NEXT GENERATION
LEARNING CHALLENGES

#MeasuresThatMatter

MEASURES THAT MATTER MOST

How Do Next Generation Educators Measure Success?

June 2016

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Executive Summary /

We are Next Generation Learning Challenges (NGLC). We represent some of the nation's most innovative school models across both the charter and district sectors. The schools in our network are piloting ideas such as personalized learning, competency-based learning, deeper learning, blended learning, student-centered learning, among other approaches.

This report marks the first time we have asked our network of innovators to lend their voice to a critical set of questions: how should we go about measuring the success of an educational innovation? What measures matter most?

Funders and policymakers are eager for evidence of success of the new models. Yet there does not currently exist a consensus on how to measure the success of educational innovation. For this report, we decided to turn to our own community of educational innovators to discuss what measures matter most to them. We also asked our network what measures they would like to see more of in the future. We were particularly interested in highlighting the different approaches and methodologies that our community of next generation educators find useful in measurement. By consulting those on the frontlines, we believe that we will elevate the national conversation.

Our research took several forms including an original survey we administered to all NGLC national grantees. Here is what we found:

- Next generation educators are actively measuring success using both traditional and nontraditional measures;
- Next generation educators consider multiple stakeholders such as students, teachers, families, and the organizational health of their schools in measuring their success;
- Next generation educators value both short-term measures and long-term measures equally;
- Next generation educators want more longitudinal data, validated performance-tasks and formative assessments, and systems such as badging to measure student outcomes;
- Next generation educators use a variety of data collection methodologies including classroom observation tools, Improvement Science techniques, statistical analyses, and software data to gather evidence of success.

We hope this report serves as a call to action for funders, researchers, and practitioners to join together to create better measures of next generation learning.

Overview /

As long as there have been public schools in the United States, there have been efforts to reform, improve, and innovate. Most attempts to improve schools are based on working hypotheses about how students should learn, how adults should teach, or how institutions should be organized. Educational entrepreneurs often test working hypotheses and refine them over time, adding in new ideas, approaches, or tools. While the innovations are well-meaning, most new ideas in education are rarely tested before being introduced at scale. Education researchers try their best to develop an evidence base for innovation but the industry is highly complex and educational interventions involve multiple variables that are hard to isolate. In many cases, the most important outcomes of an effective education only accrue over an individual's lifetime.

In 2012, Next Generation Learning Challenges (NGLC) began investing in new models based on a series of working hypotheses that student outcomes would improve if school leaders had greater flexibility to reimagine the key variables of a traditional school or college degree program.

Specifically, NGLC challenged educators working in K-12 education to propose approaches that are staked to rigorous college and career-ready outcomes and that integrate elements of the following:

Personalized Learning / Approaches that individualize learning for each student based on specific student strengths and needs, student interests, and/or individualized goals. Source: Next Generation Learning Challenges

Competency-Based Learning / Approaches that allow students to advance along a learning continuum based on mastery of a given content, rather than based on credits or seat time. Source: CompetencyWorks

Deeper Learning / Approaches that enable critical thinking and problem-solving, effective communication, collaboration and self-directed learning. Source: The Hewlett Foundation's Definition of Deeper Learning

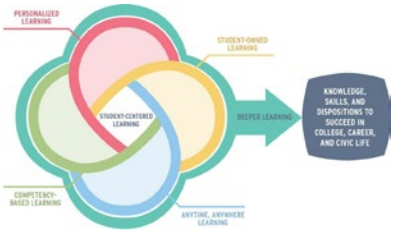
Blended Learning / Approaches that employ online, adaptive curricula and other technology to enable flexibility in time, place, path, and pace. Source: The Clayton Christensen Institute

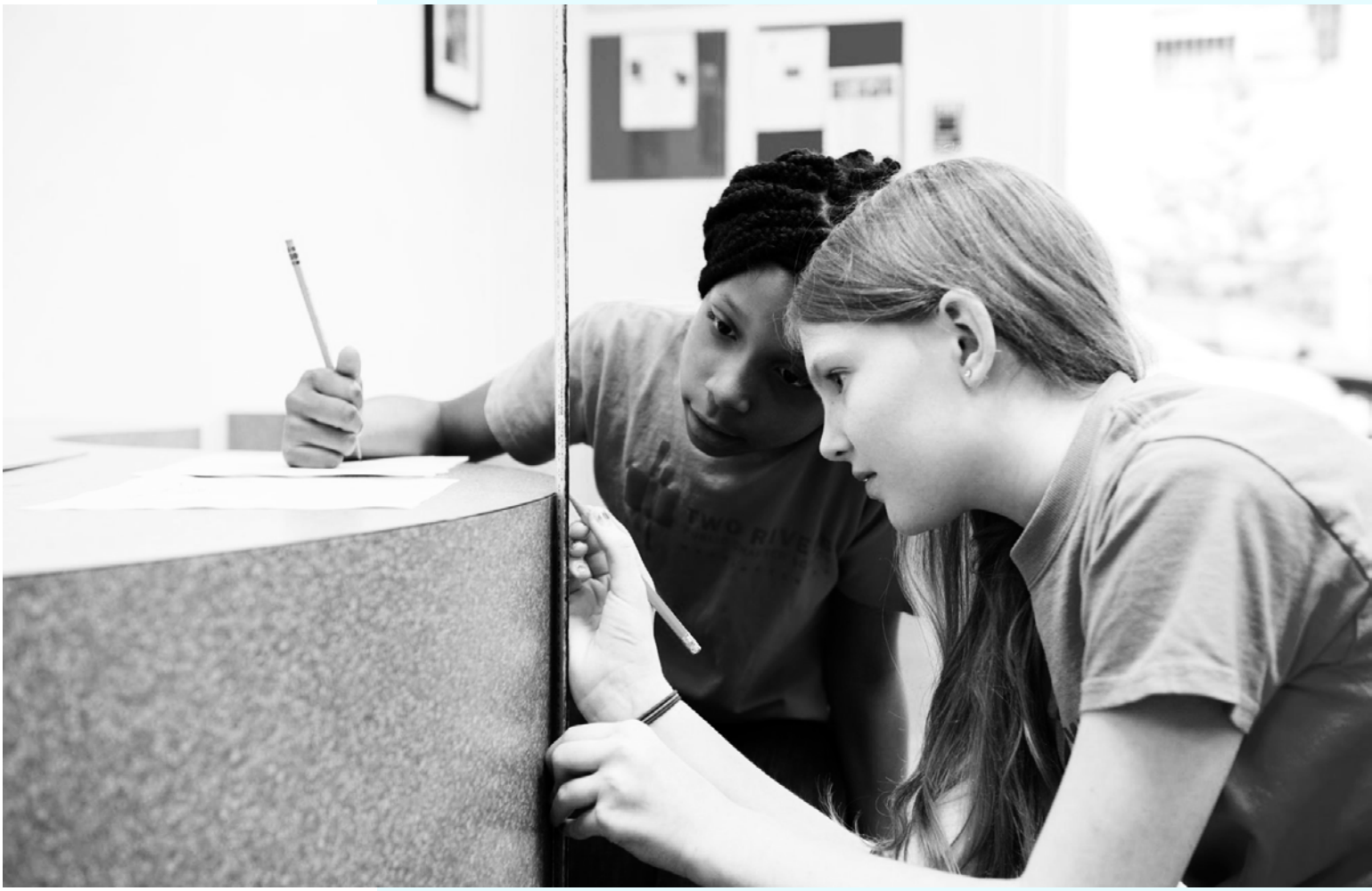
Student-Centered Learning / Approaches that enable students to exert control over their own learning; are competency-based, personalized, and take place anytime and anywhere. Source: Students at the Center Hub

