Indicators for Systems-Level Change

The indicators for systems-level change were developed through support from the Nellie Mae Education Foundation as part of the evaluation of the foundation's multi-state District-Level Systems Change initiative. The initiative provided funding to 10 New England school districts from 2012 to 2019 to develop and implement whole school models of *student-centered learning* (SCL). The initiative aims to transform the educational system around the principles of SCL- that learning is personalized; competency-based; student-owned; and can occur anytime, anywhere- to support improved student outcomes.

The indicators for systems-level change were developed in coordination with the college and career readiness indicators. Unlike the college and career readiness indicators, which were conceived as a "dashboard" of a small set of mostly quantifiable measures from surveys and other data sources, developing indicators that are sensitive to systems-level change are more complex. There are fewer easily identifiable and quantifiable data sources related to systems-level variables, and there is more difficulty in bounding the set of indicators. For this reason, we have identified a set of "systems keys," core elements of practice and policy that are vertically and horizontally integrated in the district system:

- **Vertical integration** implies that there is evidence for this key indicator in data from the state level, district level, school level, and classroom level.

- **Horizontal integration** implies that there is evidence for the indicator across major functional domains supporting instructional practice and student learning—for example, finance, scheduling, instruction, professional development, and learning technology.

Because the system keys are so central to the theory and practice of student-centered learning, they can tell us a great deal about the health of SCL initiatives and the systemic influence of these initiatives. Three systems keys were theorized to be central to advancing broad changes in school districts to support SCL:

1. Assessment
2. Collaborative culture
3. Personalization and scaffolding

In our Indicators Framework, data collection of the systems keys is coupled with the collection of data on student achievement, participation, and success in rigorous academic experiences. The collection of student outcomes data allows correlations to be drawn between changes within the systems keys and the hypothesized measurable improvement for students.

Following, we provide an example of how one systems key—assessment—is vertically and horizontally integrated.

Assessment as a Case of Vertical and Horizontal Integration

In an SCL system, assessment is driven by a **common purpose**, which is providing reliable, fair, and timely results on the needs and performance of every student in the system. This information can then be used to scaffold support, ascertain proficiency, and track individual and collective progress over time. Unlike systems that rely on assessment results to reward a comparatively small number of high achievers with privileged access and opportunity, an SCL system relies on assessment to support deeper learning and improve proficiency for all students. This system is built on the assumption that all students can learn at high levels.

Vertical Integration

At the **classroom level**, assessment is an important tool to help students determine whether or how well they've mastered core content and to help teachers design additional supports (when and as needed) to accelerate slower or struggling students toward proficiency. What's more, to be authors of their own education, students need to develop the capacity for self-assessment.

At the **school level**, well-structured and timely assessment helps teachers create greater consistency across classrooms and provides a basis for informed dialogue about instruction. It also opens the door to extended learning opportunities, since the measure of proficiency can be applied across a variety of settings.

At the **district level**, a well-developed system of assessments provides detailed information about school performance, the efficacy of instruction, and the success (or struggles) of students from across the learning spectrum. This information, in turn, can be used to allocate resources, target innovative responses to identified needs, and communicate progress to parents and the wider community.

At the **state level**, high-stakes assessments can be implemented in ways that support and build on these local assessment designs—and not simply ignore or disrupt them.

Together, these comprise vertical integration, one of the defining characteristics of a systems key.

Horizontal Integration

To develop the necessary skills for administering, scoring, and interpreting results from a wide range of performance assessments, most teachers will require **professional development**

and coaching. This kind of professional support has to be extensive and readily available in all participating schools.

Implementing broad-based SCL assessments across the content areas requires **flexibility in scheduling**—to allow enough time in the school day and school week to administer and score assessments and to develop appropriate instructional responses to assessment results.

Professional time—for professional development and for administering and scoring assessments—is expensive, and **school and district finances** need to be aligned to support this priority.

Creating, sharing, and administering assessments, as well as preparing assessment results, is increasingly technology-based, and teachers and students will need full **access to the appropriate hardware and software** to ensure that assessments are secure, timely, efficient, and capable of generating powerful results (i.e., results that can be quickly translated into differentiated instructional methods and learning tasks).

One of the chief goals of assessment is to share results with students and their families, so the school and the district will need to provide an accessible and comprehensible **system of grading and reporting** that accurately captures student progress toward proficiency as well as evidence of deeper learning and college and career readiness.

These together make up horizontal integration, the other visible instantiation of a systems key.

The remaining two systems keys—collaborative culture and personalization and scaffolding—can be similarly described, but the point is the same—vertical and horizontal integration that suggest the importance of these keys for achieving SCL goals and for organizing data collection.

