PUTTING STUDENTS AT THE CENTER

a reference guide

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INTRODUCTION

Our nation is at a crossroads.

A renewed focus on rigorous standards and high expectations for all students is intersecting with increasing disparities in social mobility, income, and education.

When we think about our country's future, we need to consider how we can do more to prepare today's students to meet future challenges. For our society to thrive in the 21st century, our students need to graduate ready to succeed in college and the workplace and to contribute to their communities as informed citizens. Yet far too many young people are not developing the knowledge and skills needed to succeed in a rapidly changing world, evident in the troubling gaps in achievement and high school completion along racial and income lines and the alarmingly high rate of remediation among students graduating high school and entering post-secondary. Although many organizations and individuals are working to close these skills gaps, our society at large continues to tolerate the large racial, ethnic, and income-based disparities in the educational experiences and outcomes of our youth.

The adoption of the Common Core State Standards by many states grew out of concerns about these disparities, and represents a major shift in direction for public schools across the country. In describing precisely what students need to know and be able to do in order to become ready for college and careers, these standards have real potential both to raise student outcomes and promote equity nationwide.

Today, we know more than ever about how students learn. Education researchers have identified key components of college and career readiness,[1] while research in the cognitive sciences has revealed the neurological pathways of effective learning and shown how learning affects the brain.[2]

We know now that individuals are most likely to learn when they are positively disposed towards the learning task. They are most likely to attempt difficult tasks when they have developed a "growth mindset" (the belief that intelligence is malleable, not fixed, and that effort makes a critical difference in achievement).[3] And they are most likely to persist when learning tasks reflect and respond to their particular needs and interests, and when they can employ effective learning strategies.

Further, students are most likely to succeed when they experience a strong sense of connection to others – whether in the classroom, at home, or in their communities.[4] Even as technology opens up new possibilities for individuals to study on their own, research increasingly shows that learning is a fundamentally social process, made more effective when done with others rather than alone. [5]

The challenge now is to enable schools and community learning environments to implement student-centered approaches to learning that make active use of these burgeoning knowledge bases, while ensuring that every student develops the critical thinking, problem solving, and other deeper learning skills needed in order to graduate high school prepared to contribute to their communities and succeed in college and at work.
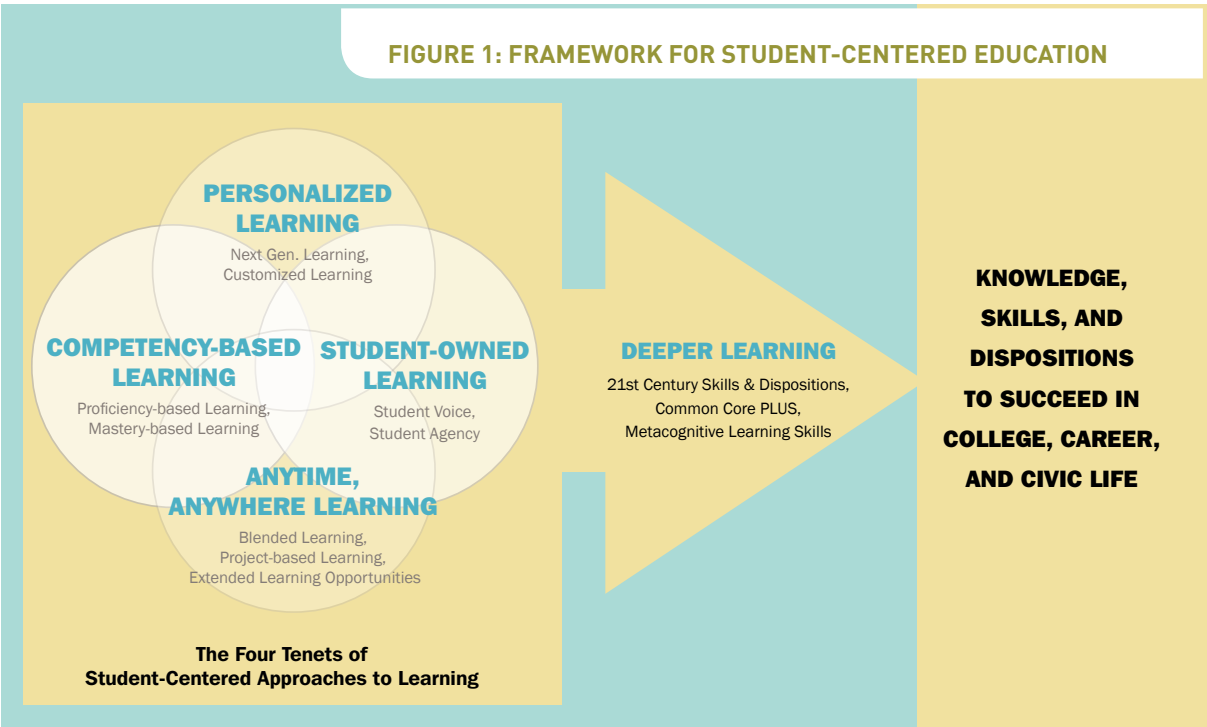
With careful attention to the underlying inequities in our education system, new technological tools also offer possibilities to approach these opportunities and their attendant challenges.

