Systems Change for Student-Centered Learning:

A New Logic for District Level Systems Change

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Introduction

The Nellie Mae Education Foundation entered education philanthropy with a mission to promote accessibility, quality, and effectiveness of education from preschool through post-secondary levels for all ages, especially for the underserved populations living in the six New England states. Significant investments were made to support effective programs that have benefitted students across the entire New England region. The outcome of those efforts made lasting impact in the fields of after school and adult learning, linking both more closely to a focus on academic achievement. The Foundation was also a leader in early learning, helping to build networks and elevate questions of quality and access into the public policy debate. Similarly, cutting edge efforts to dramatically increase the success rates of minority students in higher education produced very strong results at the sites in which they were piloted.

These contributions were important and are in many cases enduring, but in some ways they only offered small fixes and remedial opportunities for a limited number of learners. At a time when high school completion and attainment of a high quality post-secondary credential are essential to individual success and to the success of society, the Foundation's past achievements seem inadequate. Patching the system so that it can better serve a few more students falls far short of the need to achieve equitable outcomes for underserved learners and ensure that all learners reach higher levels of attainment. Past experience and the urgency of the need led the Foundation away from small fixes through effective programs toward a new focus on systemic change and the adoption of its new mission:

> "To stimulate transformative change of public education systems across New England by growing a greater variety of higher quality educational opportunities that enable all learners – especially and essentially underserved learners – to obtain the skills, knowledge and supports necessary to become civically engaged, economically self-sufficient life-long learners."

To meet this mission, the Foundation launched a set of interrelated initiatives in 2010 that were designed to give shape to the emerging field of student-centered learning (SCL) and to more fully explore the role of policy, practice, and community engagement in its implementation in school districts. The initiatives were:

1. District Level Systems Change (DLSC), which included grant funds for Building New Models (BNM), Building a Collaborative Culture and, more recently, the creation of New Approaches in Urban Districts (NAUD);
2. State Level Systems Change;
3. Public Understanding and Demand; and
4. Research and Development.

The four initiatives shared a common set of principles that helped to guide innovation among grantees and establish the Foundation's priorities for education transformation in New England.[1] Those priorities were captured in the first DLSC Logic Model, completed in June 2010. That model served as the first planning tool to graphically display the Foundation's strategy for fostering SCL at

the district level and among DLSC communities in Vermont, New Hampshire, and Maine. The root theory of change expressed in this model was that the breadth and complexity of SCL, and its departure from business as usual, would require staging the progress of SCL implementation in three strands of work:

1. Models of Practice: pursuit of a core set of SCL strategies coupled with school and district level resources and supports;
2. District-level Policy: alignment of policy areas such as assessment, finance, technology, graduation requirements, or human capital to support SCL implementation; and
3. Public Demand: involvement of leading community-based organizations in building a broad base of knowledge and support for SCL adoption and implementation.

In 2013, to extend system change toward SCL into New England's larger, more urban districts, the NAUD grant fund was created. The logic model for this fund focused on developing high-leverage teaching and learning strategies to support blended learning and formative and performance assessments while preserving a modified version of the strands within the DLSC Logic Model.

Both logic models served as general prototypes for site-based logic models that, in turn, provided the framework for implementation of efforts to introduce and accelerate SCL in participating high schools, their districts, and wider communities. Over the course of the BNM and NAUD grant funds, these sites devised and implemented work plans consistent with their logic models and with the broader goals outlined in the Foundation's principles.

In order to prepare for the next phases of each grant fund, the Foundation has revisited its original logic models and those created by each grantee district. Drawing on what was learned during the course of the DLSC Initiative and other activities, the Foundation has produced a new model that refines the thinking set forth in the original logic models. This model, which applies to both the BNM and NAUD grant funds effective 2015, was also drawn from a lengthy strategic planning process conducted in the first half of 2014 that resulted in a refinement of Foundation priorities into the following four objectives:

1. Increasing educator ownership and capacity building;
2. Strengthening rigor and equity of SCL implementation;
3. Supporting systems change in the name of SCL; and
4. Growing public understanding, engagement, and demand.

