsato, 2012). Academic preparedness refers to what Conley terms “key cognitive strategies” and “key content knowledge.” This involves skills in critical thinking, reading, writing, and mathematics necessary for students to independently and successfully complete introductory college-level coursework. The term “academic tenacity” aligns to

Conley's "key learning skills and techniques," involving what have been termed "non-cognitive" skills of persistence, help-seeking behaviors, self-monitoring, time management, and other such skills. "College knowledge" refers to specific understanding of the process of applying to college, obtaining financial aid, and successfully matriculating and enrolling in college classes. Ultimately measured at the individual student level, these factors are influenced by practices at both the school and district levels, and can be measured at these levels as well.

The John W. Gardner Center for Youth and their Communities, Stanford University (2014) identified several essential elements for successful CRIS implementation in its work with the original five districts: (a) "leadership commitment," (b) "data infrastructure," (c) "strengthening adult capacity around data use and college readiness," (d) "connecting indicators with supports to promote college readiness," and (e) "partnerships with community institutions and institutions of higher education" (p. 5). Our study builds on preliminary studies of early implementer districts (Alter, Hall, & Lauck, 2012; Hall, 2013; Mishook, 2013) to investigate how one of those districts, Dallas Independent School District (Dallas ISD), continued to develop and sustain its CRIS.

## **District Background**

This case study gathered data from documents, interviews, and observations to describe the evolving status of Dallas ISD's CRIS and especially focuses on developments during the 2013-2014 and 2014-2015 school years. In 2014-2015, Dallas ISD served 160,253 students in a total of 224 schools. It is the 14th largest school district in the nation. Nearly 15,000 professional staff and more than 6,000 support staff serve the district's schools and students. Nearly all the district's students are non-White (70% Hispanic, 23% African American, 2% other ethnicity) and from low-income homes (89% eligible for free or reduced-price lunch). Almost one in three (31%) is an English language learner, and 7% receive special education services.<sup>1</sup> The district 4-year cohort graduation rate in 2013 was reported by the Texas Education Agency as 84.8%.

During this period, district schools were organized into five regional divisions led by Assistant Superintendents under a Chief of School Leadership. Each division included several feeder patterns of elementary, middle and high schools, each led by an Executive Director. Key district office departments involved in college- and career-readiness work included: Office of College and Career Readiness, Counseling Services, and Evaluation and Assessment.

Dallas ISD's focus on improving students' graduation rates and postsecondary outcomes began during an earlier period, during Michael Hinojosa's first term as Superintendent (2005-2011). Dallas ISD began acquiring data on its graduates from the National Student Clearinghouse in 2006 and has produced publicly available yearly reports summarizing postsecondary outcomes for its graduates since 2009. According to the most recent (Johnson & Hall, 2015) report, 58% of Dallas ISD 2012 graduates had enrolled in college within a year of graduation. Among the 2013 graduates, 49% had enrolled in college by the fall following graduation. On average, for graduating classes over the 5-year period 2009-2013, more of the college enrollees went to 2-year colleges (53%) than 4-year colleges (47%). Most enrollees (90%) went to Texas colleges.

In 2007-2008, Dallas ISD created an on-track to high school graduation indicator based on research conducted by the Chicago Consortium on School Research. Ninth graders were considered to be on track if they earned five credits and had no more than one failing semester grade in the core academic subjects. The percentage of ninth graders on track to graduation was calculated for each high school, and published in a yearly report from the Dallas ISD Evaluation and Assessment Department. The on-track measure was one of the accountability measures for principals from 2009-2010 to 2011-2012 (Weir, 2013). Principals and other district leaders did not pay as much attention to the on-track indicator once it was no longer an accountability measure. The latest report on the on-track indicator (2013-2014) shows a slight decline in the percentage of ninth graders on track to graduation (Weir, 2014).

In addition, Dallas ISD created a drop-out early warning system (DEWS) in 2008-2009. The data system, which was updated about every 6 weeks, integrated data on indicators such as attendance, truancy, course grades, number of credits earned, and state assessment scores. It allowed staff to identify students who were failing core courses, truant, or who had failing scores on the state assessments. Lists of students could be sorted and exported to EXCEL. Due to district budget cuts, the system has not been updated to reflect the new graduation requirements (particularly end-of-course [EOC] exams). Other reports for principals on the EOC exams have been generated separately. The CRIS proposed in the latest round of the Gates Foundation-funded CRIS work in Dallas was envisioned as an updated and expanded replacement for the DEWS, with a more positive title.

With previous funding from the Gates Foundation beginning in 2008, Dallas ISD developed a data dashboard that integrated a set of college-readiness indicators together for use by school staff. Reorganization under new district leadership in 2012 led to the dismantling of the department that created and supported the data dashboard (Hall, 2013). This case study summarizes the development of CRIS work in the aftermath of that reorganization.

## *Study Research Questions and Methodology*

This district case study sought to address the following overarching questions:

- **Research Question 1:** How did the CRIS work fit into the overarching district goals, and how was it supported by district leadership? What challenges were encountered?
- **Research Question 2:** How did district data systems support the CRIS initiative, and what data-related challenges were identified?
- **Research Question 3:** How did the district seek to build human capacity to use data systematically to inform efforts to improve the college readiness of its students? What challenges were encountered?
- **Research Question 4:** How did the district ensure that the CRIS would include a process for moving from data analysis to appropriate interventions? What challenges were encountered?
- **Research Question 5:** How did the systemic college-readiness initiative in the district involve partnerships with community and higher education institutions? What challenges were encountered?

Table 1 summarizes data sources for the study, which included interviews, focus groups, meeting observations, and review of documents. Over the course of a year, the research team conducted semistructured interviews with a total of 24 Dallas Independent School District (Dallas ISD) staff members and external partners (including multiple discussions with several of these leaders). In addition, we observed three meetings with middle school teachers designed to spur discussion about preparing students for college and the indicators needed to monitor student readiness. These meetings included focus groups with 20 teachers from five schools. We also observed two regular monthly “Data Inquiry Cycle” meetings of middle and high school principals, and a regular meeting of external partners working with the district to increase college access. All interviews were transcribed for use in analyses of recurring themes. In addition, we reviewed related research reports produced by Dallas ISD as well as district strategic plans and documents shared in observed meetings.

