A GUIDE TO PERSONALIZING LEARNING

Suggestions for the Race to the Top–District competition

AN EDUCATION WHITE PAPER

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Suggestions for the Race to the Top–District competition

The top priority for the U.S. Department of Education's new Race to the Top–District (RTT–D) competition is to create personalized-learning environments to bolster student achievement:

> *Absolute Priority 1: Personalized Learning Environments. To meet this priority, an applicant must coherently and comprehensively address how it will build on the core educational assurance areas (as defined in the notice) to create learning environments that are designed to significantly improve learning and teaching through the personalization of strategies, tools, and supports for students and educators that are aligned with college- and career-ready standards (as defined in the notice) or college- and career-ready graduation requirements (as defined in the notice); accelerate student achievement and deepen student learning by meeting the academic needs of each student; increase the effectiveness of educators; expand student access to the most effective educators; decrease achievement gaps across student groups; and increase the rates at which students graduate from high school prepared for college and careers.*

Using online learning in blended-learning environments will be critical for most Local Education Agencies (LEAs) to realize this priority. As Innosight Institute has written in several reports, there are a growing number of schools and districts across the country that are implementing blended-learning models. Innosight Institute has collected dozens of case studies of blended-learning programs on its website. These profiles may be an important resource for those LEAs seeking to apply to the competition, as the profiles chronicle the history of how schools and districts started their blended-learning programs, the effect of these programs on student achievement, the blended-learning models they use, and the software or Internet tools that power these programs.

Background on the need for personalized learning

Today's education system was built to standardize the way we teach and test. This worked well when students would grow up to work in an industrial job. Now that we ask increasingly more of students, however, this arrangement falls short. Given that everyone has different learning needs at different times—we learn at different paces, have different aptitudes, and enter classes with different experiences and background knowledge—we need an education system that can customize so that each student can realize her fullest potential.

Online learning holds the key to this transformation, as it has the potential to not just help reform education but to transform it. Because online learning is inherently modular, it can more easily customize for different student learning needs than can the traditional classroom. It can also create near real-time feedback loops to bolster the interactions with both the teacher and the content itself.

Having this background brings us to the question that all LEAs must ask themselves in crafting their RTT–D application.

Key resources:

- Heather Staker and Michael B. Horn, "Classifying K–12 blended learning," Innosight Institute, May 2012
- Heather Staker, "The rise of K–12 blended learning: Profiles of emerging models," Innosight Institute, May 2011
- Michael B. Horn and Heather Staker, "The rise of K–12 blended learning," Innosight Institute, January 2011

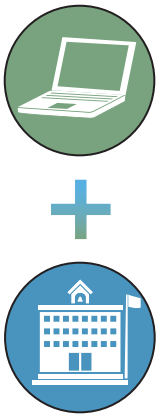
What does personalized learning look like in practice?

Personalized learning has begun to emerge in pockets of innovative schools across the country. In practice this often means leveraging technology to meet student needs in real-time. No longer should the student who has mastered a concept before her class need to wait until the end of the unit to move on, nor should the student who is struggling simply continue on without the time to grasp important building blocks.

Blended learning has begun to address this need for differentiation in meaningful ways. **Figure 1** depicts the definition of blended learning.

Figure 1. *Definition of blended learning*

Blended learning is…



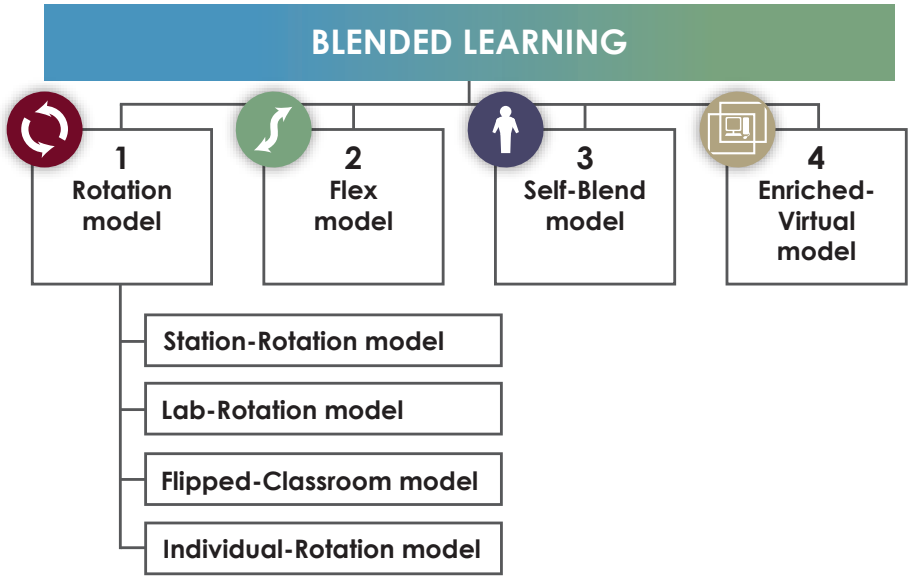
a formal education program in which a student learns at least in part through online delivery of content and instruction with some element of student control over time, place, path, and/or pace