The revised model has two parts: the first is a **Systems Level Logic Model** that captures the Foundation's thinking about systems transformation for SCL and the second is a **Student-Centered Learning Logic Model** that captures the Foundation's evolving conception of what SCL is in practice at the high school level. Representing these two parts separately allows the Foundation to capture the nuances of systems level changes separately from the core elements of SCL and highlight the anticipated relationship among these elements over time. As both parts of the model make clear, NMEF expects this next phase of work to improve outcomes across the board – raising the bar for all students while closing gaps in access, opportunity, and outcomes for high school students in New England.

The Foundation recently adopted an aggressive target for its overarching goal that all New England students graduate from high school ready for college and career. Due to constraints on available data, the Foundation defines readiness as graduating high school and entering college without the need for remediation. Currently, only 50 percent of the students who enter high school as freshmen will graduate ready by this definition. For some subgroups of students the number is even lower, with 37 percent of black students, 31 percent of English Language Learners, and 32 percent of low-income students graduating ready, for example. Closing the gap from 30 percent to 50 percent is simply not enough, because the Foundation seeks to increase that figure to 80 percent for each subgroup by the year 2030 and, ultimately, to 100 percent so that each student graduates ready. At the current rate of improvement it will take 100 years to reach the 80 percent target and nearly twice that long to get to 100 percent.[2] Accepting a glacial pace of change that leaves current generations underserved is unacceptable. The new logic model represents the Foundation's theories about the transformations that will need to occur to dramatically increase the pace of change and reach 80 percent ready – not in a century but in the next 15 years.

There are many factors that affect district, school, and student performance and that limit local influence on these broader outcomes. These include unprecedented and unjust levels of racial, ethnic, and economic disparities that are linked to the country's broader cultural identity, which allows these disparities to persist. In some ways, federal and state policy concerning funding, accountability, and human capital, among others, are proxies for this broader culture that often limits influence on what local districts can do. But within this broader cultural context there is much that local communities can do to make an impact. Education is significantly a local venture, and local communities have opportunities to reflect on the values and cultural contexts that define their education systems through processes focused on building **public understanding, support, and demand**. In this way local communities can take responsibility and the opportunity to leverage a **new system paradigm** defined by continuous improvement and the alignment of system operations with a renewed purpose. Based on this, local community leaders and members will all have a chance to develop **new learning opportunities** to accelerate, equalize, and elevate learning for each and every learner, no matter who they are or where they live.

The new logic model reflects these assumptions and is organized to support local efforts to prepare communities for strong, positive futures by maximizing and ensuring the educational success of each and every learner. Many of the ideas reflected in it were part of the original DLSC logic model, the NAUD logic model, and/or some of the site-based logic models. Some ideas, however, *are* new and reflect the Foundation's evolving understanding of SCL and the conditions that accelerate its consolidation and growth. Provided below is a narrative account of the two parts of the new logic model and the ideas that animate them.

The Systems Level Logic Model

The Systems Level Logic Model highlights three main strands that constitute the systemic underpinnings for accelerating and deepening the work of SCL in schools and communities. These strands include:

1. Creating a New Systems Paradigm;
2. Shaping and Strengthening Public Understanding and Support; and

3. Building a New System of Learning Opportunities.

Each strand emerged as necessary conditions for building sustainable efforts in SCL at scale, and each is rooted in the Foundation's longstanding commitment to equity in access, opportunity, and outcomes for all students. The Foundation's theory of change suggests that equitable, system-wide implementation of SCL will improve levels of student engagement, increase student access to rigorous content, prepare teachers to provide proficiency-based instruction, and lead to measurable improvements in achievement and long-term outcomes – post-secondary readiness without need for remediation for all students. In the near term, the Foundation expects that systems will be increasingly characterized by student-centered approaches to education, and as "opportunity gaps" close,[3] so too will achievement gaps. Over time, as a majority of students gain access to high quality SCL, the Foundation expects to meet its target of 80 percent readiness by 2030, with 100 percent the ultimate goal. The push for universal attainment of deeper learning outcomes stands as a driving force for the three strands of the Systems Level Logic Model. The following sections unpack each of those strands. **Creating a New Systems Paradigm** covers how the system itself operates, **Building a New System of Learning Opportunities** details changes needed for SCL and **Shaping and Strengthening Public Understanding and Support** highlights a support essential to the other two strands.