For this case study, we used a qualitative methodology of analyzing data from interviews, meeting observations, and district documents. We used a constant comparative method to analyze these qualitative data to explore recurring themes and patterns (Lincoln & Guba, 1985; Miles & Huberman, 1994), focused specifically around the CRIS essential elements identified through previous research. In particular, interview data were analyzed to identify relevant findings related to the categories identified by the Gardner Center and used as framing questions in the interview protocols: (a) district

**Table 1.** Case Study Data Sources.

Interviews/focus groups	
Date	Participants
May 2014	Focus groups with 20 teachers from five schools
May 2014	Executive Director of the school feeder pattern
May 2014	Assistant Superintendent, Evaluation and Assessment
May 2014	Director of Postsecondary Success
May 2014	Assistant Superintendent of School Leadership, Division 4
May 2014	Assistant Superintendent of School Leadership, Division 3
October 2014	High school principal
October 2014	High school principal
October 2014	High school counselor
October 2014	Director of Postsecondary Success
October 2014	AVID (Advancement Via Individual Determination) District Manager
October 2014	Assistant Superintendent, Evaluation and Assessment
October 2014	Evaluation Specialist, Program Evaluation, Evaluation and Assessment
October 2014	Evaluator, Evaluation and Assessment
October 2014	Assistant Superintendent, Teaching and Learning
October 2014	Deputy Superintendent
October 2014	Director of Advanced Academic Services
October 2014	Evaluator, Evaluation and Assessment
December 2014	Coordinator, College Access
December 2014	Senior Associate Vice President for Outreach Services & Community Engagement for University Crossroads
December 2014	Director of Counseling Services
December 2014	College and Career Readiness (CCR) Department—Imagine 2020 CCR Coordinator
March 2015	Executive Director of the school feeder pattern
March 2015	CRIS Project Manager
March 2015	Management Information Systems Consultant
March 2015	Deputy Director for College Access and Success, COMMIT!
Monthly in 2014-2015	Executive Director, College and Career Readiness
Observations	
October 2014, December 2014	Middle School Teacher meetings
December 2014	Meeting of the Higher Education/Work Force Support Council for Commit!
March 2015	Cycle of Inquiry Data meeting with principals and Executive Director
April 2015	Cycle of Inquiry Data meeting with additional principals and Executive Director

Note. Documentary sources listed in references. CRIS = college-readiness indicator system.

leadership commitment, (b) data infrastructure, (c) building adult capacity around data use and college readiness, (d) connecting indicators with action, and (e) partnerships with community and higher education institutions.

## Results

**Leadership commitment.** First among the essential elements of a district CRIS identified by the John W. Gardner Center for Youth and Their Communities is leadership commitment: “Without strong leadership commitment, a college readiness indicator system initiative risks falling to the bottom of the district’s priorities or marginalization from the larger district agenda” (John W. Gardner Center for Youth and their Communities, Stanford University, 2014, p. 6). In July 2012, Dallas ISD leadership declared a single official “purpose”—to “graduate college- and career-ready students.” This purpose declaration appeared in the district’s improvement action plan—named *Destination 2020*—which described plans designed to accomplish that purpose better each year until September 2020. In that plan, the district’s stated goals for 2020 are as follows: (a) 90% of Dallas ISD’s students graduate on time; (b) 40% attain a 21 or higher composite score on the ACT exam, or a Reading/Math composite score of 990 or higher on the SAT; (c) 75% are proficient on the Year 2020 workplace readiness assessments; (d) 80% enter college, the military, or a “career-ready job.” For each of the above metrics, the district has set interim annual goals, tracks and reports progress, annually identifies key actions/initiatives needed to reach the annual and longer term goals, and identifies strategic new expenditures needed to enable those actions and initiatives. These are summarized in yearly District Action Plans. Examples of aligning their expenditures and actions with their goals include expanding SAT and ACT prep classes; providing in-school PSAT for all sophomores, SAT for all juniors, and ACT for all seniors; and paying for all Advanced Placement (AP), and International Baccalaureate (IB) tests and retests.

Leadership commitment to college readiness is further evidenced in the district’s accountability system. One of Dallas ISD’s key strategies to champion equitable access for all students to a college-going culture and college-readiness resources is to emphasize school-level college-readiness indicators in the performance evaluation and accountability systems for principals and counselors in all schools, including elementary, middle, and high schools. Interviews with two magnet high school principals indicated that the specific college-readiness metrics that they were evaluated on in the new principal evaluation system included the following: (a) how the school’s average SAT and ACT scores compared with the college-readiness benchmarks the district has established, (b) the school’s scores on the State of Texas Assessments of Academic Readiness (STAAR) (percentage of students scoring at satisfactory or above), (c) the student attendance rate at their school (as an indicator of students’ academic tenacity), (d) the school’s drop-out and graduation rates, (e) teachers’ ratings of how well the school is building a “College-Going Culture” based upon a six-item scale drawn



from the teacher climate survey.<sup>2</sup> The District Department of Counseling Services is held accountable for several “college knowledge” measures, including Free Application for Federal Student Aid (FAFSA) completion, college application submission, percentage taking the SAT or ACT and scholarships accepted, and this accountability measure also applies to school principals and counselors.

Leadership commitment to college readiness is also evidenced in organizational strategies within the central office that “[cut] across district departments and . . . [leverage] the point of view and expertise of key staff with different roles within the organization” (John W. Gardner Center for Youth and their Communities, Stanford University, 2014, p. 7). During the period of the case study, Dallas ISD’s Executive Director of College and Career Readiness organized ad hoc cross-department meetings that brought together key senior-level staff from different departments. Staff at these meetings planned improvements to the district’s CRIS, and discussed the programming and launch of the district’s “on-track to college” CRIS for monitoring student progress in academic preparedness, tenacity, and college knowledge. Besides the Executive Director of the College and Career Readiness Department (and members of that department), the team included the Assistant Superintendent for Evaluation and Assessment, a researcher within Evaluation and Assessment who was a fellow in the Harvard University Strategic Data Partnership, and the Dallas ISD Director of Counseling Services. The team also included a project manager from the Information Technology department focused on creation of a dashboard and integrated data system. Cross-department collaboration among key leaders focusing on college readiness is reportedly smoother now than in the past as a result of the college-readiness focus of the district’s Destination 2020 improvement plan. In addition, a district reorganization that placed the School Leadership department in the same division as the college- and career-readiness department (along with other Teaching and Learning departments, and the Evaluation and Assessment Department) has also facilitated more cross-departmental collaboration.