and

at least in part at a supervised brick-and-mortar location away from home.

As **Figure 2** depicts, four models of implementation have emerged in this nascent field. LEAs and the various consortia applying should be thoughtful and deliberate as they explore which model—or combination of models—may best fit the needs of their students.

Figure 2. *Blended-learning models*



Personalized learning in math could mean that students work on their learning objectives using adaptive software to work at their own pace while a teacher roams around acting as a learning coach and tutor. For English each student could read a passage at her proximal learning level and tackle assignments relevant to her interest and skill. Online learning also allows for an expansion of courses. Schools are not limited to offering only those classes for which they have a certified teacher in the district. If learners are interested in Mandarin or AP Chemistry, the LEA can provide the course online, thereby expanding access to emerging topics of personal or global interest to their students.

Some schools have begun to implement personalized learning in a more expansive fashion. They have essentially done away with grade levels, class schedules, bell times, and traditional school architectures and allowed students to take ownership of their learning by choosing where to devote their time throughout the day to complete weekly learning goals (see schools using the "Flex" model in Innosight Institute's blended-learning profiles). This leaves time for small groups, which emphasize group discussion, project-based learning, and real-world relevance of curricula.

What are the essential elements of transformation?

Key resource:

- Blend My Learning

Effective transformation starts with the goals for students and then embarks upon a design process that reexamines everything from school structure to teacher roles and curriculum to craft a strong vision. The executive summary states applicants should:

> *(A)(1) Articulat[e] a comprehensive and coherent reform vision*

This includes:

> *(B)(5) A high-quality plan ... and the logic behind the reform proposal contained within the applicant's proposal, including identified needs and gaps that the plan will address.*

The language above makes clear that LEAs must be thoughtful in considering which models will best address the needs of their individual student populations. Some models lend themselves neatly to particular grade-bands and student demographics.

School-wide steps

Primary schools

The simplest way for elementary schools to embark on blended learning is by setting up a Rotation model, which involves students rotating on a fixed schedule within a given subject between online- and offline-learning stations. The Station-Rotation model in particular is a natural outgrowth of existing activity-center classroom models that lend themselves to adding an online-learning station. Teachers can make use of the data that emerges from the time online to group and re-group students appropriately for small-group instruction.

Secondary schools

Flex and Self-Blend models allow for more student autonomy and control over learning, which works well as students mature. In high schools, the Flex model, in which students can choose where to spend their time without a set bell-schedule, has proven popular with both funders and students. The Self-Blend model, in which students can take supplemental classes, is currently the most common way of integrating online learning into traditional high schools.

One of the critical findings from our research on innovation is that new organizations have a far easier time engaging in transformational innovation than do existing organizations. New organizations do not have legacy models that constrain them. As a result, LEAs may use such areas as summer school, credit recovery, and new schools as opportunities where they can launch new schooling models that reinvent and reimagine education from whole cloth—and then create a plan that takes the findings from these innovations to scale across the LEA or consortia.

Key resources:

- Bryan Hassel, "Expanding the Impact of Excellent Teachers," *Education Week*, August 16, 2012
- Public Impact's Opportunity Culture Project

Human capital and changing roles

> *Absolute Priority 1: ...increase the effectiveness of educators; expand student access to the most effective educators...*

Personalized learning changes the role of teachers. Thinking through potential team-teaching models, new and differentiated teaching roles, models that extend the impact of great teachers, and innovative leadership that can spur personalized learning is imperative. For example, in new schooling models, some teachers may be content experts, others mentors or learning coaches, and still others non-academic mentors. The application sets clear goals for improvements in teaching roles and communication:

> *(C)(2)(a)(iv) Improve teachers' and principals' practice and effectiveness by using ... frequent feedback on individual and collective effectiveness, as well as by providing recommendations, supports, and interventions as needed for improvement.*

LEAs and consortia should look at supporting teachers with individualized real-time tools increasingly available through online professional development.