All of our knowledge and tools should be put into practice intentionally, in order to maximize the learning of every student and especially to accelerate the learning of low income youth and youth of color. And extending the educational experience for all students means finding ways to connect deep learning to cultural and personal identity, not asking youth to divorce their identity from their academic growth.[6]

The intent of this reference guide is to put the best of our current knowledge and tools – specifically, the research on the outcomes most associated with college and career readiness and civic engagement; the approaches most compatible with what is now known about the mind, brain, and learning; and the technological tools best able to support implementation – in the hands of practitioners and community members. As the reference guide suggests, this is a pivotal moment to leverage – so that **every student** gets the skills they need to be successful and contribute to society.

PUTTING STUDENTS AT THE CENTER

This section defines the major tenets of the approach to learning that emerge from this knowledge base (*student-centered learning*) and are critical to enabling all students to master what they need to know and be able to do to succeed in college, careers, and civic life *(deeper learning)*.

FIGURE 1: FRAMEWORK FOR STUDENT-CENTERED EDUCATION

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

The Four Tenets of Student-Centered Approaches to Learning

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

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

Student-Centered Approaches to Learning[8] highlight four key tenets of student-centered approaches – drawn from the mind/brain sciences, learning theory, and youth development science – that are essential to students' full engagement in achieving deeper learning outcomes. These approaches will reach the intended deeper learning outcomes only if the tenets are applied together and with careful attention to meeting high and rigorous standards:

Learning Is Personalized:

Personalized learning recognizes that students engage in different ways and in different places. Students benefit from individually-paced, targeted learning tasks that start from where the student is, formatively assess existing skills and knowledge, and address the student's needs and interests. At the same time, learning is deepened and reinforced through participation in collaborative group work, focused on engaging and increasingly complex and authentic problems and projects, and through relationships and community structures in the larger learning environment beyond the classroom itself (e.g., advisory groups, mentoring, internships).

Learning Is Competency-Based:

Students move ahead based primarily on demonstrating key learning milestones along the path to mastery of core competencies and bodies of knowledge (as defined in *deeper learning*). 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 and career and civic outcomes, even when unequal resources are required to achieve a more equitable result.

Learning Takes Place Anytime, Anywhere:

Learning takes place beyond the traditional school day, and even the school year. The school's walls are permeable – learning is not restricted to the classroom. Time and place are used flexibly, in ways that optimize and extend student learning and that allow for educators to engage in reflection and planning. Students have equitable opportunities to take advantage of digital technologies that can enhance learning, and can receive credit for the learning they do outside of school, based on their demonstration of skills and knowledge.

Students Exert Ownership Over Their Learning:

Student-centered learning engages students in their own success and incorporates their interests into the learning process. Students understand how to get "smarter" by applying effort strategically to learning tasks. They have frequent opportunities to direct and to reflect and improve on their own learning progression towards 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.

Deeper Learning[7] establishes two major types of outcomes as essential to college and career readiness for all:

- Core academic content, including foundational domain knowledge, concepts and modes of inquiry in the humanities, mathematics, sciences, and arts that form the building blocks for further study and skill specialization as well as of a literate and informed society.