The district leadership’s commitment to college readiness can also be seen in the district communication strategy. The district’s website, official written plans, brochures, and a host of evaluation reports posted online clearly show that it has been highlighting its college- and career-readiness focus in internal and external communications. This is especially evident in communications regarding the Destination 2020 districtwide strategic improvement plan and the Imagine 2020 reform initiative (an initiative that channels district and community resources into three of its most challenged feeder patterns).

At the same time, analysis of interview and district record data also revealed formidable challenges to maintaining district leadership attention on

college-readiness goals. Other district goals compete for leaders' attention and bandwidth. Despite its overall goal of graduating college-ready students, Dallas ISD actually gave greater priority during the case study year to ensuring the on-time rollout of its new teacher evaluation system than to encouraging the regular cross-departmental CRIS teamwork necessary to further its college-readiness goals. District attention was also diverted by human capital challenges—exacerbated by the high rate of teacher turnover at the secondary level—and the need to focus on ensuring that all classrooms were staffed by effective teachers. Although ensuring that high-quality instruction is essential to increasing college readiness, there were dimensions of the college-readiness work that did not receive the district-level attention that they needed for progress to be made on several of the other essential elements described below. In addition, a vacancy in a high-level leadership position contributed to a lack of common vision for guiding school principals across the district in engaging in data-informed cycles of inquiry focused on the ultimate goal of preparing students for college.

*Data infrastructure.* Considerable documentary evidence indicates that Dallas ISD has long benefited from a solid data infrastructure that has supported the development of tools and reports relevant for data-informed decision making regarding indicators of high school success. As noted earlier, the district used this data infrastructure to develop a DEWS and on-track indicator system for ninth grade, as well as a data dashboard that facilitated the use of data by school leaders. The district produces high school profiles that highlight key college-readiness indicators such as school-level SAT/ACT and AP results, as well as 4-year cohort graduation rates. The Office of Institutional Research within Evaluation and Assessment also produces comprehensive “Data Packets” with college- and career-readiness measures by demographic subgroups for each school at the beginning of the school year, which are available to school leaders on the district data portal.

In addition, Dallas ISD's Office of Evaluation and Assessment has a long history of using its data system to produce high-quality evaluation reports focused on both specific programs and institutional data. Dallas ISD was a national leader in analyzing data from the National Student Clearinghouse to summarize college enrollment, first-year success, and completion outcomes for its graduates in reports used by the district and its schools. The district produces publicly available college- and career-readiness reports on PSAT testing, school-day SAT testing, ACT testing, and remedial course taking in college, and on student performance on the EOC high school exams that are now a graduation requirement and accountability measure. These reports inform discussion and planning at the central office level, and are disaggregated to the

school level for use by school leaders. Other reports produced include evaluation studies of district programs such as early college high schools and the College Access Provider initiative. For example, the 2013 evaluation of the College Access Provider initiative for Title I high schools identified challenges that led the college- and career-readiness department to improve processes for 2013-2014. There is now a protocol for the school principal, guidance department, and college access providers to agree on where responsibility lies for each component of college-readiness services to students.

Unlike many (if not most) other districts nationally, Dallas ISD aggressively pursued and gained ongoing access to objective data (through the Texas Education Agency) on two late-stage measures of college knowledge: FAFSA completion and college application submission (to Texas colleges). These two measures, along with objective data on whether students have taken the SAT or ACT (generally available to most districts) and scholarships accepted, are included in the accountability measure for the District Counseling Department and high school principals throughout the district. Schools receive data on individual 12th graders that can be used in school-level interventions to raise college-readiness and enrollment rates (see Dallas ISD, 2015).

Despite the breadth of data available to guide decision making, challenges remain in fully integrating the district's data systems. With the dismantling of the previously created CRIS dashboard, the CRIS work in Dallas had to refocus on creating a new dashboard with key performance indicators of college readiness more closely aligned with current accountability measures (e.g., the new EOC exams). Although student outcome data are available to school leaders on the district's "My Data Portal" system, some interviewees reflected fondly on the superiority of the prior dashboard. During the case study period, there was considerable fragmentation across various district data systems. As one school leader put it,

I think that the idea of taking all of this data and putting it one area is awesome, because for so long we've had to go to so many different systems for so much information that we need from all over the place . . . We're in the process of going through a new data system, . . . and it's painful, because things don't match up, things are all over the place, and I think it will just take a lot of time to sort of massage that system.

A school counselor reported significant time lags in the district data system for uploading college test scores, as well as problems in pulling all student transcript information together. She noted that the computer system for transcripts had worked better more than 10 years ago than it was working currently.

The Dallas ISD Information Technology department was able to bring together some individual student-level data from separate silos into an integrated and interactive college indicator “dashboard” or data report during a professional development session with middle-grade teachers in the 2014-2015 school year. However, access to the new dashboard for district teachers was not available until the following year. The delay appeared to be due to other district priorities (particularly related to principal and teacher evaluations) that dominated available information technology resources. At the conclusion of the case study, different kinds of data remained, to some extent, in separate data silos, and it was still difficult for school-based staff to access all the data they needed in a way that facilitated productive cycles of inquiry regarding college-readiness indicators. Dallas ISD was still working on integrating individual-level data on college-readiness measures (e.g., grade-point average [GPA], attendance, EOC exam scores, AP course and test score data, SAT/ACT scores) in ways that could effectively guide action and specific interventions for students by school-based staff.

*Building adult capacity around data use and college readiness.* As the John W. Gardner Center for Youth and their Communities, Stanford University (2014) points out, the usefulness of a district’s data infrastructure depends on “an investment in enhancing the capacity of adults—both at the district and school levels—to use data to help improve classroom practice, increase learning, track college readiness, and apply appropriate interventions” (p. 12). District leadership in organizing and ensuring implementation of systematic professional development around data use is one way that districts can support schools in improving their students’ college readiness. During case study data collection, Dallas ISD had a structure in place that supported a systematic approach to building adult capacity around assessment data. As one district leader described it,

Every campus has what’s called Campus Instruction Coach . . . They are to use that data to build campus-specific, teacher need-specific at that campus professional development. The campus instructional coaches at the district level then have a support structure position called the academic facilitator, and the academic facilitators work with those coaches on developing professional development, analyzing data, all the different things that an instructional coach is supposed to do on campus. So that professional development structure is kind of in place that way. It all starts with the numbers. What does that data say? . . . Progress monitoring is a key piece to the work that we’re doing. So with the coaches teachers are to develop regular assessments . . . to see where their kids are at.