Creating a New Systems Paradigm

The focus of education has, on the whole, been to fix one part of a broken system by improving one school among many, for example, or by addressing the needs of one group of students rather than another. This narrow approach has contributed to consistently and profoundly unequal results for historically underserved populations. Furthermore, this approach is predicated on the achievement of a range of locally determined minimums that are measured by tests rather than directing all students toward a universal higher bar commensurate with real readiness for success in post-secondary careers and education settings.

The desired change consists of a commitment to **continuous cycles of revision and improvement** and a greater reliance on **individual and organizational adaptability** in the face of complex problems and changing context. The change is dependent on and requires a shift in culture to support appropriate implementation of student-centered practices. It is defined by renovating systems based on how they can best host high quality, rigorous, and equitably accessible student-centered practices.[4]

A shared culture, rooted in a belief that education benefits society and characterized by a commitment to universal attainment of deeper learning outcomes for all students, will accelerate transformation toward SCL and ensure sustainability of the change. Cultivating changes in culture is often slow, arduous work, but failing to make these changes leaves unspoken (and often unbridgeable) gaps between the primary stakeholders in the education system. Cultural norms that govern interactions between students and teachers, teachers and parents, and schools and the wider community can be deeply rooted in policies, practices, and mindsets.

Because cultural norms are lodged across multiple aspects of systems, a range of system components must be aligned in order to achieve sustained system transformation. They include:

- Human resources: training, ongoing professional learning, talent development and management, succession planning, and well aligned teacher effectiveness processes that reinforce and grow professional responsibility and authorize professional judgment;
- Educational finance: alignment of financial resources around the needs, interests, and aspirations of all students;
- Assessment: development and use of formative, interim, and summative measures defined by on-demand and performance approaches assessing attainment of deeper learning outcomes;
- Accountability: systems of incentives and consequences that leverage increasing support and innovation to ensure rigor and equity;
- Technology: acquisition, distribution, and appropriate use of instructional technologies to better meet students' individual learning needs; and
- Education leadership: adaptive, thoughtful development of leadership competencies and distribution of leadership responsibilities to meet the evolving needs of the school and larger learning community.

This new system also supports and rewards **continuous improvement**, or the regular practice of collecting, analyzing, and using data to improve student learning. This continuous cycle, described in one formulation as "Plan, Do, Study, Act,"[5] applies to new innovations and to existing programs. Educators and staff at all levels must cultivate a "research mindset" and approach all work with the intent to plan, implement, and revise based on meaningful data. They must also be supported to build the skills to do this effectively and to have opportunities that make it a regular part of their practice.

Ultimately, the goal is to create a **fully aligned and integrated system** of educational practices that are **routinely reviewed and modified** in an effort to accelerate the pace of effective change. This can be accomplished by adjusting educational approaches at the district and school levels and by **building the capacity to routinely adapt individual student engagements as needed.** In this way, system performance is judged not simply by a score on a state test, but by its results in strengthening models of student-centered learning and achieving more robust and equitable outcomes for all students as determined by multiple measures.

Building a New System of Learning Opportunities

The success of the new model for SCL is contingent on a shift to a new system of learning opportunities that seeks **proficiency for each and every student at levels that ensure success in post-secondary settings.** The core characteristic of this new system is **the replacement of batch processing of learners with a more customized and flexible approach. Learner needs should define system responses versus traditional system constructs that define limited learner opportunities.** In this new system, learner needs trump tradition and adult concerns. Students come first.

The new system requires a technical change in how the learning is organized and facilitated, and it is essentially driven by a cultural shift defined by a focus on universal attainment of deeper learning outcomes. Also, the cultural shift at the level of district policy and practice needs to be accompanied

by a shift in the culture of teaching and learning inside the school and classroom and in alternative sites of learning.