System-wide steps

Applicants must also think beyond small school-wide change to a broader re-imagining of the role and functionality of school districts. The application makes clear that competitive advantage will goes to those who have:

> *(A)(3) LEA-wide reform & change*
> *The extent to which the application includes a high-quality plan describing how the reform proposal will be scaled up and translated into meaningful reform to support district-wide change beyond the participating schools...*

Portfolio school model

Key resource:

- Center for Reinventing Public Education's Portfolio Strategy reports

To embark upon system-wide innovation, districts should adopt a mindset in which they see themselves as overseeing a portfolio of different types of schools, rather than running a set of similar "one-size-fits-all" schools. Moving to this portfolio mindset requires significant business model innovation for both the district and individual schools, as it requires the district to shift from running schools to instead seeing itself as an authorizer of schools and purveyor of supporting services to schools. Rather than viewing their charge as preserving the public schools in their geographical jurisdiction, public school boards and superintendents should view their mission as educating well all the students within that area. A critical function in this new model is that the district move beyond input-based standards that seek to dictate how schools teach students, which are anathema to innovation, and instead create outcome-based student growth standards to give innovators a common target toward which to improve. The district's job in this role would be both to shut down schools over time that do not perform up to par but also to help parents and students find the right school for their needs, thereby framing the creation of new schools as a constant chance for innovation to learn which types of schools serve which types of students best—and to acknowledge that no school will likely serve all students well.

The RTT–D application allows for this innovation, as it states that LEA central offices, or the consortium governance structure, should "provide support and services to all participating schools" (D)(1)(a) and makes clear that successful applicants will allow schools to act autonomously in the best interests of their particular student population. Specifically, it requires that leadership teams in participating schools have "sufficient flexibility and autonomy over factors such as school schedules and calendars, school personnel decisions and staffing models, roles and responsibilities for educators and noneducators, and school-level budgets."(D)(1)(b)

Move away from seat time to a competency-based system

LEAs and consortia are encouraged throughout the application to move to a competency-based system that does not rely on seat-time as the standard for measuring success.

(D)(1) The applicant has practices, policies, and rules that facilitate personalized learning by—

(c) Giving students the opportunity to progress and earn credit based on demonstrated mastery, not the amount of time spent on a topic;

(d) Giving students the opportunity to demonstrate mastery of standards at multiple times and in multiple comparable ways

This represents a distinct change from the first draft of the Executive Summary that the Department circulated for comment. Previously, student attendance was one of the required benchmarks of success. The removal of this clause would seem to indicate the Department's encouragement of a move toward competency-based learning. The application's description of learning ideals makes clear that applicants ought to espouse the principals of mastery by ensuring all students:

(C)(1)(A) (ii) Identify and pursue learning and development goals linked to college- and career-ready standards (as defined in the notice) or college- and career-ready graduation requirements (as defined in the notice), understand how to structure their learning to achieve their goals, and measure progress toward those goals;

(iii) Are able to be involved in deep learning experiences in areas of academic interest;

(iv) Have access and exposure to diverse cultures, contexts, and perspectives that motivate and deepen individual student learning; and

(v) Master critical academic content and develop skills and traits such as goal-setting, teamwork, perseverance, critical thinking, communication, creativity, and problem-solving

To bolster the likelihood that the adoption of blended learning does not maintain the current factory-model system but in fact transforms it into a student-centric one, it is imperative that states move beyond seat-time policies and create room for competency-based learning ones in which students make progress based on actual mastery of learning objectives. This change often requires state-level action to change education code, but without community and thought leaders pushing for this change, there is little impetus for legislators to take up the cause. Applicants ought to consider appealing to state-level stakeholders to make the necessary changes to state code, given that the competition requires "demonstrated evidence of— Successful conditions and sufficient autonomy under State legal, statutory,

Key resources:

- Competency Works
- Chris Sturgis, "The Art and Science of Defining Competencies," iNACOL, August 2012
- Susan Patrick and Chris Sturgis, "Cracking the Code: Synchronizing Policy and Practice for Performance-Based Learning," iNACOL, July 2011

and regulatory requirements to implement the personalized learning environments" (B)(3) to do away with seat-time and attendance requirements, relying instead on human growth.