The district was organized to support school-level coaches who guided teachers in analyzing their students' achievement data and provided professional development in how to adjust instruction to meet students' needs.

Another district-level structure that supported capacity building around data use was the monthly "data meetings" around specific topics that Executive Directors led with the principals they coached and supervised. These provided an opportunity for school leaders to have structured collaborative inquiry and discussions around data. As one Executive Director put it,

And so when the feeder pattern principals get together, they look at the data. They talk about it. They talk about who is doing what. That's where there's a lot of sharing in terms of well what are you doing, what are you doing, how are we doing this together? And so it's just a way to have conversations, and also just get in the habit of monitoring data.

These meetings were supported by central office staff who compiled data for schools in structured, user-friendly ways that facilitated both the preparation process for principals and the discussion among principals at the monthly meetings.

Data from interviews indicated that the structure and content of these data meetings were highly dependent on the direction and vision of particular Executive Directors or their Assistant Superintendent. Our observations of two different meetings confirmed the variation in how they are conducted. In one meeting of four to five middle and high school principals and their Executive Director, each principal made a short presentation of data and analysis related to a particular issue in their school, discussing plans for action steps in response to findings from the data. That particular month's focus was on data from formative teacher observations using the district teacher evaluation rubric. Other principals had the opportunity to make comments or ask questions after each presentation. The Executive Director was particularly skilled in asking questions that helped principals to move beyond the surface to a deeper understanding of the relationships among variables in the data. In particular, the Executive Director helped principals to think through possible relationships between dimensions of instruction and student learning and achievement outcomes. Although it was not explicitly mentioned, the process that the Executive Director modeled in collaborative inquiry with principals was a way of building principal capacity to conduct the same kind of inquiry with their teachers, so as to build the capacity of their teaching staff in drawing conclusions from data inquiry that could inform their practice and ultimately student outcomes. Another data meeting we observed included almost 20 different middle and high school principals, and was conducted in a different

format. Groups of principals met together at different tables to present data, analysis, and action plans, and then receive feedback from colleagues. This format did not appear to be as carefully structured (with questioning and modeling from Executive Directors) as the previously described meeting. As a result, it did not appear to have the same potential for building principal capacity in a way that could then be transferred by principals to their teachers.

It was evident from interview data that capacity had been built among district principals for using college-readiness data. As one school leader explained,

The things that we place the most focus on . . . are our PSAT/ACT/SAT, kind of like looking at those in conjunction, because they all show a different continuum . . . The other thing that we place a lot of stock in is AP data. And I mean the fact that Advanced Placement is geared towards teaching college-level curriculum at a college level and looking at college readiness, if our kids are showing strong scores on AP tests then we feel confident in deeming them college-ready. And so we really look at AP, and so the instructional reports that come out of AP College Board in the summer for our past year's data have been incredibly helpful.

A district research office staff member noted,

From the principals that I have had contact with, they're all very data driven, so they really have kind of changed the culture where they're just pulling data all the time to try to make decisions about what they're going to do on their campuses. So I would think that our district has quite a bit of capacity to use any college readiness indicator system that we've developed.

Although principals were focused on test score data, interview data indicated that principal awareness of "on-track indicator" (i.e., attendance and course passing) data had declined as they were no longer held accountable for the percentage of ninth graders on track to graduation. In addition, despite the evidence regarding grades as predictors of college success (e.g., Geiser & Santelices, 2007), school staff were paying little attention to data on course grades. As one district leader said,

I don't think that GPA is being discussed at most of the meetings or let's say an RTI [Response to Intervention] meeting or even an SST [Student Support Team] meeting where a student might be struggling and you're wondering why. I don't think the GPA is ever brought up as an indicator . . . I think many teachers, in my perception, have disbelief that there's an alignment between the result on state assessments and the GPA because of the compliance driven board policies that are in place or the district policies, as well. So I think that's probably why it's not much used.

During case study data collection, the district's college- and career-readiness department held a series of meetings for teams of teachers from five middle schools, which provided an opportunity for teachers to engage in discussions about strategies for using student data and increasing college readiness. These meetings yielded some fruitful discussions, and revealed that informal collaboration that helps build adult capacity around data use already occurs in some Dallas ISD schools, particularly in relatively high-performing schools, where teachers are organized into interdisciplinary pods that facilitate collaboration. At the same time, teacher comments during these meetings indicated that there was considerable variation in teacher capacity to use data to guide instruction and interventions, and that additional time for professional development to build teacher capacity around data use was needed.

*Connecting indicators with supports to promote college readiness.* As the John W. Gardner Center for Youth and their Communities, Stanford University (2014) asserts,

When adults at schools and in district offices have the opportunity to convene regularly in inquiry groups to examine and interpret indicator data, coordinate and assess intervention efforts, and make course corrections when needed, it improves the chances that students will receive the supports they need to finish high school ready for college. (p. 16)

It is essential to build systematic structures within the district to ensure that student needs identified through discussions of data are addressed to improve college readiness. Case study findings indicated that Dallas ISD had built the structure of regular cycle of inquiry meetings for principals with their peers and Executive Directors. As an executive director of one of the district feeder patterns put it, "Every month, the principals have data meetings with their Executive Director to discuss topics that impact all schools in order to make sure that the principals have a plan of action. The principals collaborate, share, and exchange ideas." One example of how the inquiry led to action steps concerned Advanced Placement (AP). An Assistant Superintendent related how analysis of the extremely low rate of Dallas ISD AP students scoring at least a 3 on the AP exam led to (a) more focused observation of classroom instruction, which revealed the need for higher level questioning and higher quality student work production; and (b) a focus on establishing a rubric for judging student work quality.

Although this district-level cycle of inquiry structure models the process for school principals to use with their faculties, it is not yet clear that each middle and high school has a regular cycle of inquiry process focused on

connecting academic preparedness or academic tenacity indicator data to planning and implementing specific action steps. Such a cycle of inquiry could help teachers understand relationships among student attendance, homework completion, course performance and GPA, and student performance on course assessments, state assessments, and PSAT/SAT/ACT/AP tests. It could also help them reflect on the level of rigor of their instruction and additional training needs they may have to increase level of rigor as well as student engagement in learning.