Students need to become authors of their own learning who are much more proactive in identifying personalized pathways within and across subjects and over time. They need to accept responsibility and exercise judgment to help shape the learning experience, and put in the hard work of acquiring new knowledge and skills and demonstrating mastery or competence at key points in the process. This is a significant cultural shift for most learners, so expectations and norms need to be clearly identified and implemented, with appropriate scaffolding provided to support the change. Students will need opportunities to practice skills, develop capacity to become authors of their own learning, and make a shift at a cultural level toward SCL. Learning environments that have made this shift typically have students who can quickly describe the broader purpose of a learning activity, can identify criteria for success, and are eager to demonstrate what they have learned in order to move on to new material. Students in these learning environments are adept at making connections to prior learning and can comfortably seek information and feedback from teachers, peers, and others with the requisite knowledge, skill, and interest.

These learning environments require support from educators who have achieved a similar culture shift. If teachers are to accept responsibility for supporting and guiding each student's pursuit of a pathway to college, career, and civic participation, they must also have opportunities to participate in a professional learning infrastructure – a **collaborative culture that builds educator capacity, skills, and knowledge** and that supports reflection, a research mindset, and a commitment to continuous improvement. As the education system shifts to accommodate these changes, teachers must be directly involved and be given access to high quality, job-embedded professional development. At bottom, this shift reflects deep engagement of educators in building the new system of learning opportunities, from conceptualization of the new model through its implementation and refinement. In this way, educators are supported to make their commitment to universal attainment of deeper learning outcomes.

This new system of learning opportunities must also incorporate a **more varied, rigorous, and reliable system of student assessments** than is available in most schools today, where the major purpose of assessment is ranking students (individually and collectively) on a comparatively narrow set of achievement objectives. A new assessment system, if well designed and appropriately implemented, will provide robust measures of student progress, targeted and timely feedback on student work, guidance about what kinds of future engagements are indicated, and the means for students to demonstrate mastery and move on to more challenging work. This system is defined by varied and frequent measures, including traditional on-demand assessments and more performance based approaches. In this system, frequent formative assessment provides educators with data that are used to make decisions about instruction for each student. It provides more than a narrow account of "achievement" by opening a window into "deeper learning" that helps students create personalized pathways to success and supports teachers in their drive for continuous improvement.

In this new system of learning opportunities, **personalization** will be the norm. For example, some schools may require personalized learning plans for each student, not just those with special needs or those with aspirations for the most selective colleges. But, whether or not a school requires such plans, it will be important for each student, together with his or her care givers, teachers, and

counselors, to chart a pathway that builds on their own interests and strengths and that can serve as a roadmap for individual accomplishment. In this system, teachers will provide instruction and facilitation that recognizes these varied pathways and that responds actively to students' individual learning needs.

Equitable implementation of personalization necessitates the regular provision of targeted support. Student engagement plans must be revised regularly and resources should be directed to accelerate the learning of those further behind. One size does not fit all, and the assembly-line approach of the large comprehensive high schools will need to shift in order to provide more customized experiences for each student while ensuring equitable, rigorous deeper learning outcomes for all. In this way **the foundation for the new system of learning opportunities** is the strengthened **capacity** of educators and learners to provide a cogent and varied system of **assessments** and **personalization**.

Complementing this foundation is a triad of **(1) Instructional Practices** rooted in advancing student ownership through developmentally appropriate tasks and engagement strategies; **(2)** related **Curriculum Materials and Resources** including clear learning progressions and performance rubrics detailing deeper learning expectations and in support of a competency based approach to learning; and **(3) a broad range of Anywhere, Anytime Learning Opportunities** in and out of traditional school settings and schedules including, but not limited to, high quality, equitably accessible blended learning vehicles.

Together with the emphasis on new models of capacity building, assessment, and greater personalization of learning, these methods and tools of education must change to offer a wider range of opportunities to all students and to ensure their readiness for post-secondary learning, careers, and civic life. The outcomes of this new system of learning opportunities are nothing less than every student's acquisition of the knowledge, skills, habits of work, and habits of mind that together are the tools for her to succeed beyond high school. In this way "readiness" for successful post-secondary experiences, defined by clear attainment of core outcomes, replaces successful endurance of seat time requirements.

