Breakthrough Success Community
Expert Convening Pre-Reading Memo

October 3, 2018 - Los Angeles, California

Contents:

Background on CORE

CORE Districts is a collaboration of eight large urban school districts working together to improve student outcomes and narrow achievement gaps through meaningful collaboration and continuous learning. Representing one million California students, CORE districts include Fresno, Garden Grove, Long Beach, Los Angeles, Oakland, Sacramento City, San Francisco and Santa Ana Unified school districts. Organizationally, CORE is a 501c3 nonprofit that serves as a hub for this collaboration by supporting partnership and shared learning at the superintendent, central office, school leader, and teacher levels.

Collaborating for more than eight years, the CORE Districts have experienced multiple iterations in the design of their work. The partnership launched as an innovative relationship to learn about standards, assessment and improved teaching and school leadership. Following this valuable period of collaborative learning, the CORE Districts were granted an ESEA Flexibility waiver which enabled them to design and implement a shared data system and utilize common metrics to measure the impact of their efforts in schools and school districts.

The districts share a robust and dynamic data system that incorporates multiple measures and that can be leveraged for continuous improvement within and across districts. The CORE Data System provides educators

with a complete picture of schools' academic progress by showcasing state and locally-developed data in a way that is unique and innovative. The system is broader than the state's dashboard, and includes including academic and social-emotional and culture-climate indicators. It provides educators a clear view of progress by including index options for school comparisons, a student academic growth measure to assess the impact of school teams, on track for college and career analytics, and other capabilities that support college readiness, enrollment and persistence. This data system was recently opened up to all interested Local Education Agencies (LEAs) in California, forming a CORE Data Collaborative that provides information to support more than a third of California school districts and includes data for a third of the state's student population.

In 2016, in part with the support of the Bill and Melinda Gates Foundation, CORE embarked on a new era of its work: leveraging improvement science practiced in networked communities to drive cross-district school improvement and improved student outcomes. CORE currently hosts the CORE Improvement Community, which is focused on leveraging improvement methods and collaboration to solve inequities in 4-8 grade math outcomes.

CORE's work with improvement communities has also been supported by an innovative research partnership with Policy Analysis for California Education, which captures learning from CORE's efforts in order to fuel the improvement of CORE's own approaches while simultaneously sharing lessons learned with the broader field.

The long standing relationships between the CORE districts as well as with partner organizations in the fields of research and analytics are now being leveraged to initiate a new community, the Breakthrough Success Community, which will focus on college and career preparedness and success.

Introducing the Breakthrough Success Community (BTSC)

What are we trying to accomplish?

CORE intends to launch an equity-focused improvement community with an overarching goal of improving college and/or career success for African American and Latinx students in poverty. Based on data, these student groups in our system are furthest from leaving high school ready for college and/or career, and we anticipate the systems and structures implemented will serve all students in the BTSC schools. The specific focus of this community will be on 9th grade on-track for college and/or career success. Our improvement community will maintain the following core features:

- Disciplined by improvement science methodology with the network structure of the Breakthrough Series Collaborative model developed by the Institute for Healthcare Improvement
- Anchored in common data and analytics of the CORE data system

The Breakthrough Series Collaborative model was developed based on the recognition that in many fields, including healthcare and education, we have a gap between what we know matters and what we regularly do in practice. The Breakthrough Series Collaborative structures help to close that knowing-doing gap by bringing together schools and districts to learn from each other and from experts in the field. Teams that join the collaborative meet to learn best practice on a topic, to gain the skills to make changes to reach the best practice, to test and implement these changes in their organizations, and to share their progress and results. The community will include a group of early adopter schools from approximately five districts with several schools from each district beginning the spring of 2019 and will add additional high schools later. The goal of the BTSC will be to produce breakthrough results for freshmen by ensuring that our students leave their freshman year on track for success in postsecondary options.

Ninth grade is a crucial year in determining students' likelihood of graduating on time and on track for post-secondary success. The 9th grade year has also been an area of intensive focus for school systems around the country with many bright spots and codified change practices that research has highlighted as evidence of success. The transition from middle school to high school can represent an important milestone and is frequently marked by declining academic performance, increased absences and behavior disturbances. These factors put freshmen at a higher risk than any other school-aged group.