Teacher focus group participants expressed their desire for more structured opportunities for collaboration with other teachers. Similarly, the two principals interviewed said that most schools in the district have not built into their master schedule regularly scheduled common planning time for teacher teams to examine and act upon college-readiness indicators. Dallas ISD was not able to identify a neighborhood high school where we could observe such a cycle of inquiry in process.

It is clear that to reach its goals for college readiness, the district will need to build more time into the regular work week for teachers to collaborate around data use and effective ways to intervene when students are not developing the preparedness, tenacity, or knowledge needed for college. As one district leader put it, “The resource that I say often is time; we just need the time. We have the framework, we just need more time sometimes, and it’s how we structure our time.” Given the constraints with time, district leadership is crucial to provide concrete, visual frameworks for principals and teachers that enable them to collectively understand the interrelationships among attendance and behavior issues, achievement, student learning, effective instructional practices, college readiness, and data-driven inquiry around all these issues. Integrating collaboration around all these issues will be essential to establish organizational routines at the school level that are effective in leading to improved student outcomes. Teachers also need training and tools that will enable them to respond with appropriate individual supports, small-group interventions, or broad-based programs as indicated.

However, Dallas ISD has made considerable progress in linking *college knowledge* indicators to student supports. District leadership has helped eliminate the “luck of the draw” by establishing expectations and supports for all high schools to provide access to “college knowledge” to all students. The district’s commitment to ensuring that all schools have timely data on FAFSA completion and college application submissions, and to holding schools accountable for these measures, has helped establish a college-going culture in each of the district’s high schools. District involvement in the information flow to students—through supports provided to all high schools—has helped close opportunity gaps for minority students in college knowledge that have existed in the past.



Interviews with district leaders indicated that each of the 34 comprehensive Title I high schools now had a full-time “College Access Program” (CAP) staff member to assist students in the college application process, whereas in the past there were programs that “would work at some schools with a selected group of students,” and “it wasn’t open to all students like it is now.” As a district leader put it, “We just want to remove all barriers from students. We want to make sure that there’s a leveled playing field, that the south of town is receiving the same things that the north is receiving.”

The district administers the CAP through a district College Access Coordinator (under the Director of Postsecondary Success, a department within College and Career Readiness). Principals are able to select from among several different approved CAP vendors. The principal, school counselors, and CAP vendor at each school agree on a set of annual goals, and how responsibility for these goals will be divided between the counseling staff and the CAP provider. The Evaluation and Assessment Department has conducted yearly program evaluations to ascertain how well the program is working and provide formative recommendations. These have been useful in fine-tuning the program, so that it works more smoothly in conjunction with the school-based counseling staff members. As a district leader summarized the impact of adding college access support staff members to high schools,

I got to observe an advisor the other day working with his students it was impressive to see the knowledge base at that school. Like I could see that kids were grasping college terms. So they’re familiar with Apply Texas. They know what that word means now. They’re familiar with SAT and ACT. They know what that means. They’re familiar with their major. You can ask them what are you going to major in. They know what that means. So that knowledge is building and I think that’s great.

With Counseling Services held accountable for such “college knowledge” measures as FAFSA completion and college application submission, there is considerable attention to monitoring data on these measures and intervening with individual students. The district receives timely student-level data on both these measures, which are available to school counselors. Having data on which students have not yet completed FAFSAs or college application allows for more efficiency among counselors in targeting interactions with students to encourage completion of these steps.

*Partnerships with community and higher education institutions.* The John W. Gardner Center for Youth and their Communities, Stanford University (2014) points out that “high-quality collaborations between districts and their partners can leverage resources, supports, and expertise that exist outside the K-12

school system, and can help forge stronger links for students as they transition from high school to institutions of higher education.” (p. 23). Our case study interview data indicate that Dallas ISD has had strong relationships with Texas Regional P-16 Councils (both University Crossroads and the North Texas Regional P-16 Council) and the STRIVE Network organization, Commit!, that have strengthened its systemic efforts to improve college readiness.

As the John W. Gardner Center for Youth and their Communities, Stanford University (2014) asserts, a key component in building strong district-level support for college readiness is to

share data with institutions of higher education to assist both organizations in supporting students’ college readiness, providing needed supports, locating gaps in both service and quality of those supports, and bridging supports as students transition from K–12 to higher education. (p. 23)

As one university-based member of both councils summarized it,

We meet once a month as a P-16 council . . . and we look at the data that the district provides whether it’s on completion of FAFSA . . . [or] indicators on how many kids are taking an SAT [or] . . . those who were doing the Apply Texas Online College Application.

Dallas ISD research staff have analyzed data on remediation required by their graduates entering local community colleges (Johnson & Hall, 2015), which external partners are eager to continue examining and discussing as they seek to help reduce the need for remediation.

Discussions between Dallas ISD and university-based members of the P-16 councils have also addressed college-readiness issues ranging from AP to students’ social adjustment to college. One university partner opined that AP instruction was not rigorous enough in Dallas ISD classrooms, and that not enough Dallas ISD teachers were participating in the AP professional development provided. Another issue the partners discussed was the need for social supports for students, and how students urged to enroll in prestigious out-of-state colleges may not necessarily receive the social supports needed for them to successfully complete their degrees. The partner suggested that the P-16 partnership could help ensure greater social support for students at in-state colleges, and there should be more encouragement for students to remain in state for college.

Both the P-16 councils and Commit have implemented specific interventions focused on increasing college-readiness and enrollment rates. As one P-16 partner explained,

We would do what we call college roundups when we would have a one-stop shop and the kids would come in and we would have them either bring the tax forms and we'd have volunteer executives from IRS or whatever that would actually help parents do the taxes on site. We'd get online, complete their FAFSA or the TASFAA paper form and then submit it.

Another example of supports offered by P-16 partners is strategically designed SAT prep classes:

We only offer the math portion of the SAT because we know that that's where you can actually improve your score faster than the verbal part . . . We have offered them at three different sites across the city where we know the population of first and second generation students are very high.

Commit built on the previous Dallas summer melt texting intervention—designed to increase the probability that accepted students actually enroll in college in the fall—with a similar intervention that included students from several Dallas ISD schools. This joint work with the district not only stood to benefit students but also yielded dividends for the district and its partners. As the Commit representative explained,

A side product of planning all of this is we've had the directors of admissions and our K-12 directors in the room talking about these text messages and touch points, that the text messages need to be about, or the common barriers need to be about, and have uncovered so much through just having the conversations. And I feel like the districts have learned a lot and higher ed have also learned a lot about what those barriers are. K-12 assumed that higher ed knew that was a barrier, and higher ed didn't necessarily realize that some of the things that they had in place were barriers.