Applicants are required to put forward their own "ambitious yet achievable performance measures, overall and by subgroup, with annual targets for required and applicant-proposed performance measures." (E)(3) LEAs and consortia should center their performance goals on student-growth gains and set benchmarks with an eye toward competency (or mastery) given Application Requirement that applicants measure "all student progress and performance against college- and career-ready graduation requirements." (3)(c)(iv)(B)(2) Focusing on student progress represents an important step forward toward creating a student-centric system.

Data systems

Growth and competency-based models require strong data systems. "A robust data system" is an eligibility requirement, but applicants ought to think beyond the Department's language that this data system has at a minimum:

> *(3)(c)(iv)(C)(1) An individual teacher identifier with a teacher-student match; and*
> *(2) The capability to provide timely data back to educators and their supervisors on student growth*

The application details more about what a successful data system will include:

> *(C)(1)(b)(iv) Ongoing and regular feedback, including, at a minimum—*
> *(A) frequently updated individual student data that can be used to determine progress toward mastery of college- and career-ready standards…or college- and career-ready graduation requirements;*
> *(D)(2) The LEA and school infrastructure supports personalized learning by-*
> *(c) Using information technology systems that allow parents and students to export their information in an open data format…and to use the data in other electronic learning systems (e.g., electronic tutors, tools that make recommendations for additional learning supports, or software that securely stores personal records); and*
> *(d) Ensuring that LEAs and schools use interoperable data systems…(e.g., systems that include human resources data, student information data, budget data, and instructional improvement system data).*

Growth and competency-based models require a data system that captures real-time data and yearly growth through Common Core and college and career-readiness standards. In a competency-based model, these standards move from broad goals tested annually to a real-time learning map in which skills must be defined in small, clear increments. To understand the requirements of such a data system that powers a competency-based learning model, see Innosight Institute's case study of Western Governors University.

Curriculum choices and procurement

Software and online courseware is a necessary element of blended learning. Applicants must be thoughtful in choosing whether to buy or build their own technologies. It may be unnecessary and unhelpful to re-invent the wheel and have individual teachers craft courses from scratch, for example. Given the wealth of free and open education resources, online courses, and supplemental software tools, applicants will likely have to make tough decisions about the best options for their students. EdSurge's database of providers, which includes teacher reviews of various products, may prove helpful when considering options, although districts should not spell out any choices they make in advance. Per the Department's instructions in Section XVIII, "Because grantees must use appropriate procurement procedures to select contractors, applicants should not include information in their grant applications about specific contractors that may be used to provide services or goods for the proposed project if a grant is awarded."

The application provides some guidance of what LEAs should be looking for in providers and resources. Most explicitly it states that students must have:

> *(C)(1)(b)(ii) a variety of high-quality instructional approaches and environments; (iii) High-quality content, including digital learning content…as appropriate, aligned with college- and career-ready standards…or college- and career-ready graduation requirements*
> *(iv) (B) Personalized learning recommendations based on the student's current knowledge and skills, college- and career-ready standards…or college- and career-ready graduation requirements…and available content, instructional approaches, and supports;*

Key resources:

- NewSchools Venture Fund open letter to the U.S. Department of Education, June 2012
- California Learning Resource Network, 2012

The software requirements are made even clearer in the section devoted to teaching. It is interesting to note that, although not an eligibility requirement, in this section the application states that available resources *must* include:

> *(C)(2)(b)(i) Actionable information that helps educators ... identify optimal learning approaches that respond to individual student academic needs and interests;*
> *(ii) High-quality learning resources (e.g., instructional content and assessments), including digital resources, as appropriate, that are aligned with college- and career-ready standards...or college- and career-ready graduation requirements…and the tools to create and share new resources; and*
> *(iii) Processes and tools to match student needs…with specific resources and approaches…to provide continuously improving feedback about the effectiveness of the resources in meeting student needs.*