As of 2016, Next Generation Learning Challenges had awarded funds to nearly 80 schools; about half of the schools have received direct funding as national grantees, and half have received funding through regional incubators.[1] About two-fifths (42%) of our grants have been awarded to district schools and 58 percent to charter schools. Grantees represent the diversity of the American educational landscape—they are located across all regions of the country and in rural, urban, and suburban communities. Most schools in the network serve enrollments comprising at least 40% of students eligible for free and reduced-price lunch. Funding for NGLC has come from the Bill & Melinda Gates Foundation, the Eli and Edythe Broad Foundation, and the Michael & Susan Dell Foundation.

The Next Generation Learning Challenges portfolio includes an intentionally diverse set of academic models such as project-based learning schools, Montessori schools, blended learning schools, schools innovating with gamification and virtual experiences, and schools that have redesigned the roles of teachers and students. A few partner organizations are currently taking the lead in defining personalized learning for the field. The following frameworks, among others, inform our work:

- LEAP Innovations' Personalized Learning Framework
- Jobs for the Future and The Nellie Mae Foundation's Students at the Center Framework
- Summit Public Schools' Framework for Personalized Learning
- Next Generation Learning Challenges' MyWays Student Success Definition



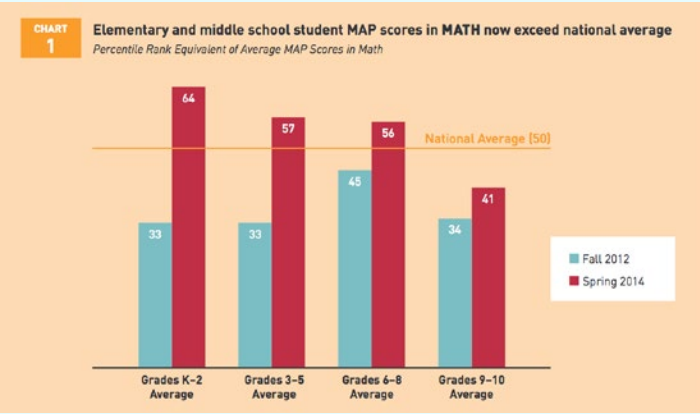


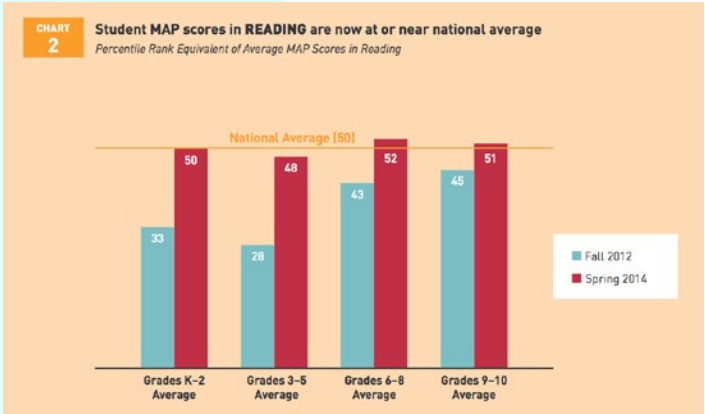
The Evidence Base for Next Generation Learning /

Collecting evidence of next generation learning is difficult given the diversity of approaches described above. It is hard to isolate the true effect of an innovation as, in most instances, there are many variables at play in a school redesign including powerful teacher effects and a strong selection bias for those who would choose to attend or work at an innovative school.

Nonetheless, there has been initial progress in measuring the academic performance of students in next generation learning schools. The Gates Foundation commissioned an independent study conducted by the RAND Corporation to develop a study that compared student growth in a set of schools employing a personalized learning model with similar schools teaching a more traditional direct-instruction model. The study found that schools that self-identified as using personalized learning achieved higher levels of growth on the NWEA-MAP assessment in mathematics and English Language Arts (ELA). Site visits, interviews, and surveys confirmed the widespread and evolving use of personalized and blended learning pedagogies in NGLC schools.[1]

While the results from RAND's study point to promising academic growth in schools employing personalized learning methods, there are other metrics that matter to schools, teachers, parents, and students outside of ELA and math performance at a single moment in time.This project began as a natural complement to the RAND study; we wanted to know what measures mattered most for educators who have a broad definition of student success.





The Challenge of Education Research /

For decades, educators have used the term "research-based practice" quite informally. The field of education research encompasses a range of methodologies drawn from the social sciences including, for example, from fields as diverse as economics, psychology, cognitive science, and anthropology. In many cases, claiming an idea or approach to be backed by research has become commonplace because of the absence of a consensus on what a research-based practice truly means. In 2002, Congress created the Institute for Education Sciences (IES) to "provide rigorous evidence on which to ground education practice and policy," and to ensure that federal funding helped support research that met meet a "gold standard" of research. IES has created a set of practice guides for practitioners to help collect rigorous evidence around a given approach.