## **Discussion**

Improving college-readiness rates, particularly for low-income students from populations underrepresented at college campuses, continues to present challenges to schools in districts throughout the United States. This case study identifies ways in which local education agencies or districts can support college-readiness efforts of individual schools, so that student outcomes are not so dependent on particular school cultures or school personnel, an issue identified specifically by Bosworth et al. (2014) as a concern for the college-going cultures of the schools in their study. As Corbett and Wilson (1992, p. 46) noted more than two decades ago,

From the students' perspective . . . the quality of their educational experiences rests on the "luck of the draw." The central office instructional role is to remove this luck factor from the instructional program, i.e., to insure that idiosyncratic variations in programs, people, and policies do not result in systematic differences in the quality of education for children.

A productive and effective district role in improving students' college readiness begins with leadership commitment. But district leadership commitment must extend beyond rhetoric around college-readiness goals. Establishing college-readiness accountability measures for school leaders, as Dallas ISD has done, represents an important step toward addressing the tendency of some high schools to engage in practices that constrain college application and college choice (Roderick et al., 2011). In addition, the example of Dallas ISD suggests that a district organizational structure that provides regular and systematic support to school leaders for engaging in a regular cycle of inquiry around data is critical. A district structure—like the one in Dallas ISD during this case study—that groups small numbers of principals together under a supervisor who provides regular, systematic coaching to principals as a learning community is a key foundation for yielding continuous improvement in adult practices and student outcomes. However, there was variability in how effectively supervisors coached principals around collaborative inquiry and discussion of data, which could limit the benefits of such coaching for students in schools already struggling with fewer highly qualified teachers or less rigorous instruction. Creating a structure to systematically deliver support to all school leaders is one way that the district can help eliminate the "luck of the draw" in students' access to preparation for college.

Dallas ISD leadership commitment was also evident in concrete administrative and spending policies designed to eliminate opportunity gaps. District coordination led to college access support services in *all* high schools serving low-income and minority students, which expanded the "college knowledge" information flow to more of Dallas ISD's high school students (nearly all of whom are Hispanic or African American). Ensuring that all students have access to required college testing like SAT/ACT and AP exams without worrying about prohibitive costs represents another way that leadership commitment can make a difference for students' college prospects. Resource allocation is a concrete lever under leadership control that may be able to achieve results more quickly and effectively than more complex policies involving human capital development.

Given the widespread consensus about the importance of "using student achievement data to support instructional decision making" (Hamilton et al., 2009), the importance of district investment in a comprehensive data infrastructure to support educational decision making cannot be overestimated.

Such a task demands a system-level rather than an individual school-level approach. As Cho and Wayman (2014) put it, “Without technologies (i.e., computer data systems), it would be difficult, if not impossible, for educators to manage and analyze such prodigious assemblies of data” (p. 3). At the same time, data systems have various technical limitations depending on the system (Cho & Wayman, 2015). Even when districts have a long history of building a data infrastructure and using it to produce regular analyses of student outcome measures related to college readiness, as was the case with Dallas ISD, this case study revealed how transitions in both district leadership and state accountability measures were related to what appeared to many affected personnel as steps *backward* in maintaining access to usable data for educational decision making. In the context of continual change, maintaining a data infrastructure that meets the needs of those making educational decisions appears to be an ongoing challenge for districts. Given that implementation of new data systems involves such “an extended period of adjustment” (Cho and Wayman, 2014, p. 32) and that “the use of a computer data system was not simply a matter of the utility of the data or practicality of the system,” it may behoove districts to deliberate carefully regarding costs as well as benefits to proposed changes in system technology.

As Cho and Wayman (2014) point out, “Technologies might have the potential to remedy some of the technical problems of data use, but whether (and how) they get used is a ‘people problem’” (p. 5). This case study illuminated the importance of framing the task of “building adult capacity for data use” more broadly than it is sometimes portrayed. The way in which Dallas ISD sought to build adult capacity not only around data use but also in collaborative inquiry for continuous improvement is an example of what Honig (2012) has called “district central office leadership as teaching” in her analysis of “how central office administrators support principals’ development as instructional leaders.” The ways in which district Executive Directors modeled the collaborative inquiry process with groups of principals they supervised reflected this attention to teaching or coaching school leaders. The collaborative inquiry of principal “learning communities” focused not only on data but also on interpreting patterns and making connections to instructional practices within the classroom. As both district and external partner respondents emphasized during interviews, students’ college readiness is closely linked to the quality of the instruction received, which involves teacher ability to not only communicate content but also to monitor and address the indicators of student attendance, engagement, and effort reflected in student grades in addition to assessment scores. The example described above, in which Dallas ISD collaborative inquiry around AP scores led to analysis of classroom instruction and the need for higher level questioning, illustrates how analysis of data led to more qualitative investigation of instruction and teacher

practice. But data from interviews also indicated that district and school staff had not paid much attention to indicators of attendance and student effort, often reflected in course grades, that could also lead to analysis of other dimensions of teacher practice affecting the development of student readiness for college. As Foley et al. (2008, pp. 1-2) have argued, getting educators to look “beyond test scores” to other indicators that influence student learning (and ultimately college readiness) has been challenging.

Connecting indicators to action—or moving from data-focused inquiry to the kinds of interventions or changes in instructional or organizational practice that will help more students to become ready for college—is a particular challenge for educators. As Marsh (2012) notes in her review of interventions to support educators’ use of data, studies have thus far offered little solid evidence (beyond principal or teacher self-report in a few studies) that participation in data-focused inquiry has led to teacher changes in instructional practice. There is some emerging evidence that organizing schools to focus regularly on the on-track indicators of student attendance, behavior, and course performance yields at least a small causal effect on student outcomes (Corrin, Sepanik, Rosen, & Shane, 2016). District leadership is critical in helping ensure that all schools develop the organizational routines that can structure the process of connecting indicator data to action. This begins with modeling the cycle of inquiry with school leaders, as occurred in Dallas ISD. But it must also include district leadership actions that help school leaders to engage their faculties in a school-level continuous improvement process that involves reflecting upon college-readiness indicator data and taking appropriate action steps in response. The district leaders who supervise principals would undoubtedly need to exercise the kind of teaching function described by Honig (2012) in observing cycle of inquiry meetings at the school level, so they could provide feedback to principals regarding how to make the process more effective in planning and implementing interventions in response to data reflection. It requires active district leadership to ensure that all school leaders are expected and equipped to take what they learn from their professional learning communities with other principals, and apply and implement it in their own schools.