Procurement presents unique opportunities to align more stakeholders around student outcomes. States in places like Florida and Utah have already created mechanisms through which they pay online learning providers in part based on student outcomes. For example, in Utah, an online learning provider receives 50 percent of funds up front for serving students but only receives the other 50 percent when a student successfully completes a course. This helps align incentives around actual student learning. Where possible, applicants ought to define successful student learning based on students passing objective, on-demand performance assessments. Applicants can move into performance-based contracts now without waiting for state legislatures to act. Recently McGraw-Hill entered into a performance-based contract with Western Governors University for its content, which suggests that even traditional textbook publishers might be open to these sorts of innovative contracts. Districts could offer the schools they authorize the opportunity to enter into different sorts of these arrangements with different vendors.

Key resources:

- John Bailey, Carri Schneider, and Tom Vander Ark, "Funding the Shift to Digital Learning: Three Strategies for Funding Sustainable High-Access Environments," Digital Learning Now, August 2012
- Christine Fox, John Waters, Geoff Fletcher, and Douglas Levin, "The Broadband Imperative: Recommendations to Address K–12 Education Infrastructure Needs," SETDA, 2012
- Parents for Choice in Education, "Statewide Online Education Law Summary 2012"

Infrastructure and connectivity

> *(D)(2) The LEA and school infrastructure supports personalized learning by— (a) ensuring that all participating students..., parents, educators … and other stakeholders (as appropriate and relevant to student learning), regardless of income, have access to necessary content, tools, and other learning resources both in and out of school to support the implementation of the applicant's proposal;*

To support a move to blended learning, LEAs must help schools have the proper Internet connectivity, as well as work with cities to ensure that students have adequate Internet access. LEAs and states should use their scale to negotiate good contracts that schools can opt in to and provide expertise as a service to help schools implement and maintain their infrastructure wisely.

Community engagement

As LEAs and consortia begin to craft their application, they must be purposeful about engaging stakeholders in the process given the requirement that "each LEA has demonstrated evidence of— meaningful stakeholder engagement in the development of the proposal and meaningful stakeholder support for the proposal."

It is important to gain buy-in from educators on the front lines who will be working directly with students and to help educators see that the move to online and blended learning is not motivated by a desire to replace teachers with technology. Applicants should consider hosting a convening in order to both engage and educate stakeholders. Recently the Rhode Island Department of Education held a large and successful conference for the district teachers, principals, parents, and administrators in its state to establish a common language, understanding, and strategies for growth of digital learning in the state to spur educators on the front lines to lead the innovation. As districts move to a portfolio model of schooling, they ought to move into this educational role for educators as well and hold similar convenings.

Key resources:

- Richard A. Delorenzo, Wendy J. Battino, Rick M. Schreiberand, and Barbara Gaddy Carrio, "Delivering on the Promise: The Education Revolution," Solution Tree, Bloomington, Ind., 2009
- Meg Evans, "Convening Rhode Island around digital learning," Innosight Institute, June 2012
- Rhode Island Department of Education's Innovation Powered by Technology Conference, February 2012

Conclusion

Moving to a personalized learning system powered by digital learning has the potential to transform our education system. This holds particular promise for LEAs that have traditionally struggled to meet the needs of a diverse group of students. With a focus on student growth and individual learning goals, each student has the potential to achieve.

Although there are challenges that stand in the way of this change, there are concrete steps that applicants can take to move toward this reality. Beginning with the low-hanging fruit of moving elementary schools to a Station-Rotation model and expanding into wide-ranging individual course options for high school students, removing seat-time requirements and focusing on growth metrics, applicants can

stand as a model for the nation on how to capture the potential of online and blended learning.

Although innovation has sprouted up in pockets around the nation in charter networks and within districts, there has yet to be a full systematic re-imagining of an entire district with disruptive innovation in mind. The RTT–D competition has the potential to spur this innovation. LEAs should take the opportunity to move beyond the low-hanging fruit of implementing flipped classrooms and tech-rich learning environments in line with the recommendations and resources presented above. There is tremendous opportunity for innovation and the creation of a student-centric education system right now. LEAs must seize the moment.

About Innosight Institute

Innosight Institute, founded in May 2007, is a 501(c)(3) not-for-profit think tank whose mission is to apply Harvard Business School Professor Clayton Christensen's theories of disruptive innovation to develop and promote solutions to the most vexing problems in the social sector.

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