The system of learning that the Foundation supports will rest on a wider foundation, one that serves and prepares all students, not just a fortunate few, for success. The bar for student success in this system is higher than ever before and, as it is implemented, there will be fewer and smaller gaps between historically high performing groups and historically low performing groups in student achievement, aspiration, and life opportunities.

Shaping and Strengthening Public Understanding and Support

The new **Systems Paradigm** and the new **System of Learning Opportunities** defined by student-centered approaches require broad public understanding and support as an engine of change. The envisioned shift in the current systems model requires that teachers, students, parents, and the wider community (including representatives of business and industry, higher education, civic agencies, and the health and social services sectors) have opportunities to understand the changes demanded in adopting a new culture, implementing related structures and policies, and developing more robust student engagement practices. Stakeholders must also have opportunities to fully and authentically engage in developing and implementing these changes, recognize the benefits of

student-centered learning for individual students and for the social and economic health of the community, and feel empowered to actively support these changes in public settings.

Building and strengthening public will to achieve the desired outcomes needs an intentional stance toward public engagement both inside and outside the public school system. The complex, multi-tiered work of implementing student-centered learning requires extensive internal buy-in and shared ownership. It also cannot be accomplished in isolation from the families and communities it aims to serve. At bottom, this is *their* change – their opportunity to create an education system that serves all students equally and prepares them for success in life after high school while preparing their communities for a successful and secure future.

In order to successfully reach all of their stakeholders, districts may need to identify, partner with, or support external organizations that engage the public and/or invest in an internal infrastructure that prioritizes this capacity. At the same time, the voice of external stakeholders should remain unfettered by the education system's interests. Opportunities for voices to be heard and to influence the system's transformation are integral to the formulation of the new paradigm and its execution.

Education must be seen as a public good in every sense. Families and communities become economically and socially healthier, setting the stage for improved student achievement and readiness for success after high school.

The Student-Centered Learning Logic Model

The SCL logic model is a companion piece to the Systems Level Model and together they provide a picture of how the DLSC initiative is intended to work and what underlying theory informs the anticipated change. The SCL logic model is designed for high school students and educators, and is based on lessons from research, Foundation-wide observations, and grantee experience. The model provides a road map for putting students at the center of learning. It gives primacy to the four tenets of student-centered approaches to learning as defined by the Foundation and the research it supported with Jobs for the Future through the Students at the Center project.[6]

The logic model suggests **moving from** a set of conditions and assumptions **through** practical organizing principles in order **to** achieve desired outcomes and the ultimate impact of building the knowledge, skills, and dispositions to succeed in college, career, and civic life. The alignment of strategy and outcome, coupled with the ability to reflect on progress using the logic model, is vital to success and continuous improvement.