The task of improving college readiness and increasing college enrollment and completion for larger numbers of historically underrepresented students also requires closer collaboration and partnership between K-12 schools and institutions of higher education. Maintaining these kinds of partnerships is possible at the individual high school level but is much more efficiently managed at the district level. This also ensures that students are not subject to the “luck of the draw,” depending on how much bandwidth their high school is able to devote to partnering directly with postsecondary institutions. Ensuring

that all schools and their leaders, teachers, counselors, and students have access to the information and supports related to college readiness leveraged through P-16 partnerships is an important district responsibility. Dallas ISD provides an example to other districts of how partnerships with postsecondary institutions can be maintained and leveraged. Ensuring that all school leaders and their staff are equipped and supported to share the benefits from the P-16 partnership with all their students remains an ongoing challenge for district leaders to address.

## Conclusion

Building on recent research regarding the impact of high school cultures and practices related to college readiness and college enrollment, this article has emphasized the important role of the district central office in creating a support structure that equips schools to do the work of graduating students who are ready for college and actually go on to enroll in postsecondary institutions. Relying on individual schools to manage this independently is not only inefficient but often results in considerable inequity for students depending on the high school they happen to attend. During the course of this study, Dallas ISD was able to reduce the opportunity gaps in “college knowledge” for the Black and Latino students who make up nearly all of its student population by ensuring that *all* schools were supported to provide college information and supports to *all* their students. While data for the graduating classes later than 2013 were not available to inform the district’s analysis of its students’ college enrollment rates (Johnson & Hall, 2015), we expect that future analyses will demonstrate increased college enrollment rates for Dallas ISD students. “Bringing the district back in” (Mac Iver & Farley-Ripple, 2008) to the conversation about college readiness is an important next step for increasing the number of historically underrepresented students in our nation’s colleges.

## Acknowledgments

The authors thank Nettie Legters of Education Northwest, Robert Balfanz of the Everyone Graduates Center at Johns Hopkins University, and Linda Johnson of Dallas Independent School District for their thoughtful comments on this study. We are grateful for the support of Don Mitchell and Ryoko Yamaguchi throughout the study, and the participation of Dallas ISD leaders in interviews.

## Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This article was based on a report we prepared with support from the Bill and Melinda Gates Foundation. The views expressed in this publication do not necessarily represent the Foundation, nor do references to commercial services and organizations imply endorsement by the Foundation.

## Notes

1. Data on ethnicity from 2014-2015 District Fact Sheet on website. Other data are obtained from Hall (2013).
2. The College-Going Culture Scale is used in principal evaluation for all Dallas ISD schools, not just high schools. All principals are evaluated based upon the percentage of positive responses by teachers to these statements: "Teachers expect most students in this school to go to college," "Instruction in this school is focused on helping students get ready for college," "Teachers in this school feel that it is part of their job to prepare students to succeed," "Teachers at this school accept nothing less from students than their full effort," "Teachers at this school do not let students give up when their class work becomes challenging," "Teachers at this school give students feedback to help them understand how to improve."

## References

- Allensworth, E., & Easton, J. (2007). *What matters for staying on-track and graduating in Chicago public high schools*. Chicago, IL: Consortium on Chicago School Research.
- Alter, J., Hall, S., & Lauck, M. (2012). Helping schools measure and support their students' college readiness: The central office perspective. *Voices in Urban Education, 35*, 35-41.
- Ascher, C., & Maguire, C. (2007). *Beating the odds: How thirteen NYC schools bring low-performing ninth-graders to timely graduation and college enrollment*. Providence, RI: Annenberg Institute for School Reform at Brown University.
- Balfanz, R., DePaoli, J., Ingram, E., Bridgeland, J., & Fox, J. H. (2016). *Closing the college gap: A roadmap to postsecondary readiness and attainment*. Baltimore, MD: Civic Enterprises and Everyone Graduates Center, School of Education, Johns Hopkins University.
- Balfanz, R., Herzog, L., & Mac Iver, 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*, 223-235.
- Bosworth, K., Convertino, C., & Hurwitz, J. (2014). Common purpose and different approaches to support college-going in five southwestern districts. *American Secondary Education, 431*, 4-24.
- Chambers, T. V. (2009). The "receiving gap": School tracking policies and the fal-lacy of the "achievement gap." *Journal of Negro Education, 78*, 417-431.



- Cho, V., & Wayman, J. C. (2014). Districts' efforts for data use and computer data systems: The role of sensemaking in system use and implementation. *Teachers College Record*, 116(2). Retrieved from <http://www.tcrecord.org/library/Abstract.asp?ContentId=17349>
- Cho, V., & Wayman, J. C. (2015). Assumptions, strategies, and organization: Central office implementation of computer data systems. *Journal of School Leadership*, 25, 1203-1234.
- Conley, D. T. (2007). *Redefining college readiness* (Vol. 3). Eugene, OR: Educational Policy Improvement Center. Retrieved from <http://www.evergreen.edu/washingtoncenter/docs/conleycollegereadiness.pdf>
- Corbett, H.D., & Wilson, B.L. (1992). The central office role in instructional improvement. *School Effectiveness and School Improvement*, 3(1), 45-68.
- 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: Manpower Demonstration Research Corporation (MDRC).
- Dallas, ISD. (2015). *Dallas ISD Counseling Services Annual Report 2014-15*. Retrieved from <https://www.dallasisd.org/cms/lib/TX01001475/Centricity/Domain/3068/Annual%20Report-1415.pdf>
- Darling-Hammond, L. (2004). Inequality and the right to learn: Access to qualified teachers in California's public schools. *Teachers College Record*, 106, 1936-1966.
- Deil-Amen, R., & Turley, R. L. (2007). A review of the transition to college literature in sociology. *Teachers College Record*, 109, 2324-2366.
- Duffy, H., & Darwin, M. (2013). *The district role in supporting college and career readiness for students: Perspectives from Long Beach, Albuquerque, and Philadelphia*. Washington, DC: College & Career Readiness & Success Center at the American Institutes for Research.
- Duncan, G., & Murnane, R. (2014). *Restoring opportunity: The crisis of inequality and the challenge for American education*. Boston, MA: Harvard Education Press and the Russell Sage Foundation.
- Durham, R., Bell-Ellwanger, J., Connolly, F., Robinson, K. H., Olson, L., & Rone, T. (2015). University-district partnership research to understand college readiness among Baltimore City students. *Journal of Education for Students Placed at Risk*, 20, 120-140.
- Foley, E., Mishook, J., Thompson, J., Kubiak, M., Supovitz, J., & Rhude-Faust, M. (2008). *Beyond test scores: Leading indicators in education*. Providence, RI: Annenberg Institute for School Reform at Brown University.
- Gamoran, A. (2001). American schooling and educational inequality: A forecast for the 21st century. *Sociology of Education*, 74, 135-153.
- Geiser, S., & Santelices, M. (2007). *Validity of high-school grades in predicting student success beyond the freshman year: High-school record vs. standardized tests as indicators of four-year college outcomes* (Research & Occasional Paper Series: CSHE.6.07). Berkeley: Center for Studies in Higher Education, University of California, Berkeley.