While the federal efforts are a step in the right direction, waiting several years for a gold standard study to show the effect of a specific intervention does not help busy practitioners solve for immediate information gaps. For educational innovators who are piloting models that extend beyond traditional practice, the need to quickly test the efficacy of a new approach or tool is especially critical. In many cases, a school leadership team may have one summer to plan for and implement a new curriculum that will be in place for the entire subsequent school year.

In recent years, many educational entrepreneurs have turned to methodologies used in other industries, most notably in the high-tech and start-up sectors. Design-Thinking and Lean Startup methodologies have proved particularly popular as a way for educators to quickly test the viability of an approach, refine the intervention, and test again—hopefully running through the cycle several times in one school year.

Similarly, the field of Improvement Science—popularized in both the health and business sectors—allows educators to identify their own problems, collect data, and work towards practical solutions. Tightly-focused mini-analyses repeated over time build an evidence base, despite the inherent limitation of self-reported data.

In our work at Next Generation Learning Challenges, we have participated in analyses of all types—from multi-year analyses to data collected from short feedback cycles. We often see each methodological approach being employed in isolation from one another and wonder what the field of education would look like if a mixed methodological approach could be standard practice.

The Goals of the Project /

In dreaming up this project, next generation educators told us that it would be helpful to learn how some of the most innovative schools in our country measure the success or failure of their own innovations. Funders and policymakers were curious to understand what measures and measurement approaches mattered most to next generation educators on the forefront of new ideas in education. We were also interested in understanding what measures school innovators were considering for future use to help inform funding and policy decisions.

We began the project with many open questions:

- **Short-Term Success?** How do next generation educators think about the success of their innovation in the short-term for improvement purposes? What measures, processes, and methods do they rely on to answer a key question: How do you know your innovations are working?

- **Long-Term Outcomes?** In the long-term, we were curious about how, ultimately, next generation educators measure their richer and deeper definitions of success.

- **Methods?** We had heard a lot of complaints from our next generation educators that traditional forms of research that relied on typical measures of achievement were limited in the usefulness of information they provide. We were curious about the methods of feedback and measurement innovators do find useful to their emerging practice.

With this project, we begin a hunt for a new measurement framework for innovation in education.

The Organization of the Report /

To help answer our research questions, we employed a mixed methodology that included four discrete activities:

1. We held more than 20 in-depth conversations with key practitioners, researchers, and thought leaders.

2. We reviewed salient literature on the existing evidence base for personalized learning, one-to-one tutoring, blended learning, and other innovative models (see Appendix A).

3. We administered an original survey to the leaders of 42 innovative schools: 41 NGLC school leaders and one district leader who has overseen a personalized learning innovation in the district's schools for over three years. The survey was long and required the uploading of materials and artifacts. To honor respondents for their time, we awarded a $250 stipend to those who participated in the survey (Appendix B provides details on the survey methodology).

4. We dug deep on eight schools or networks of schools piloting measurement frameworks for personalized or next generation learning. We included case studies developed by innovators across both the charter and district sectors. We asked those participating in our case studies to share resources and tools that practitioners could readily use.

This report of our findings is divided into three parts:

- In Part A, we report on the original survey data collected from next generation schools. We discuss how next generation educators talk about their schools' innovations, what measures matter most, and what measures they are considering for the future.

- In Part B, we explore the variety of methodologies and tools next generation educators use to collect evidence of their innovations. We highlight eight schools or networks of schools that are working to collect evidence of success.

- In Part C, we conclude with specific steps that the consumers of evidence— practitioners, researchers, and funders—can take to help improve the evidence base behind innovative school models and listen more closely to the measures that matter most.

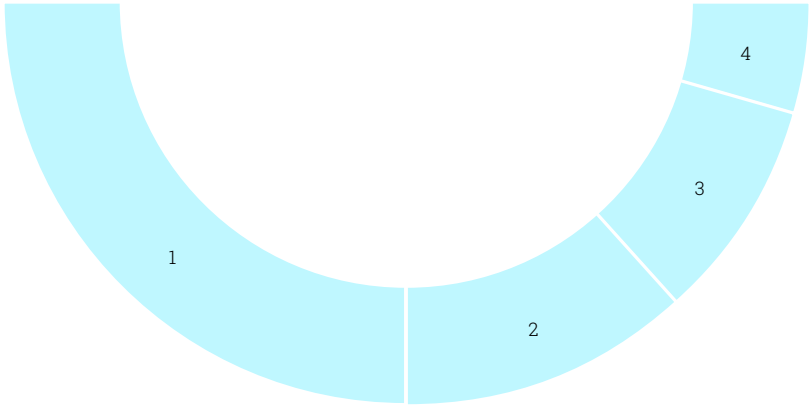
PART A: Measures That Matter Most: How Do Next Generation Educators Measure Success? /

1. Intrinsic Schools (Chicago, IL)
2. Fullerton School District* (Fullerton, CA)
3. Design Tech High School (San Mateo, CA)
4. Blackstone Valley Prep Mayoral Academy (Cumberland, RI)
5. Virtual Learning Academy Charter School (New Hampshire)
6. Alpha Public Schools (San Jose, CA)
7. Two Rivers Public Charter School (Washington, DC)**
8. Generation Schools Network (Colorado and New York)
9. Foundations College Prep (Chicago, IL)
10. Summit Public Schools (California and Washington State)
11. Alliance College-Ready Public Schools (Los Angeles, CA)
12. The Workshop School, Philadelphia Public Schools (Philadelphia, PA)
13. Schools for the Future (Detroit, MI)
14. Building 21, Philadelphia Public Schools (Philadelphia, PA)
15. Steam Academy, Fayette County Public Schools (Lexington, KY)
16. The Incubator School, Los Angeles Public Schools (Los Angeles, CA)
17. Piedmont Middle School, Piedmont City Schools (Piedmont, AL)
18. Metro Institute of Technology, Columbus City Schools (Columbus, OH)
19. Thrive Public Schools (San Diego, CA)
20. Matchbook Learning (MI and NJ)
21. Vertus Charter School (Rochester, NY)
22. Venture Academy (Minneapolis, MN)
23. Montessori For All (Austin, TX)
24. Caliber Schools (Richmond, CA)
25. E3 Civic High, San Diego Public Schools (San Diego, CA)
26. Valor Collegiate Academies (Nashville, TN)
27. Ednovate / USC Hybrid High (Los Angeles, CA)
28. Da Vinci Schools (Hawthorne, CA)
29. Cornerstone Charter Schools (Detroit, MI)
30. Brooklyn Laboratory Charter School (Brooklyn, NY)
31. Ingenuity Prep (Washington, DC)
32. Anonymous
33. Anonymous

Who Are Next Generation Schools?