A preliminary examination of 9th grade on track data in the CORE Districts using the CORE data system suggests substantive challenge and variation that could be addressed through an improvement science approach. We examined two indicators of 9th grade on-track based upon the work of Chicago Consortium on School Research in this area:having no "Ds" or "Fs" in term grades and a GPA of 2.5 or better in 9th grade. We looked first at gaps between our target demographic - African American and Latinx youth in poverty - and students not in that group with respect to 2016-17 9th graders: Only half of these students end 9th grade with a 2.5 or better, whereas three out of four other student will have at least a 2.5 grade point average. We see a 25 percent gap in the no "Ds" or "Fs" rate and a 23 percent gap in the 2.5 or better GPA rate.

We also examined whether these kinds of gaps were merely a matter of persistent gaps from 8th grade high school readiness, an indicator that CORE developed to predict which students will graduate on time from high school. High-school-ready 8th graders have a GPA of 2.5 or better, no "Ds" or "Fs" in 8th grade ELA and math, no suspensions in 8th grade and 96 percent attendance rate in 8th grade. These disparities carry all the way through to college going.

	9th Grade on Track*	
African- American/ Latinx & in Poverty	No Ds or Fs in 9th Grade	34%
NOT African- American/ Latinx & in Poverty		59%
African- American/ Latinx & in Poverty	9th grade GPA of 2.5 or better	50%
NOT African- American/ Latinx & in Poverty		73%

What changes might we make that could result in an improvement?

Developing a Theory of Improvement

The following section outlines our progress-to-date in developing a "theory of improvement," or an articulation of what we believe are important areas to effect change in order to produce significant improvement in on-track rates. Please note that our thinking here is in its early stages, and we are sharing a sacrificial first draft for feedback during the convening.

The synthesis we present here was developed through a collaborative scanning process, in which members of the CORE and PACE teams conducted interviews with numerous research and practice experts around the country, reviewed academic literature, and synthesized our findings.

In synthesizing our findings, we have created a diagram that attempts to represent the "system" of on-trackness. The map articulates what we have learned to be key "levers" upon which schools and districts may work. By "lever" we are referring to specific events, practices, routines, structures, resources, or policies which may be intervened upon to positively impact student on-trackness.

Once refined, the BTSC's theory of improvement will guide our efforts by articulating a handful of major leverage points for introducing changes into the system. The leverage points named in the theory will have specific changes attached in order to form the community's "change package," which is the set of concrete, actionable protocols and tools that will be tested, refined, and integrated into school and district practice over the course of their participation in the Breakthrough Success Community.

The three main areas of the diagram include:

The Freshman Journey: These elements depict the student experience entering into and progressing over the 9th grade year. We include this journey and a starter set of key milestones to represent the system from the student perspective and to help us think critically about when in the journey there may be opportunities to intervene in both proactive and reactive ways.

On-Track Infrastructure at the High School Level: These elements represent the organizational structures, routines, and resources that are critical to ensuring on-trackness. We envision these elements as key "levers" for change at the high school level. Our change package would eventually have an associated set of tools, protocols, guidelines, or other specific and concrete materials for each lever to support school-based teams in acting on them.

District Policy & Coordination: In our exploration of the field of on-trackness, we uncovered a number of levers that seem to sit at the district level and are most effectively influenced by those working in the central office.

It is important to note that this first draft of our system map is an attempt to depict a wide array of critical levers that may play a pivotal role in affecting on-track rates among students. Future work to refine this theory will

include not only learning if we have captured the most important levers, but also prioritizing which levers this community will actually work on. Because we cannot realistically intervene everywhere at once, a smaller set of key levers will need to be strategically selected out of all possible options.

In attempting to create a theory of improvement for on-trackness, we have grappled with several dimensions:

Chronologic Nature of the Problem: Each student has only one freshman year and some changes must be implemented at a particular point in time in order to be effective. How can we see the system from the student's perspective to ensure we are not letting good opportunities to intervene slip away?