Moving From: Initial Conditions and Assumptions

The conditions and assumptions that drive the transformation toward SCL are similar to those presented earlier in the narrative for the Systems Level Logic Model – the current approach of "one size fits all" education is not working. As mentioned above, less than 50 percent of high school learners are truly "ready" for post-secondary success at a time when this level of achievement is essential for individual economic viability. Readiness levels are much worse for learners of color, low-income learners and low-income learners of color.[7] This situation is unacceptable for practical and moral reasons.
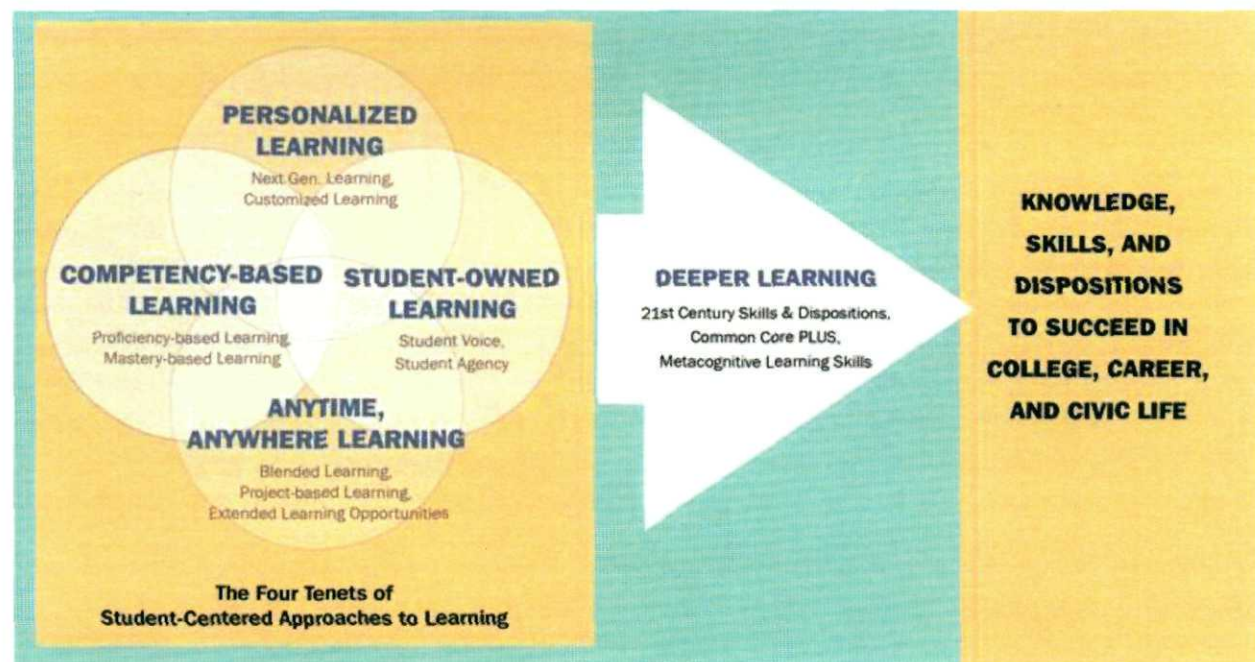
It is a practical matter because we must ensure that far more learners leave high school truly ready to succeed. When every student is achieving at high levels, the rising tide will lift everyone toward a more equitable and prosperous future. Predictions about employment needs indicate that today's innovation economy and diverse society require skills that aren't addressed in a traditional curriculum. The historical requirements necessary to be an active participant in a democracy demands that every student get the skills they need to succeed and contribute to society. It is a moral matter because a public system that demonstrates institutional and structural barriers to achievement connected to race, ethnicity, income, or English ability is unfair and unjust.

In order to address these issues, **systems of learning must replace "batch processing" with the promotion of more customized, personalized, inherently more equitable and effective approaches.**

The Foundation and grantees have learned that shifting models of long standing educational practice is a major undertaking requiring fundamental change in curriculum, instruction, and assessment. It is a complex change process that takes time and benefits from relentless results orientation to succeed.

Moving Through: Organizing Principles

Research supported by the Foundation through the Students at the Center project underscores the value of certain tenets. The framework and definitions that follow are drawn directly from "Putting Students at the Center: a Reference Guide."

PERSONALIZED LEARNING
Next Gen. Learning,
Customized Learning

COMPETENCY-BASED LEARNING
Proficiency-based Learning,
Mastery-based Learning

STUDENT-OWNED LEARNING
Student Voice,
Student Agency

ANYTIME, ANYWHERE LEARNING
Blended Learning,
Project-based Learning,
Extended Learning Opportunities

DEEPER LEARNING
21st Century Skills & Dispositions,
Common Core PLUS,
Metacognitive Learning Skills

KNOWLEDGE, SKILLS, AND DISPOSITIONS TO SUCCEED IN COLLEGE, CAREER, AND CIVIC LIFE

The Four Tenets of Student-Centered Approaches to Learning

The process of implementing these four tenets may not be linear or sequential. Indeed, it can be quite messy business. How well a grantee executes and builds out each tenet is more important than the order in which they act. Grantees are encouraged to build on their strengths, starting where they have a critical mass of willing people, knowledge, and experience.