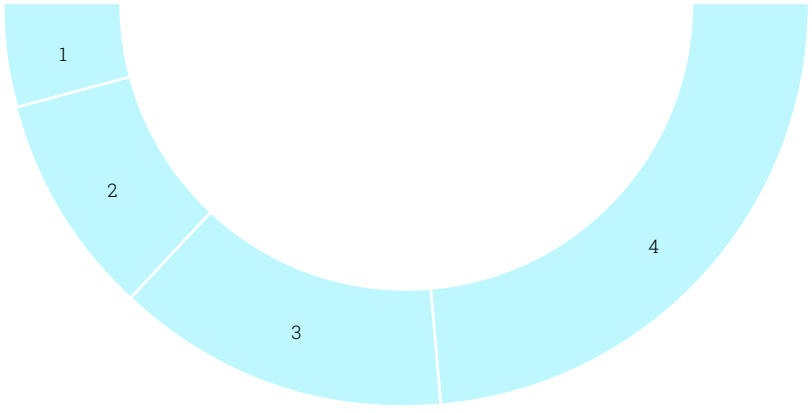
All schools responding to our survey have been implementing next generation approaches for at least two years, and many of them have been piloting and experimenting with personalized learning and other methods for a longer period of time. We collected data on the following characteristics of schools: school size; grades served; governance models (charter, district, or other); and the percentage of students who qualify for free and reduced lunch.

Who Manages Next Generation Schools?



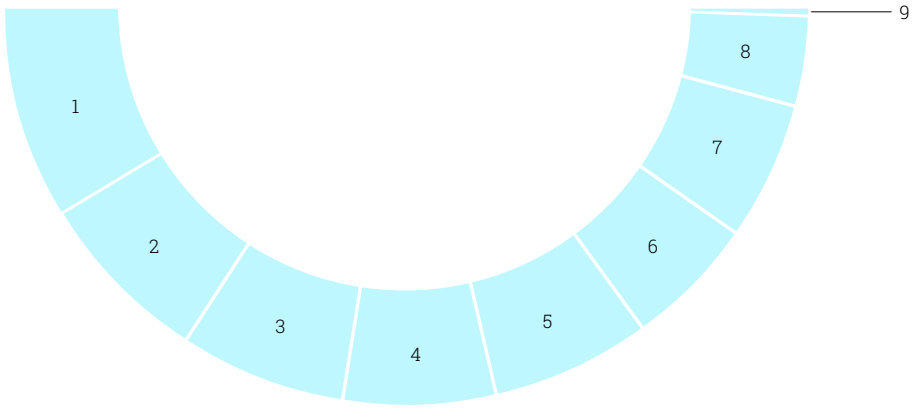
1. CMO (50%)
2. School District (24%)
3. Single Charter (18%)
4. Other (8%)

Next Generation Schools and Percentage Students Eligible for Free and Reduced Lunch



1. 9% serve 10–25% of students who qualify
2. 18% serve 25–50% of students who qualify
3. 26% serve 50–75% of students who qualify
4. 47% serve 75–100% of students who qualify

How Do Next Generation Educators Describe Their Models?

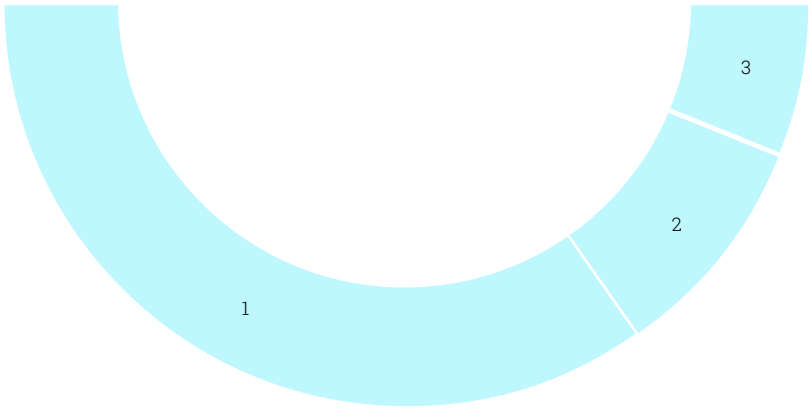


1. Personalized Learning (18%)
2. Blended Learning (14%)
3. Project-Based / Experiential Learning (13%)
4. Competency-Based Learning (12%)
5. Focus on Social-Emotional Supports (12%)
6. Deeper Learning Goals for Students (11%)
7. Student-Centered Learning (11%)
8. Innovative Staffing Model (8%)
9. Gamified Learning (1%)

Summary /

We asked the school leaders to describe what ideas are "core to their model." We allowed respondents to choose several categories because we recognize that many innovations contain several integrated parts. We were not surprised to see that the terms "personalized learning" and "blended learning" proved the most popular with our next generation educators.

Are Your Innovations Related to Instructional Inputs or Student Outcomes?