- The ability, academic mindsets, and predilection to continue to learn and to apply and transfer knowledge effectively through higher-order skills, such as critical thinking, problem solving, communication, collaboration, and self-directed learning.
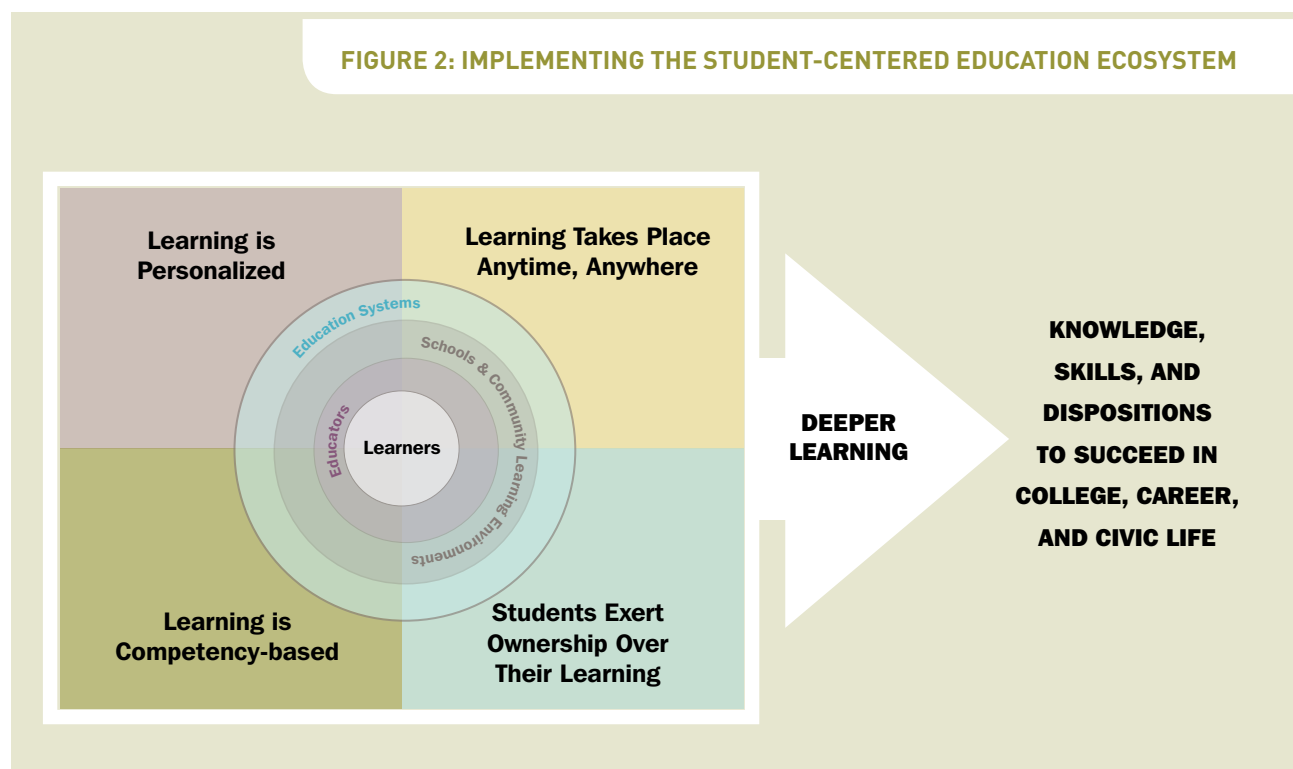
Proponents recognize that the goal of ensuring that all youth reach college and career outcomes needs to be front and center - especially and essentially for underserved youth. This means that the student-centered approaches to learning represent a bundle of the four key tenets that should be developed through rigorous data-driven investigation, and that should be applied intentionally, consistently, and strategically.

While any one of these tenets, in isolation, can be beneficial for educators, the collective embrace and systemic implementation of all the tenets is critical. Further, embedded in these designs and practices should be the allowance for different implementation pacing, dosage, and resource allocation based on context and student needs. Only through building a culture in which leaders pay constant and vigilant attention to how implementing the four tenets impacts our most vulnerable youth can we begin to ensure universal high achievement while addressing underlying inequities in education.

Proponents also recognize that the key tenets should be applied not just at the individual learner level, but throughout a multi-layered education landscape that involves classrooms and other learning environments supported by educational systems and policies directed at achieving the **deeper learning** outcomes.