Personalized learning: Students' learning experiences – what they learn and how, when, and where they learn it – are tailored to their individual developmental needs, skills, and interests.[8] Although where, how, and when they learn might vary according to their needs, students also develop deep connections with each other, their teachers, and other adults. Many applications of personalized learning emphasize the use of technology to enable the appropriate level of customization at scale. [Closely related: next generation learning, customized learning.]

Competency-based learning: Students move ahead based primarily on demonstrating key learning milestones along the path to mastery of core competencies and bodies of knowledge, rather than based heavily on a student's age or hours logged in the classroom (often represented by the phrase "learning is the constant, time is the variable"). Tasks and learning units might be either individual or collective, and students have multiple means and opportunities to demonstrate mastery through performance-based and other assessments. Each student is assured of the scaffolding and differentiated support needed to keep progressing at a pace appropriate to reaching college, career, and civic outcomes. [Closely related: proficiency-based learning/education, mastery-based learning/education.]

Anytime, Anywhere learning: Time is fully utilized to optimize and extend student learning and to allow for educators to engage in reflection and planning. Students have equitable opportunities to learn outside of the typical school day and year in a variety of settings, take advantage of the variety of digital technologies that can enhance learning, and can receive credit for this learning based on demonstration of skills and knowledge. The school's walls are permeable – benefitting from multiple community assets and digital resources, as well as being informed by meaningful community input. [Closely related: blended learning, project-based learning.]

Student-owned learning: Students understand how to get "smarter" by applying effort strategically to learning tasks in the different domains. They have frequent opportunities to direct and to reflect and improve on their own learning progression toward college and career ready standards through formative assessments that help them understand their own strengths and learning challenges. Students take increasing responsibility for their own learning, using strategies for self-regulation when necessary. Students also support and celebrate each other's progress and experience a sense of commitment and belonging to the learning group. [Closely related: student voice and choice, student agency.]

Moving To: Medium- and Long-Term Outcomes

Deeper learning: is an umbrella term for the skills and knowledge that students must possess to succeed in 21st century jobs and civic life.[9] At the heart of deeper learning is a set of competencies students must master in order to develop a keen understanding of academic content and apply their knowledge to problems in the classroom and on the job. The deeper learning framework includes six competencies that are essential to prepare students to achieve at high levels:
1. Master core academic content
2. Think critically and solve complex problems
3. Work collaboratively

4. Communicate effectively
5. Learn how to learn
6. Develop academic mindsets

Other medium-term outcomes include a decrease in achievement gaps by race and class, as determined by multiple measures of student knowledge and skills, and measurable progress toward the target of 80 percent college and career ready by 2030 through increases in post-secondary education enrollment without need for remediation and in post-secondary employment at a living wage or in career training.

Moving To: Impact

This model calls for generational change, and the Foundation recognizes that equity and excellence are not technical enterprises that can be completed within the life cycle of a grant. The target of 80 percent ready by 2030 is intended to provoke and focus current efforts and catalyze a change that will eventually benefit all students. The ultimate impact is for each student to achieve deeper learning at high levels, completing secondary education having mastered the skills, dispositions and knowledge for them to succeed and contribute to society.

Using the Logic Models as a Management and Learning Tool for Continuous Improvement

The Foundation's theory of transformative district-level change is based on a new paradigm for secondary public education – one that posits that high quality education is such a compelling public interest that the **whole system** and community must operate in new ways to collectively make it highly probable that **each student** achieves at high levels. This belief and unprecedented commitment to each student must be made manifest in a district's adaptive leadership, flexibility to the ever-changing ecosystem, and effort to transform the district. Ideas about relevant district and community dynamics, their functionality and their interplay in such a change, are represented in the systems-level change logic model. This model theorizes that system transformation depends on operational transformation in dynamics and structures of district governance, the central office, and in the interactions between and among them, schools, the community and the people. More specifically, the technical changes in operations, management, and governance must be rooted in a culture defined by an explicit shared purpose of universal attainment of deeper learning for all learners as well as by a commitment to stronger communities.