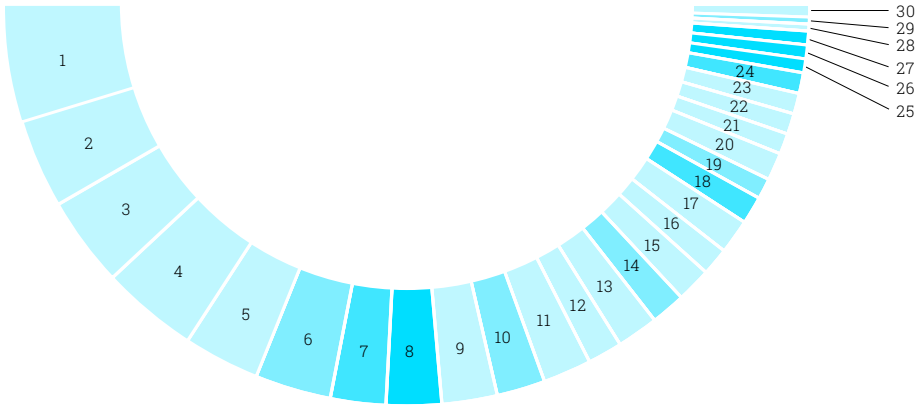


1. 90.91% of respondents said their innovations relate to changes in student outcomes **only**
2. 24.4% of respondents said their innovations relate to changes in instructional inputs **only**
3. 15.5% of respondents said their innovations relate to **both** changes in student outcomes and changes in instructional inputs

Summary /

We asked whether our innovators consider their key innovations to be primarily related to changes in the "inputs of learning" (i.e.-instructional delivery and design) or the outcomes of learning (i.e.- changing the definitions of success). The vast majority of the next generation educators in our study believe that their models involve changes to both the inputs and outcomes of learning.

How Do You Know Your Innovations Are Effective by Stakeholder?



STUDENT
STAFF
SCHOOL
FAMILY

1. State Testing/Common Core
2. NWEA MAP
3. Teacher-Generated Assessments
4. Student Surveys
5. Rubric-Based Evaluation
6. Staff Surveys
7. School Culture
8. Family Surveys
9. Student Conversations & Focus Groups
10. Teacher Conversations & Focus Groups
11. PSAT/ACT/SAT & College Entrance Req.
12. Social Emotional Learning
13. Student Progress on Individual Goals
14. Teacher Practice
15. Standardized Formative Assessments
16. External Evaluation
17. Student Pace on Mastery
18. Student Ownership of Learning
19. Student Retention
20. Student Attendance
21. Rate of Adoption w/in School
22. College Enrollment
23. Student Projects
24. Family Conversations & Focus Groups
25. College Persistence
26. Performance Relative to Other Schools
27. Replication by Other Schools
28. Student Enrollment
29. Staff Retention Rate
30. Credit Accumulation

Summary /

We asked the Next Generation educators to tell us how they know that their innovations are working. We asked the question in a few ways and found the qualitative responses to be highly similar. We tagged the qualitative responses in order to be able to quantify them (Appendix B provides a full description of the tags). Our tags are based on categories that emerged from the analysis of the data rather than on the prompts in our survey.

Overall, We Found That:

- All respondents listed at least three measures or tools. Many listed more, suggesting that **next generation educators are focused on measurement and use a broad range of assessment and evidence-gathering strategies.**

- All respondents listed measures beyond traditional content assessment. Examples include internally developed, performance-based assessments; badging systems; and assessments of social-emotional skills. The findings suggest that **next generation educators have an expanded definition of student success and are supplementing traditional assessments.**

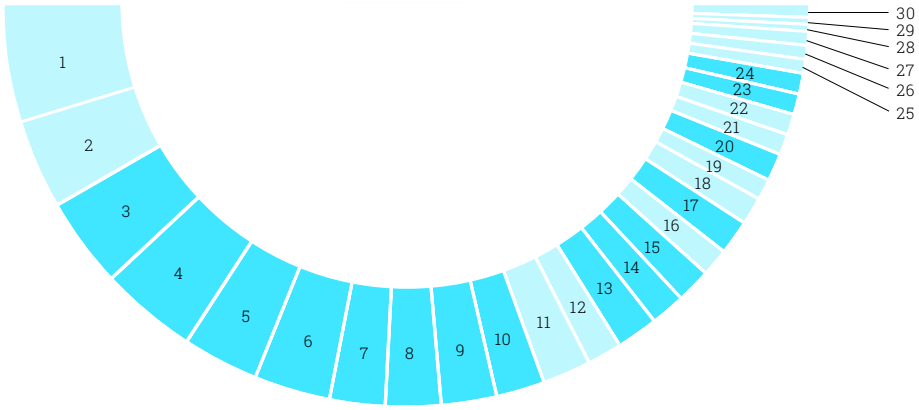
- Thirty-five of the 42 schools identified standardized tests such as the NWEA-MAP or the Common Core Assessments in their answers, suggesting that, despite new approaches, **next generation educators continue to value traditional measures of content knowledge and critical thinking such as the NWEA-MAP examination or the Common Core Assessments.**

When we tagged the data by school stakeholder, we found that next generation educators use a wide range of both traditional and nontraditional measures to determine if their innovations are improving learning but that they also tap a diversity of actors to measure success. Measures involve stakeholders such as students, staff, and families. Some measures assess the organizational health of the school. For example, respondents to surveys of parents, teacher practice, and other measures frequently mentioned the school's organizational health. While we do not have a comparative data set, we do hypothesize from this finding that next generation educators have broadened their key constituencies over time. Even though schools have administered parent and student surveys for decades, we hypothesize that the new set of innovative schools is critically focused on stakeholder satisfaction, in large part because so many schools in the data set are new schools concerned with enrollment and retention issues.

In addition, next generation schools define success in ways that extend beyond proficiency on state tests in mathematics and ELA and therefore may also use surveys to monitor self-reported perceptions (among students and parents) of progress in social-emotional and intra- and interpersonal skills such as self-direction, collaboration, and goal-setting.

Please note, the low numbers of high school-related measures might reflect the low number of schools serving 11th and 12th graders in our sample.

How Do You Know Your Innovations Are Effective by Time Period?



GREATER THAN 6 MOS

LESS THAN 6 MOS

1. State Testing/Common Core
2. NWEA MAP
3. Teacher-Generated Assessments
4. Student Surveys
5. Rubric-Based Evaluation
6. Staff Surveys
7. School Culture
8. Family Surveys
9. Student Conversations & Focus Groups
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30. Credit Accumulation

Summary /

Here we report on success measures that are short-term (less than six months) and long-term (greater than six months). We were interested in understanding whether next generation educators consider success in either short-term or long-term measures. We took six months as our cut-off between short and long-term because data that is gleaned within a six month period (survey data, formative assessment data, etc.) can be used for internal improvement within the school year; data collected in cycles longer than six months require multi-year improvement processes. We found an even split in time period, indicating that the innovators value both short-term and long-term measures of success.

What Measures Are You Considering for the Future?