It bears noting, too, that these tenets have implications for teachers' roles and responsibilities (and we explore those implications in greater depth elsewhere).[9] **Figure 2** illustrates the dynamic relationship between the tenets of student-centered approaches, the different levels of the educational landscape, the responsibilities and orientations of stakeholders at each level in the education landscape, and the ultimate outcomes.

Student-centered approaches to learning can only be successful if they occur within a cultural context that demands continuous improvement and engages collective processes that foster understanding and broad ownership of decisions. This should be driven by vigilant consideration of assessment results that help illuminate the extent to which particular interventions are working, and who is benefiting from the changes in what ways.

FIGURE 2: IMPLEMENTING THE STUDENT-CENTERED EDUCATION ECOSYSTEM

Learning is Personalized

Learning Takes Place Anytime, Anywhere

Learning is Competency-based

Students Exert Ownership Over Their Learning

Education Systems

Schools & Community Learning Environments

Educators

Learners

DEEPER LEARNING

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

Furthermore, in order to survive and thrive as a system defined by student-centered approaches to learning, school communities need to build a shared cultural foundation defined by clear purposes, values and beliefs about education – recognizing public education as the public good that it is – explicitly grounded in the need for high-achievement of deeper learning for all students. Without this critical cultural context, the four tenets described in this reference guide could perpetuate an old-style culling and sorting system that benefits only the small subset of students destined to succeed.

This *Reference Guide* builds upon current research that points to the deeper learning outcomes most associated with college and career readiness and preparation for engaged civic participation, and the student-centered learning approaches that lead to such results.

It also looks towards what it will take to expand and implement these outcomes and practices, and particularly how educational equity can be maximized in that process. Learning and teaching occur within schools and communities, locations of learning that are in turn nested within larger educational systems – all of which need to work in concert towards the goals of college and career readiness and active civic engagement for all.

With Common Core implementation gathering steam in most states and districts, this is a moment for shared understanding among all stakeholders of what, where, when, and how young people need to learn in order to be fully prepared for life and work in the 21st century, recognizing that much of the knowledge, behaviors and cross-cutting skills necessary for success in college and career are left unaddressed by the Common Core itself.[10] In short, we offer this reference guide as a critical tool, meant to complement other school improvement efforts.

This *Reference Guide* is a continuation of an ongoing effort intended to promote, encourage, and guide the implementation of student-centered approaches to learning in ways consistent with what is known about the skills, dispositions, and knowledge that matter for college and career success and civic engagement, and when, how, and where to best develop these.

NOTES

[1] e.g., Murnane, R. and Levy, F. (2013). "Dancing With Robots: Human Skills for Computerized Work." The Third Way Publications. www.thirdway.org/publications/714. ; Conley, D. (2012). A complete definition of college readiness. Eugene, OR: Educational Policy Improvement Center.; Conley, D. (2010). College and Career Ready: Helping All Students Succeed Beyond High School. San Francisco, CA: Jossey-Bass.

[2] Hinton, C., Fischer K., and Glennon C. (2013.) "Applying the Science of How We Learn" In Anytime, Anywhere Student-Centered Learning for Schools and Teachers, eds. Rebecca E. Wolfe, Adria Steinberg, & Nancy Hoffman. Cambridge, MA: Harvard Education Press.

[3] Toshalis, Eric & Michael Nakkula. 2013. "Prioritizing Motivation and Engagement." In Anytime, Anywhere Student-Centered Learning for Schools and Teachers, eds. Rebecca E. Wolfe, Adria Steinberg, & Nancy Hoffman. Cambridge, MA: Harvard Education Press; Hinton, C., Fischer K., and Glennon C. (2013.) "Applying the Science of How We Learn" In Anytime, Anywhere Student-Centered Learning for Schools and Teachers, eds. Rebecca E. Wolfe, Adria Steinberg, & Nancy Hoffman. Cambridge, MA: Harvard Education Press.; Tough, P. (2012). How children succeed. New York, NY: Houghton Mifflin Harcourt.; Dweck, C. (2007). Mindset: The New Psychology of Success. Random House.

[4] Cervone, B. and Cushman, K. (2013). "Learning from the Leaders: Core Practices of Six Schools." In *Anytime, Anywhere Student-Centered Learning for Schools and Teachers*, eds. Rebecca E. Wolfe, Adria Steinberg, & Nancy Hoffman. Cambridge, MA: Harvard Education Press; Yonezawa, S., McClure, L., and Jones, M. (2012). "Personalization in Schools." *The Students at the Center Series*. Boston, MA: Jobs for the Future. http://www.studentsatthecenter.org/topics/motivation-engagement-and-student-voice.