These systemic practices reflect a commitment to excellence and universal success. This model cannot be invoked via memo or top-down approaches. Its success rests on the hearts and minds of people acting as change agents. It requires unlearning old skills and ways and learning new ones. This is true on both the systems level and the SCL program level. Student-centeredness, then, permeates in structures, practices, hearts, and minds.

To support transformative change, new knowledge, skills, and dispositions must be continually developed and nurtured. Agency and authentic engagement of change agents as well as highly skilled and effective leadership at all levels are critical.

Importantly, there is an assumption growing in strength and influence at the Foundation that educational leaders may need to create innovation-friendly policies and even *autonomous teams* with the flexibility to nurture innovation in spaces protected from the moderating influences that traditional systems exert so well on significant change efforts.

The two-part logic model for DLSC presented in this narrative is intended as a guide to inform and measure progress in the implementation phase. First, the model serves as a starting point for a more **detailed and customized** approach to transformation. The Foundation expects this next phase of the DLSC initiative to increase readiness dramatically. This means identifying specific, ambitious targets over time for both student readiness outcomes and system outcomes consistent with the logic model. The ideas reflected in these models represent the Foundation's best thinking. They can be used to go deeper in development of design and work plans. The Foundation is committed to a learning partnership driven by the logic models and to supporting districts against the worst stumbling blocks by providing critical friends and relevant expertise to support the development and refinement of student-centered learning strategies.

Second, the logic model provides a powerful base from which to conduct **ongoing evaluation**. It spells out how the approach may produce desired outcomes. In this way, grantees can decide more systematically which pieces of the program to study in determining whether or not their assumptions are correct. The logic model helps focus the evaluation on measuring each strategy to see what happens, what works, what doesn't work and for whom. Evaluators will be able to discover where the model supports change and/or where it is failing to perform as originally conceptualized. Using the model as a reflection-in-action tool is an effective practice for continuous improvement.

Finally, there is value for each grantee in the **process** of developing its local logic model as a companion to the Foundation's. Context is critical. The process is an interactive one that requires stakeholders to work together to clarify the underlying rationale and the conditions under which success is most likely to be achieved in each district, i.e., the local **high-leverage strategies**. Gaps in activities, expected outcomes, and theoretical assumptions can be identified, resulting in changes based on consensus-building and logic rather than on personalities, politics, or ideology. The clarity of thinking that comes from the process of building the model becomes an important catalyst for shared ownership as well. The model itself then provides a focal point for discussion and a public education platform easy for everyone to understand.

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[1] 1. Student-centered education systems provide all students equal access to the skills and knowledge needed for college and career readiness in today's world. 2. Student-centered education systems align with current research on the learning process and motivation. 3. Student-centered education systems focus on mastery of skills and knowledge. 4. Student-centered education systems build student's identities through a positive culture with a foundation of strong relationships and high expectations. 5. Student-centered education systems empower and support parents, teachers, administrators, and other community members to encourage and guide learners through their educational journey. (These original principles of SCL have been reformulated into the four tenets described in "Putting Students at the Center: a Reference Guide.")

[2] Estimates calculated by Nellie Mae Education Foundation based on data obtained from state-level sources.

[3] Carter, Prudence L. and Kevin G. Welner, eds (2013). Closing the Opportunity Gap: What America Must Do to Give Every Child an Even Chance. New York: Oxford University Press.

[4] From "Putting Students at the Center: a Reference Guide," by Nellie Mae Education Foundation. 2014.
[5] Deming Institute. See https://www.deming.org/theman/theories/pdsacycle.
[6] See Footnote 4. Also see additional materials online at http://studentsatthecenter.org.
[7] Estimates calculated by Nellie Mae Education Foundation based on data obtained from state-level sources
[8] Adapted from "What is Personalized Learning? A Working Draft," by Gates Foundation. 2013. View online at http://nextgenstacey.com/2013/12/19/shared-attributes-of-schools-implementingpersonalized-learning/ and http://ipersonalize.org/2013/08/06/what-is-personalized-learning/.
[9] From "Deeper Learning Defined," by Hewlett Foundation. 2013. View online at http://www.hewlett.org/uploads/documents/Deeper_Learning_Defined__April_2013.pdf.