We asked our next generation educators to share what tools they are considering using in the future. Here were the most commonly mentioned measures:

- **Student Longitudinal Data** from measures of academic content, academic skills, and social-emotional skills;
- **Student Badging** as measures of students' academic skill;
- **Validated Performance Tasks** to measure content knowledge;
- **Evaluations of Support Programs** for social-emotional supports.

Across the board, longitudinal data for students seem to be the kind of measure that next generation educators want more of in the future.

Badging also appears to be a method of measurement that next generation educators value and want more of from the industry moving forward. Next generation educators are eager for better, validated short-term formative assessments like externally-sourced performance tasks demonstrating both content knowledge and formative assessments of students' academic and social emotional development. We observe that many of these measures are currently being developed internally by schools—a process that can be time consuming for teachers and educators. Innovative educators are looking for external expertise in helping to develop innovative measures like performance tasks to both save time and to ensure proper validation.

Student Longitudinal Data

Student Badging

Validated Performance Tasks

Evaluation of Support Programs

Taken together, the data reported here reflect a picture of an innovative space in education that is intensely focused on measurement aligned with both traditional and expanded definitions of success. Next generation educators value multiple measures, measures that involve several actors (family, parents, students, teachers), measures that are longitudinal, and measures that provide both short-term and long-term data. These preliminary data, emerging from one of the nation's most advanced cohort of redesigned schools, provide a roadmap for funders, policymakers, and technologists to help deliver measures that mwtter most.

Part B: Promising Measurement Tools and Resources /

Through our research, we identified eight next generation schools and school networks that are developing new measurement frameworks for next generation learning. We focused on schools that have at least three or more years of innovation under their belt and have a particular focus on measurement. We intentionally chose a diverse set of school models to show the breadth of both the type of innovation and the type of measurement approaches used to collect evidence.

The tools and resources are presented within mini case studies organized by the school or organization that is designing, testing, and using them. A full description of their approach to next generation learning is outside the scope of the report, but we provide links where you may learn more. We hope that educators considering innovating with next generation learning will find the tools and resources useful:

- **Two Rivers Public Charter School** (Washington, DC): Developing short performance tasks that measure the transferability of deeper learning skills.
- **Fullerton School District** (Fullerton, CA): Measuring student engagement through student surveys, game data, and a controlled experiment.
- **Cornerstone Charter Schools** (Detroit, MI): Using student and teacher survey data, classroom observations, and student achievement to measure personalized learning.
- **LEAP Innovations** (Chicago, IL): Using student and teacher survey data, classroom observations, and student achievement to measure personalized learning.
- **Shue-Medill Middle School and the Carnegie Student Agency Improvement Community** (DE, VA, NY, CA, WA): Using the tools of improvement science to measure student agency and motivation.
- **Summit Public Schools** (CA and WA): Measuring what we value through multiple forms of assessment.
- **National Center for Montessori in the Public Sector** (United States): Using classroom observation to assess learning that supports the development of executive functions, literacy, and social and emotional skills.
- **Enlarged City School District** (Middletown, NY): Using a personalized learning implementation framework to measure classroom practice.

Next generation educators are drawn to different methodologies and measurement approaches. Some rely primarily on leading indicators of implementation. Others prefer satisfaction surveys or instantaneous data feedback. For still other next generation educators, improvement science tools and the offer of a networked community are most appealing. At this time, there is very little consensus in the field on the right methodology for measurement of an innovation's impact even when the innovations are similar. We believe that the diversity of methods and approaches is important to maintain and support so that educational innovation may continue to thrive. This report is a first step but more could and should be done to share measurement tools and resources among next generation educators.

Part C:
A Call to Action for Practitioners, Funders, and Researchers /

As funders of innovation in education, we feel a particular responsibility to support the collection of evidence that anchors our work. We understand the complexity and challenge of creating an evidence base that provides both immediate, helpful feedback for improvement and longer-term analyses of student outcomes. We need both types of evidence. Ideally, practitioners and researchers can work together in a mutually-supportive way to help provide such evidence. Based on our findings, we propose next steps for different stakeholders interested in developing "measures that matter most."

For Educators:

We encourage you to choose a methodology that works for you and one that your teachers and leaders can easily implement. We hope the resources and tools provided here, especially in the case studies, provide you with several, usable tools to immediately begin rethinking measurement strategies in your own school. If you are interested in sharing your expertise with funders and researchers working to develop a new measurement framework for education, be in touch with us here.

Tweet your ideas #NGLCMeasuresthatMatter
Contribute a blog for our Next Generation Learning blog
Learn more about Next Generation Learning here
Learn more about our Assessment for Learning Project here

"I've been a teacher and school leader in Maryland, Louisiana, Illinois and California. In the seven years that I've been in education, I've seen how new, next generation learning models are impacting our classrooms. Education innovators are experimenting with personalized learning models, blended learning models, competency based models—promising concepts that will better prepare each individual student for the future. And these are just a few of the ideas reshaping education. The field is awash in new terms and approaches, which is all to say that educators are experimenting and refining their practice day in and day out. It's okay that the terms are messy right now. It's a natural part of the process. The movement is maturing as folks are working to define and clarify these terms. "Measures that Matter Most" is another step in that process. We've asked educators like me to speak out on how they are measuring the success of their innovations, no matter how they define them. Finally, we are listening to the voices of the educators."

—**Jin-Soo Huh**

Jin-Soo Huh
Personalized Learning Manager
Alpha Public Schools
San Jose, CA

For Researchers:

We encourage researchers to continue to work with practitioners to provide helpful, formative evidence that embraces multiple-methodologies and where the sample sizes are large enough to draw conclusions without too many caveats. We call on researchers to consider how evidence from measures can be fruitfully combined and used in concert (and when it shouldn't be). We further encourage next generation research to take, as a starting place, what we know about good instruction and about how people learn.

Laura Hamilton
The Rand Corporation

"We've been fortunate to work with Next Generation Learning Challenges (NGLC) and other organizations to collect high-quality evidence related to implementation and outcomes in schools implementing personalized learning models, and we've identified two factors that we think are particularly valuable for supporting this kind of research.

First, we need long-lasting, collaborative partnerships between researchers and practitioners. These should be true partnerships in which practitioners provide input into all aspects of the study and are engaged from the design stage to the dissemination stage. We would encourage funders to invest in such partnerships, and we hope that organizations like NGLC will be interested in collaborating with research organizations in this way.