Proactive vs. Reactive Changes: Some changes are intended as proactive or preventative supports to maintain students on-track, and others are reactive interventions that are triggered once a student has already been identified as "off-track." Both types are important in developing a comprehensive system of supports.

Levels of the System: Changes that could impact on-track sit at different levels of the system, including in the classroom, at the school level, and at the district level.

Strategic Sequencing of Changes: Some potentially impactful changes require significantly more will and human investment than others. Which changes might be most strategic to invite schools and districts to try first, and which might be better left to later stages in the work?

Areas for Feedback:

In the spirit of refining this very early thinking to ground the work of our community, we invite you to engage around three main areas of feedback:

1. **What's right and what's missing?** Have we identified the right levers for impacting on-track? What's missing from our thinking?
    - What specific implications might we consider for specific subgroups of students? For example, what might be especially relevant for supporting the on-track performance of English Learners? Yet how do we explicitly attend to differences in on-track rates and experiences by student demographic groups without contributing to deficit thinking about student populations?

2. **Prioritization of Levers:** Clearly our community cannot intervene everywhere at once. Where might we focus our limited improvement resources in developing and introducing changes?
    - How can our prioritization of interventions be based in an analysis of potential impact as well as the level of will required for the particular intervention?

3. **Exemplars from the Field:** For our prioritized interventions, where should we go to see strong examples of each? How do we move beyond the conceptual to concrete, practical examples of specific protocols and tools that can be tested and refined?

Version 1.0 Definitely incomplete, possibly wrong

On-Track System Map

The Freshman Journey:

The blue elements on this diagram depict the student journey over the course of freshman year. While clearly incomplete, we have populated it with a starter set of key moments or milestones in the journey that may be relevant for supporting students to remain on-track. Some interventions, such as a summer bridge program for students at risk of becoming off-track, may be tied to specific moments in the student journey.

Key Milestones

- Selecting a High School?
- Course Placement for 9th Grade?
- Intervention: Summer Bridge Program
- High School Orientation
- Receiving First Grades
- First semester remediation?
- Course Placement for 10th Grade

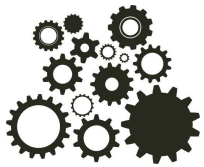
- 8th Grade End of 1st Sem.
- 8th Grade End of Year
- *8-9 Summer Break*
- Start of 9th Grade
- 9th Grade End of 1st Marking Period
- 9th Grade End of 1st Sem.
- 9th Grade End of Year
- *9-10 Summer Break*

- 8th Grade Early Warning Indicator Calculation & Support List Generation
- Course Placement Policy at District-Level
- Attendance & Truancy Policy
- Provision of analytic support and training in on-track data use

District Policy & Coordination:

The elements listed in green represent key levers that sit at the district level.

- Communication between middle & high schools about student needs



School Structures

- 9th Grade Cohort/ Academy Teaming
- Career Pathways
- Academic Tracking Policy at School-Level
- Attendance Policy

On-Track Infrastructure in High School:

The orange elements of this diagram represent key structures, routines, and resources related to supporting on-track performance at the high-school level.

Ongoing Routines

Teacher	• **Instructional Practices** for increasing student engagement • **Relationship Building Practices** • Implementation of **Targeted Interventions** from **Intervention Menu** • **Grading Practices**
Success Team	• Review Student Data (**Support Lists, Data Reports)** • Design & Assign interventions (**Intervention Menu**, **Meeting Protocols**) • Track Implementation of Interventions (**Tracking Tool**)
Building Leader	• Set the campus vision for on-track & maintain as priority • Leverage relevant **Professional Learning** time and resources to support on-track work • Coordinate **Communication** amongst staff & with students & families
Counselor	• **Course Placement & Advising Practices** (includes tracking decisions) • Participate on Success Team
Data Technician	• Maintain data collection & reporting system for **Early Warning Indicators** • Provide **Data Reports** • Generate **Support Lists**

How will we know that our changes are an improvement?