Indicators for Systems-Level Change

ASSESSMENT	
Indicator(s)	**Data source**
Purposes of assessment Purposes align with the stated goals for SCL within the schools and with curriculum, instruction, extended learning, and graduation requirements.	*Public documents* • School board minutes • District strategic plan
	Classroom, school, and district observations
	Student, teacher, and administrator interviews
Range of assessments Reliance on multiple assessments to guide instruction and student learning, e.g., state tests, common formative assessments, portfolios, performance assessments, capstones, AP tests, PSATs, and SATs.	*Student questionnaire (SQ)* Assessment experience items, disaggregated by subject area, grade level, and target population
	Teacher questionnaire (TQ) Assessment practice items, disaggregated by subject area and grade level
	Student, teacher, and administrator interviews
	Classroom observations of teachers' assessment practices
Use of assessments Formal and informal assessments are used regularly to inform practice. Teachers rely on assessment to ascertain student strengths and interests (not just their deficits) and to develop strategies for academic growth and acceleration.	*SQ* Assessment experience items, disaggregated by subject area, grade level, and target population
	TQ Assessment practice items, disaggregated by subject area and grade level
	Student, teacher, and administrator interviews
	Classroom and school observations

COLLABORATIVE CULTURE	
Indicator(s)	**Data source**
Purposes of collaborative culture Purposes align with the stated goals for SCL within the schools and with schoolwide expectations for continued learning and continuous improvement.	Documents related to professional practice e.g., school and district policies, teacher labor contracts
	Teacher and administrator interviews
	Classroom, school, and district observations
Professional learning infrastructure Multiple and varied opportunities for teachers, administrators, and others with a role in students' academic, social, and emotional growth to learn from and alongside one another.	*TQ* Collaborative culture items, including items on opportunities to work and plan together and to observe one another teach
	Teacher and administrator interviews
	Classroom, department, and school observations

	Teacher evaluation Review of instruments for evidence collected about teacher collegiality and collaboration
	Review of policies and practices regarding induction and mentoring, onboarding, and evaluation of new teachers, teacher schedule
Shared vision and shared understanding Teachers and students have a shared vision and shared understanding of instruction and the role of assessment across classrooms.	*TQ* Collaborative culture items, including items on shared vision and shared understanding
	SQ Student learning experience items, disaggregated by subject area and grade level
	Classroom, department, & school observations
	Student, teacher, administrator, and community member interviews
Consistent practice Students are experiencing consistent approaches to instructional practice across classroom (within and across subject areas).	*TQ* Collaborative culture items, including items on shared vision and shared understanding
	SQ Student learning experience items, disaggregated by subject area and grade level
	Classroom observations
	Student, teacher, and administrator interviews

PERSONALIZATION AND SCAFFOLDING	
Indicator(s)	**Data source**
Purposes of personalization and scaffolding Purposes align with the stated goals for SCL within the schools and with schoolwide expectations for access and equity in academic opportunities for all students.	*Policy documents* Sections regarding support for all students
	Classroom observations
	Teacher and administrator interviews
Reliance on formal and informal assessments to personalize instruction and to develop scaffolds for learning Teachers regularly turn to the results of formal and informal assessments to personalize and scaffold instruction, including data about students who struggle in traditional academic settings. Scaffolding includes selection of alternative tasks, materials, and timelines that support engagement while sustaining rigor.	Personalized learning plans and the recommendations of early warning teams to identify struggling students and quickly address their needs (number of teams and students served by the teams; number of students with personalized learning plans)
	Student, teacher, and administrator interviews
	Classroom observations
	TQ Items on use of instructional technology to support differentiated learning

	Complete school course List Including list of alternative pathways and extended learning opportunities leading to high school graduation
	TQ Classroom instruction items
	SQ Student engagement and academic tenacity items
Access to rigorous content All students have access to high-level academic content, whether in traditional or nontraditional settings.	TQ Items on preparation for and frequency of instruction that requires critical thinking or problem solving; item on schoolwide expectations for students
	SQ Items on teacher expectations, administrator expectations, and challenging work
	Classroom observations
	Student, teacher, and administrator interviews
Advisories, guidance, access to caring adults School-level guidance and advisory structures provide supportive environments for all students. These structures offer attention to personal challenges in education settings and support for helping students craft plans for college or career (e.g., support for technology-based systems that help students explore and measure progress along college and career pathways).	SQ Items on teacher and adult support
	School and classroom observations
	Student, teacher, guidance, and administrator interviews
	Guidance data Support level for individual students, (ratio of counselors to students; time allocated for advisory per student per week)

STUDENT-CENTERED LEARNING OUTCOMES

Indicator(s)	Data Source
Key outcomes of student achievement, access, and opportunity The collection of SCL activities within a site is directed toward key outcomes that approximate student preparation for success in life after graduation. Data on each of these outcomes, in turn, can be disaggregated by subpopulation (e.g., free and reduced lunch, ELL, SPED, and AP/Honors) to ascertain equity of access, opportunity, and achievement as part of the assessment of the effectiveness of the overall SCL system.	District overview of student test data State tests, AP tests, SATs, and PSATS by subject area, grade level, and subgroups
	Rates of graduation, attendance (including chronic absenteeism), dropouts, and disciplinary referrals
	School overview of course enrollment data Number of enrolled students, disaggregated by target populations
	School overview of student achievement in high-level courses Student grades, disaggregated by target population