The second factor that we should be addressing is the need for better measures of classroom instruction. We have good methods to document aspects of school models such as use of technology and reconfiguration of staffing. But any effects on student learning are likely to occur in large part as a result of high-quality instruction, and we currently do not have good methods to measure instruction in classrooms that implement the kinds of personalized learning approaches that many of the NGLC schools have adopted. Most of the available, validated measures of instruction rely on surveys, logs, or observations that were developed for use primarily in traditional classrooms where it is possible to monitor what the teacher does and to infer that all of the students in the class are exposed to the same instructional practices. There is a need for innovative methods that can capture the experiences of all students in personalized learning classrooms.

—**Laura Hamilton**

For Funders and Policymakers:

We call on you to help support long-lasting practitioner/researcher relationships as Laura Hamilton so eloquently described. The development of new tools that measure student learning rather than following the teacher will require a sustained investment of time and resources. At the same time, next generation educators need philanthropy to support their risk taking and measures that recognize risk-taking.

> "Researchers, policymakers and funders are all working hard on determining the right set of indicators for measuring student and school success. However one crucial and somewhat missing voice in this conversation is that of the educator. The question driving this report was simple: What do the educator teams at next generation schools care most about measuring?
>
> With that question in mind, we've been excited to support the creation of this report to elevate those voices in answering the question of "What's working?" And "How do we know?"
>
> We hope this report spurs a broader conversation and progress against two goals:
>
> 1. When it comes to sharing outcomes, building consensus between funders and practitioners on what measures matter most.
>
> 2. Identifying and amplifying leading indicators that have the potential to inform ongoing improvement, and not solely focusing on lagging indicators for evaluation.
>
> In the long term, I hope next generation funders can embrace a common and more holistic set of school and student success metrics, so that, to use Tony Bryk's language, we can deepen the field's understanding of what works well for whom under what conditions, across the various initiatives we, as a funder community, support."
>
> **—Britt Neuhaus**

With this report, we are excited to bring forward the creativity, passion, and determination of next generation educators. As you have heard, they have many ideas on what we need to better measure the impact of the innovations they are pioneering. We've found that most educational innovators are eager to embrace excellent systems of measurement and many have created their own, home-grown measurement systems. We encourage policymakers, funders, and researchers to work closely with practitioners as they develop a new measurement agenda for innovation in education.

Consult the people doing the hardest work in education, who are closest to the students; they often have—or are quickly developing—the most promising solutions.

Britt Neuhaus
Overdeck Family Foundation

More to Come—Stay Tuned for Part II

Measures That Matter Most represents the first part of our analysis of NGLC grantees' efforts to measure the impact of their innovations. Additional findings relating to their richer, deeper definitions of student success will be released this fall.

About /

About Measures That Matter Most

Dalia Hochman has been working on educational improvement and innovation for nearly twenty years. With each new innovation, she has wondered about the ways the education field measures the success of great ideas. A year ago, Dalia began a conversation with Britt Neuhaus at Overdeck Family Foundation. From her experiences supporting innovation as a practitioner at the school and district level, and now as a funder, Britt shared many of Dalia's questions about what measures matter most as educators test hypotheses for new school designs. Together, Dalia and Britt launched this project and began exploring what a new measurement framework for innovation that relied more heavily on the educator's voice would look like. Dalia and the NGLC team are grateful to Overdeck Family Foundation for making this journey possible. We are especially grateful to Allie Steel for her research expertise.

About Next Generation Learning Challenges (NGLC)

Next Generation Learning Challenges (NGLC) catalyzes and accelerates educational innovation to dramatically improve college readiness and completion in the United States. NGLC is an initiative of EDUCAUSE, a nonprofit association whose mission is to advance higher education through the use of information technology. Since 2011, NGLC has provided more than $75 million in investment capital to foster the development of transformational, student-centered K-12 and postsecondary models and to expand the use of learning technologies, all aimed at improving the quality and depth of learning outcomes in the U.S., particularly for low-income students. These grants have catalyzed many of the leading new models in postsecondary education and K-12. Together, these breakthrough grantees constitute a national vanguard of schools, colleges, and universities creating fundamentally new models of learning and institutional organization. Funding for NGLC has been provided principally by the Bill & Melinda Gates Foundation, the Eli and Edythe Broad Foundation, the Michael & Susan Dell Foundation, and the William and Flora Hewlett Foundation.

About Overdeck Family Foundation

Overdeck Family Foundation's mission is to help all kids achieve their greatest academic potential. We aim to support change in the field to create the next generation of engaged, passionate, creative thinkers. We fund efforts in education, across the birth-to-high school spectrum in the United States. We bring our data and partnership oriented mindset to education challenges by identifying gaps and inefficiencies in existing systems and developing creative solutions with our partners: building proof points, shining spotlights on what works, and scaling successes broadly. We recognize the complexity of the issues we explore and invest in, and believe in the power of collaboration to bring innovative solutions to persistent challenges.

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Citations /

1. The NGLC funding framework provides the goals and design principles for investments in K-12 breakthrough school models

2. "Continued Progress: Promising Evidence on Personalized Learning." RAND Corporation. November, 2015. Available: http://www.rand.org/pubs/research_reports/RR1365.html

Appendix A:
The Evidence Base to Date

In this section, we review commonly-referenced research on next generation learning. As discussed above, the diversity of approaches in the next generation portfolio add to the challenge of compiling evidence.

Bloom, Benjamin (1984). The Search for Methods of Group Instruction as Effective as One-to-One Tutoring. In this seminal study, University of Chicago professor Benjamin Bloom shows comparative impact of one-to-one tutoring. The average student who receives one-to-one, mastery-based instruction performs at the same level as the top two percent of students who receive traditional group instruction.

Means, Barbara; Murphy, Robert; and Bakia, Marianne. (2013). "The Effectiveness of Online and Blended Learning: A Meta-Analysis of the Empirical Literature." Teachers College Record March, 2013, Volume 115, Number 3. In a series of meta-analyses, SRI found that blended environments showed (statistically significantly) higher effects on student achievement than face-to-face classrooms. This study included higher education.