Defining and Measuring "On-Trackness"

CORE Districts is taking on the challenge and opportunity to help districts and schools understand, learn from, and respond to data about the degree to which students are on-track for success in college and/or career. We define on-trackness by the probability that a student is expected to persist through at least the second year of a two- or four-year post-secondary institution. Rather than approaching on-trackness as a discrete designation of "on-" versus "off-track," we instead define on-trackness as a continuous probability that can shift over time. We are developing these on-track analytics for students in grades three to twelve, with an initial deep focus on the 8th and 9th grade years as part of our BTSC project.

Our initial thinking is that in order to compute the probability of on-trackness, we plan to not only include known measures that predict students on-trackness (such as attendance, standardized assessments, course credits, suspension/expulsion rates, and GPA), but also incorporate measures available in CORE's unique data system (such as students' social-emotional learning, schools' culture and climate, and students' course-taking patterns). In addition, we will examine a range of possible outcomes of interest to supplement predictions of students' persistence through their second year, including the probability of high school graduation, high school graduation meeting A-G requirements, and enrollment in a two- or four-year post-secondary institution. Importantly, rather than simply providing *more* indicators of students' college readiness, we aim to develop more powerful, nuanced, sophisticated metrics than would otherwise be possible.

CORE is working with our partners at Education Analytics to ensure that these indicators are technically strong and statistically sound. CORE is also working with a design partner to develop innovative reports for students, families, educators, and system leaders that are useful, actionable, and interpretable.

In this effort, we are proposing to have three distinct, but related ways to measure students' on-trackness:

- **Risk diagnostic indicators**: This indicator and its component parts will provide information about the degree to which students in 8th grade are at risk of not being on-track to be college ready when they begin high school.
- **Progress monitoring indicators**: This indicator will leverage mid-year data to provide updated information about 9th grade students' progress toward becoming or staying college ready during the critical 9th grade year.
- **End-of-year on-track indicators**: This indicator will provide metrics with respect to each student's and school's status and progress toward improving college readiness over the course of the 9th grade academic year.

The risk diagnostic, progress monitoring, and end-of-year on-track indicators will provide information not only for these individual or component outcomes, but also for an overall college readiness outcome that combines these components. By incorporating measures we know predict college readiness, testing measures we think might predict college readiness, and leveraging NSC data to incorporate persistence in college beyond the first year, we aim to develop a more robust and sophisticated approach to predicting and monitoring students' on-trackness to college.

Areas for Feedback:

Our work to date in developing a definition and measurement approach for on-trackness has left us with a number of open questions we hope to pose during our expert convening.

For the risk diagnostic and progress monitoring indicators:

- Which criteria are most important to consider in the decision making process?
- Which metrics (e.g., attendance, suspensions) are essential and which ones should we avoid?
- Which metrics should we investigate further?
- What should we know about these possible metrics?

For the 9th grade end-of-year on-track indicator:

- What are the tradeoffs between a traditional approach and a more nuanced approach that utilizes a multiple measure predictive model? Which tradeoffs are the most important in making a decision?
- What should we pay careful attention to in this design process? For instance, how do we design the indicator and reports to maximize the likelihood that users of the data will have productive response (and how do avoid designs that may have unintended negative consequences)?

Appendices: Optional Background Reading

For more background information about key topics relevant to CORE's Breakthrough Success Community, we recommend reviewing the following additional resources:

Improvement Science

An Illustrated Look at Quality Improvement in Healthcare: *This video, while grounded in examples from improvement in healthcare, presents a nice introductory overview of improvement philosophy and practical applications.*

"Accelerating How We Learn To Improve," by Anthony Bryk: *This brief article summarizes ideas proposed by the Carnegie Foundation for the Advancement of Teaching, an organization that has been advancing the adaptation of improvement science for the field of education for the past 8 years.*

Breakthrough Series Collaborative Model

"The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvement": *A white paper from the Institute for Healthcare Improvement describing the purpose and design of this form of collaborative improvement work.*

Culture of Continuous Learning Project: *This video describes an existing Breakthrough Series Collaborative underway focused on improving social-emotional skills for preschool students.*

More Background on the CORE Districts

General Background

Learn more about the CORE Improvement Community, an existing improvement community composed of CORE District schools and focused on improving achievement in math for African American and Latinx students.