[5] Ito, M., Gutiérrez K., Livingstone S., Penuel B., Rhodes J., Salen K., Schor J., Sefton-Green J., Watkins C.. (2013). *Connected Learning: An Agenda for Research and Design*. Irvine, CA: Digital Media and Learning Research Hub.

[6] Tatum, A. (2013). "Identity and Literacy Instruction for African American Males." In *Anytime, Anywhere Student-Centered Learning for Schools and Teachers*, eds. Rebecca E. Wolfe, Adria Steinberg, & Nancy Hoffman. Cambridge, MA: Harvard Education Press; Toshalis, Eric & Michael Nakkula. 2013. "Prioritizing Motivation and Engagement." In *Anytime, Anywhere Student-Centered Learning for Schools and Teachers*, eds. Rebecca E. Wolfe, Adria Steinberg, & Nancy Hoffman. Cambridge, MA: Harvard Education Press.

[7] http://www.hewlett.org/library/hewlett-foundation-publication/deeper-learning-defined "Deeper Learning Defined." The Hewlett Foundation.

[8] http://www.studentsatthecenter.org/

[9] For examples of what teaching and learning look like in student-centered settings, see: Cervone, B. and Cushman, K. (2013). "Learning from the Leaders: Core Practices of Six Schools." In *Anytime, Anywhere Student-Centered Learning for Schools and Teachers*, eds. Rebecca E. Wolfe, Adria Steinberg, & Nancy Hoffman. Cambridge, MA: Harvard Education Press; Cervone, B. and Cushman, K. (2012). "Teachers at Work-Six Exemplars of Everyday Practice." *The Students at the Center Series*. Boston, MA: Jobs for the Future. http://www.jff.org/sites/default/files/publications/materials/Teachers%20at%20Work_0.pdf.

[10] Hess, K., Gong B., Bayerl K. (2014). *Ready for College and Career?: Achieving the Common Core Standards and Beyond through Deeper, Student-Centered Learning*. Retrieved from http://www.nmefoundation.org/global/featured-research/homepage/ready-for-college-and-career.

BUILDING A KNOWLEDGE BASE

From July 2013 through December 2013, **Jobs for the Future (JFF)** staff facilitated a process for the Nellie Mae Education Foundation and JFF to define, vet with partners and practitioners, and agree upon a clear and actionable research-based framework of student-centered learning approaches. The goal was to clarify the essential elements, boundaries, and principles of student-centered learning instruction and environments; shape it into an assessable framework; and set the stage for the next level of work to identify competencies, sequencing, and benchmarks for high-quality implementation of student-centered schools, programs, and systems.

This process built on close to three years of new research and research syntheses, deepening understanding of real-time implementation challenges, evaluations of models and examples, and taking into account the current policy and accountability context. Among other sources, the framing includes the Students at the Center research, additional research supported by NMEF (including the Center of Reinventing Public Education (CRPE) Cost Study and findings of Research and Evaluation studies), the CompetencyWorks/iNACOL reports, and early learning and evaluation reports from the District-Level Systems Change initiative. In addition to these resources, JFF interviewed close to 20 educators, administrators, policy makers, and funders engaged in implementing student-centered approaches. A selection of cross-sector reviewers provided feedback on the framework and original preamble document.

EXTERNAL REVIEWERS

- Teams from Sanford, Pittsfield, and Portland school districts
- Janet Garagliano and Dianne Ullman of CAPSS/LIS/Personalization Task force in CT
- David Ruff of Great Schools Partnership
- Brian Lord and Aubrey Scheopner Torres of EDC
- Stephen Bowen and Jenny Davis Poon of CCSSO
- Marc Chun of the Hewlett Foundation

ABOUT THE NELLIE MAE EDUCATION FOUNDATION

The Nellie Mae Education Foundation (NMEF) is the largest charitable organization in New England dedicated exclusively to education. We're committed to reshaping the high school learning experience by working with schools and organizations to implement the principles of student-centered learning – learning that is personalized, engaging, competency-based and happens anytime, anywhere. Since 1998, the Foundation has distributed over $170 million in grants.

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