- Green, D. (2006). Historically underserved students: What we know, what we still need to know. *New Directions for Community Colleges*, 135, 21-28.
- Gurantz, O., & Borsato, G. (2012, Fall). 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.
- Hall, S. (2013, Fall). Putting college and career readiness at the forefront of district priorities in Dallas. *Voices in Urban Education*, 38, 6-11.
- Hamilton, L., Halverson, R., Jackson, S., Mandinach, E., Supovitz, J., & Wayman, J. (2009). *Using student achievement data to support instructional decision making* (NCEE 2009-4067). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.
- Hill, L. (2008). School strategies and the "college-linking" process: Reconsidering the effects of high schools on college enrollment. *Sociology of Education*, 81, 53-76.
- Honig, M. (2012). District central offices leadership as teaching: How central office administrators support principals' development as instructional leaders. *Educational Administration Quarterly*, 48(4), 733-774.
- John, W. Gardner Center for Youth and their Communities, Stanford University. (2014). *Essential elements in implementation* (College Readiness Indicator Systems Resource Series). Seattle, WA: Bill & Melinda Gates Foundation.
- Johnson, L., & Hall, L. S. (2015). *Postsecondary preparation and success report 2015* (Annual report on Dallas ISD postsecondary education outcomes). Dallas, TX: Dallas Independent School District.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: SAGE.
- Mac Iver, M. A. (2010). Beginning with the end in mind: The district office leadership role in closing the graduation gap for at-risk students. *Educational Considerations*, 38, 8-16.
- Mac Iver, M. A., & Farley-Ripple, E. (2008). *Bringing the district back in: The role of the central office in instruction and achievement*. Alexandria, VA: Educational Research Service.
- Marsh, J. (2012). Interventions promoting educators' use of data: Research insights and gaps. *Teachers College Record*, 114, 1-48.
- McDonough, P. (n.d.). Building a college-going culture: Needs, goals, principles, and a case study. Retrieved from [http://collegetools.berkeley.edu/resources.php?cat\\_id=9#resource](http://collegetools.berkeley.edu/resources.php?cat_id=9#resource)
- McKillip, M., Godfrey, K., & Rawls, A. (2012). Rules of engagement: Building a college-going culture in an urban school. *Urban Education*, 48, 529-556. doi:10.1177/0042085912457163
- Miles, M., & Huberman, M. (1994). *Qualitative data analysis: An expanded sourcebook*. Thousand Oaks, CA: SAGE.
- Mishook, J. (2013, Fall). Building capacity for college readiness indicator systems. *Voices in Urban Education*, 38, 2-5.
- Perna, L., & Armijo, M. (2014). The persistence of unaligned K-12 and higher education systems: Why have statewide alignment efforts been ineffective? *The ANNALS of the American Academy of Political and Social Science*, 655, 16-35. doi:10.1177/0002716214532776

- Phillips, M., Yamashiro, K., Farrukh, A., Lim, C., Hayes, K., Wagner, N., . . . Chen, H. (2015). Using research to improve college readiness: A research partnership between the Los Angeles Unified School District and the Los Angeles Education Research Institute. *Journal of Education for Students Placed at Risk, 20*, 141-168.
- Rendon, L. (2006). *Reconceptualizing success for underserved students in higher education*. National Postsecondary Education Cooperative. Retrieved from [https://nces.ed.gov/npec/pdf/resp\\_Rendon.pdf](https://nces.ed.gov/npec/pdf/resp_Rendon.pdf)
- Roderick, M., Coca, V., & Nagaoka, J. (2011). Potholes on the road to college: High school effects in shaping urban students' participation in college application, four-year college enrollment and college match. *Sociology of Education, 84*, 178-211.
- Roderick, M., Nagaoka, J., & Coca, V. (2009). College readiness for all: The challenge for urban high schools. *The Future of Children, 19*, 1185-1210.
- Schneider, B. (2007). *Forming a college-going community in U.S. public high schools*. Lansing: Michigan State University.
- Snipes, J., Doolittle, F., & Herlihy, C. (2002). *Foundations for success: Case studies of how urban school systems improve student achievement*. Washington, DC: MDRC for the Council of the Great City Schools.
- Supovitz, J., Foley, E., & Mishook, J. (2012). In search of leading indicators in education. *Education Policy Analysis Archives, 20*(19). Retrieved from <http://eepa.asu.edu/ojs/article/view/952/986>
- Weir, D. (2013). *The Dallas ISD on-track indicator, 2012-13*. Dallas, TX: Dallas Independent School District.
- Weir, D. (2014). *The Dallas ISD on-track indicator, 2013-14*. Dallas, TX: Dallas Independent School District.
- Yonezawa, S., Wells, A. S., & Serna, I. (2002). Choosing tracks: "Freedom of choice" in detracking schools. *American Educational Research Journal, 39*, 37-67.

## Author Biographies

**Martha Abele Mac Iver** is an associate professor at Johns Hopkins University School of Education. Much of her research has focused on 9th grade early warning indicators and interventions to improve high school student outcomes.

**Douglas J. Mac Iver** is a professor at Johns Hopkins University School of Education and co-director of the Center for Social Organization of Schools. His current research includes randomized control trials testing restorative practices, a promising solution to the persistent disciplinary problems that plague many of the secondary schools serving high-poverty neighborhoods in big cities, and testing Diplomas Now, a secondary-school transformation model.

**Emily Clark** is a senior research assistant at Johns Hopkins University School of Education.