Listen to Rick Miller, CORE's Executive Director, interviewed about CORE's recent Gates award and the organization's future plans on the EdSource podcast, "This Week in California Education."

CORE Strategic Priorities

The BTSC is being designed both to dramatically improve 9th grade on-track to college readiness for participating schools and districts, and to enable CORE Districts to develop capacity for increasing its impact in education more broadly. The BTSC does this by leveraging improvement science and the breakthrough series methodologies in order to develop actionable, scalable on-track indicators and reports. With the direct work on the BTSC functioning as something of an "action tank," CORE's strategic focus over the several years includes the following:

- **CORE Data System 2.0: A college and career readiness analytics system —** Over the last several years, the CORE districts have collaborated to build a robust and dynamic data system that can be leveraged for continuous improvement. To ensure districts continue to use data to drive innovation and improvement for teachers and students, this workstream will support the development of a longitudinal, comprehensive college and career readiness predictive analytics and data analysis system with indicators at all levels of the K-12 continuum. Leveraging CORE's data system, including the data on college entrance and persistence from the National Student Clearinghouse, predictive statistical models will take into account a broad swath of input data—including, but not limited to, attendance, behavior, course grades, standardized tests (e.g., SBAC, AP, PSAT, SAT), school climate, and social emotional skills—in order to predict students' college and career readiness throughout their K-12 experience. These predictive models will enable multiple strands of decision-making at the student, program, school, and Improvement Community level, including:
    - Creating operational grade-by-grade "on track" indicators for college and career readiness, both annually and at key moments during the school year (e.g., monthly updates based upon attendance data, quarterly updates based upon course marks).
    - Helping the CORE districts and Core Data Collaborative prioritize indicators, schools, and grade levels of focus for future iterations of its Improvement Community (IC) work.
    - Rapidly evaluating the effectiveness of change ideas implemented by the ICs.
    - Providing "self-service" analytics to support improvement work operating outside of CORE's formal ICs.
    - Providing our hub, other hubs, and the education sector with benchmarks for goal-setting by indicators of interest.
    - Providing critical updates to the field about what best predicts college and career readiness.

- **CORE Improvement Management System** — CORE recently launched a partnership with Acumen Solutions, a company that configures and leverages Salesforce, in order to design, configure, launch, and support a CORE Improvement Management System. The concept is to integrate knowledge management, project management, project-specific analytics, practical measurement collection, and improvement community management into a single system targeted to local improvement team members, district improvement team members, and hub team members. All members of the BTSC will utilize the CORE Improvement Management System. It will be also be designed to support additional improvement communities, and/or district-initiated improvement projects, including "self-service" improvement efforts by members of the CORE Data Collaborative.

- **Capacity Building in Improvement Science and Leading for Equity** — A key learning from the current CORE Improvement Community focusing on math achievement is both the importance of, and value in, developing knowledge, capacity and expertise in improvement science and leading for equity within improvement staff at all levels of the education system. As part of the BTSC, CORE will implement an intensive capability building program to develop deep district lead and school lead capacity in the use of improvement science. The program will be structured to enable collaboration with colleagues across districts in cohort settings and engage experts in the field, alongside coaching support from CORE staff. Support will include virtual meetings, in-person learning sessions, and independent practice with individual and small-group coaching. CORE's refined curricula and methods will be utilized in future improvement efforts as well.

- **The CORE-PACE partnership and the essential role of Developmental Evaluation** — Through a first-of-its-kind research partnership with Policy Analysis for California Education (PACE), we provide real-time, research-based feedback that is dramatically accelerating educators' ability to understand and act on breakthrough findings about the achievement gap and our improvement work. Working together with PACE, we are making more educational data and research available more quickly and closest to where the learning is happening. To this end, PACE will execute a quantitative and qualitative research agenda and developmental evaluation, and contribute to the ongoing implementation and refinement of the BTSC through participation in the Planning Team. We will also be sharing our learnings publicly through a combination of publications and presentations.