Mohammed, S. S. (2016). Measurement Agenda for Blended Learning: A Path Forward for the Ecosystem. Retrieved from: http://learningaccelerator.org/measurement-agenda-for-blended-learning-a-path-forward-for-the-ecosystem

Murphy, Bob et al. (May 2014) "Blended Learning Report," The Michael & Susan Dell Foundation conducted by SRI International and released in 2014. The report looks at 13 low-income charter schools using a rotation model of blended learning. Researchers found consistency among how the schools implemented the model. The report examined teacher satisfaction, student productivity, and the use of data to inform instruction.

Nichols-Barrer, Ira and Haimson, Joshua. Impacts of Five Expeditionary Learning Models on Achievement. (2013). In this study, Mathematica Education compared five Expeditionary Learning middle schools in Washington DC and New York City with schools similar in demographics, size, and location that employed a more traditional educational model. The study found statistically significant increases in EL schools in both reading and math. Like the RAND study mentioned above, Mathematica employed a rigorous research methodology to determine significance. However, the sample size in this study was too small to draw large scale conclusions. Similar to PL, Expeditionary Learning models are multi-faceted and involve innovations in several areas (curriculum, teaching, academic model). It is hard to isolate variable to tests the influence of such a complex model.

Pane, J. F., Steiner, E. D., Baird, M. D., & Hamilton, L. S. (2015). Continued Progress: Promising Evidence on Personalized Learning. Retrieved from Santa Monica, CA. RAND Education matched schools employing personalized learning approaches to similar schools representing a cross-section of current instructional approaches in the country. While the sample size was small, the study found statistically significant gains in reading and math for those employing a personalized approach. The strength of this study as the rigorous research method used, allowing for statistically significant findings.

Appendix B: NGLC Survey

We sent the the survey to 42 schools; 41 NGLC grantees and 1 non-NGLC grantee. List of Survey Respondents:

1. Intrinsic Schools (Chicago, IL)
2. Fullerton School District* (Fullerton, CA)
3. Design Tech High School (San Mateo, CA)
4. Blackstone Valley Prep Mayoral Academy (Cumberland, RI)
5. Virtual Learning Academy Charter School (New Hampshire)
6. Alpha Public Schools (San Jose, CA)
7. Two Rivers Public Charter School (Washington, DC)**
8. Generation Schools Network (Colorado and New York)
9. Foundations College Prep (Chicago, IL)
10. Summit Public Schools (California and Washington State)
11. Alliance College-Ready Public Schools (Los Angeles, CA)
12. The Workshop School, Philadelphia Public Schools (Philadelphia, PA)
13. Schools for the Future (Detroit, MI)
14. Building 21, Philadelphia Public Schools (Philadelphia, PA)
15. STEAM Academy, Fayette County Public Schools (Lexington, KY)
16. The Incubator School, Los Angeles Public Schools(Los Angeles, CA)
17. Piedmont Middle School, Piedmont City Schools (Piedmont, AL)
18. Metro Institute of Technology, Columbus City Schools (Columbus, OH)
19. Thrive Public Schools (San Diego, CA)
20. Matchbook Learning (MI and NJ)
21. Vertus Charter School (Rochester, NY)
22. Venture Academy (Minneapolis, MN)
23. Montessori For All (Austin, TX)
24. Caliber Schools (Richmond, CA)
25. E3 Civic High, San Diego Public Schools (San Diego, CA)
26. Valor Collegiate Academies (Nashville, TN)
27. Ednovate / USC Hybrid High (Los Angeles, CA)
28. Da Vinci Schools (Hawthorne, CA)
29. Cornerstone Charter Schools (Detroit, MI)
30. Brooklyn Laboratory Charter School (Brooklyn, NY)
31. Ingenuity Prep (Washington, DC)
32. Anonymous
33. Anonymous

* Two Rivers is a Regional NGLC grantee supported by Citybridge Foundation. Two schools opted to remain anonymous and did not identify themselves. Additionally, given the open nature of the survey, response rates varied by question.

** Fullerton School District is not an official NGLC grantee but has been innovating with personalized learning for over three years and participates in NGLC activities.

Appendix C: Tags for How Do You Know Your Innovations Are Working

Tag Name	Tag Components					
State Testing / Common Core	state testing	PARCC	SBAC			
NWEA Map	NWEA MAP					
Teacher Generated Assessments	teacher generated tests	internal benchmarks	exit tickets	student grades		
Rubric-Based Evaluation	rubrics					
Student Surveys	student surveys					
Staff Surveys	teacher surveys					
Family Surveys	family surveys					
Standardized Formative Assessments	illuminate DNA	F&P reading assessments	ANet interim assessments	DRA reading assessments	DIBELs	
External Evaluation	university researchers	community judges	program evaluators	data analysts		
Social Emotional Learning	socio-emotional health	opti-mism	social emotional growth	char-acter develop-ment	belong-ing	joy
Student Progress on Individual Goals	short term goals set by student & advisor	check-ins on progress towards stu-dent goals	meeting goals set by teachers	individual student learning & behavioral goals	school-wide goal setting process	
Student Retention	student retention	graduation rate				
Student Attendance	attendance	absences				
School Culture	school culture	student behavior	student safety	student satisfaction	discipline	
Teacher Practice	observations & feedback for teachers	data-driven decision making in the classroom	teacher impact & growth	teacher pacing & behavior		
Student Coversations and Focus Groups	informal conversations with students	focus groups with students				
Family Conversations and Focus Groups	informal conversations with families	focus groups with families				
Teacher Conversations and Focus Groups	informal conversations with teachers	focus groups with teachers				

Tag Name	Tag Components			
Rate of Adoption Within School	participation rates		adoption of program	
College Enrollment	college enrollment			
College Persistence	college persistence			
Performance Relative to other Schools	comparison to loacal school district		comparison to traditional schools	
Student Pace on Mastery	student pace	competency map	mastery-based progress	
Student Ownership of Learning	self-direction	student agency	students own the result of their work	
Student Enrollment	student enrollment			
Student Projects	outstanding student artifacts	design challenges	portfolios	student-led conferences
Staff Retention Rate	staff retention rate			
Replication by Other Schools	replication by other schools			
PSAT / ACT / SAT and College Entrance Requirements	PSAT	ACT	SAT	students meet college entrance requirements
Credit Accumulation	number of student credits			