

Personalized Learning at a Crossroads

**Early Lessons from the Next Generation Systems Initiative
and the Regional Funds for Breakthrough Schools Initiative**

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About this Project

With support from the Bill & Melinda Gates Foundation, CRPE conducted a multiyear, multimethod effort to learn how school districts, charter schools, and regional partners can support the successful implementation, expansion, and sustainability of personalized learning (PL) in schools. The vision for PL is to tailor instruction to individual students' strengths, needs, and personal interests—often integrating technology—to boost student outcomes.

CRPE researchers used a combination of field studies, surveys, and secondary data analysis to explore how schools, districts, and partner organizations help to seed and grow PL, and what the results were. Key questions for the project included: What do principals, teachers, and system leaders need to know and be able to do to successfully support, implement, and scale up PL? What policies and practices—at the classroom, school, district, partnership, and state levels—offered important supports (and barriers) for successfully implementing and scaling up PL? What were the early results for teachers and students?

See our [full, interactive report](#) for detailed findings and recommendations, video interviews, and student projects.

Acknowledgments

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About the Center on Reinventing Public Education

CRPE is a nonpartisan research and policy analysis center at the University of Washington Bothell. We develop, test, and support bold, evidence-based, systemwide solutions to address the most urgent problems in K-12 public education across the country. Our mission is to reinvent the education delivery model, in partnership with education leaders, to prepare all American students to solve tomorrow's challenges. Since 1993 CRPE's research, analysis, and insights have informed public debates and innovative policies that enable schools to thrive. Our work is supported by multiple foundations, contracts, and the U.S Department of Education.

CRPE Quality Assurance Process

Independent peer review is an integral part of all CRPE research projects. Prior to publication, this document was subjected to a quality assurance process to ensure that: the problem is well formulated; the research approach is well designed and well executed; the data and assumptions are sound; the findings are useful and advance knowledge; the implications and recommendations follow logically from the findings and are explained thoroughly; the documentation is accurate, understandable, cogent, and balanced in tone; the research demonstrates understanding of related previous studies; and the research is relevant, objective, and independent. Peer review was conducted by research or policy professionals who were not members of the project team.

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Introduction

Personalized learning in K–12 education is at a crossroads. Its big ideas—giving students more freedom and control over their learning, allowing students to move at their own pace, and letting students’ interests and talents drive what they learn—resonate with many parents, students, and educators. Its emphasis on self-direction, agency, and complex reasoning aligns with a society and economy that increasingly rewards creativity, problem solving, and adaptability.

Although the big ideas of personalized learning draw from long-standing themes associated with progressive education, personalized learning in its current form is still a relatively new phenomenon. As Kevin Bushweller explained in a recent *Education Week special report*, “Opinions about what it [personalization] should, or should not, look like vary widely” in the field. RAND Corporation researcher John Pane said in the same report that the ideas behind personalization seem intuitive, but “the evidence base is very weak at this point.” Meanwhile, advocates of personalization believe in its promise but are also unsure how to best move beyond a few isolated exemplars to spread personalization to more students and schools.

To better support the spread of personalized learning, the Bill & Melinda Gates Foundation launched two ambitious initiatives in 2014: the Next Generation Systems Initiative and the Next Generation Learning Challenge Regional Funds for Breakthrough Schools initiative. The Foundation funded six districts and six regional partners (see inset below). The Foundation charged the grantees with designing, launching, and replicating new personalized school models. That is, the Foundation expected the grantees to create coherent strategies for how schools should organize time, teachers, and students and the instructional approaches they should use—an ambitious goal given the nascent state of the field and the complex problems associated with change in schools. Though the Foundation wanted this investment to generate models for personalized learning and hoped that some models (or at least the start of models) would emerge during the grant period, they and their grantees understood that this grant program was the start of a much longer effort that would continue after the grants concluded.

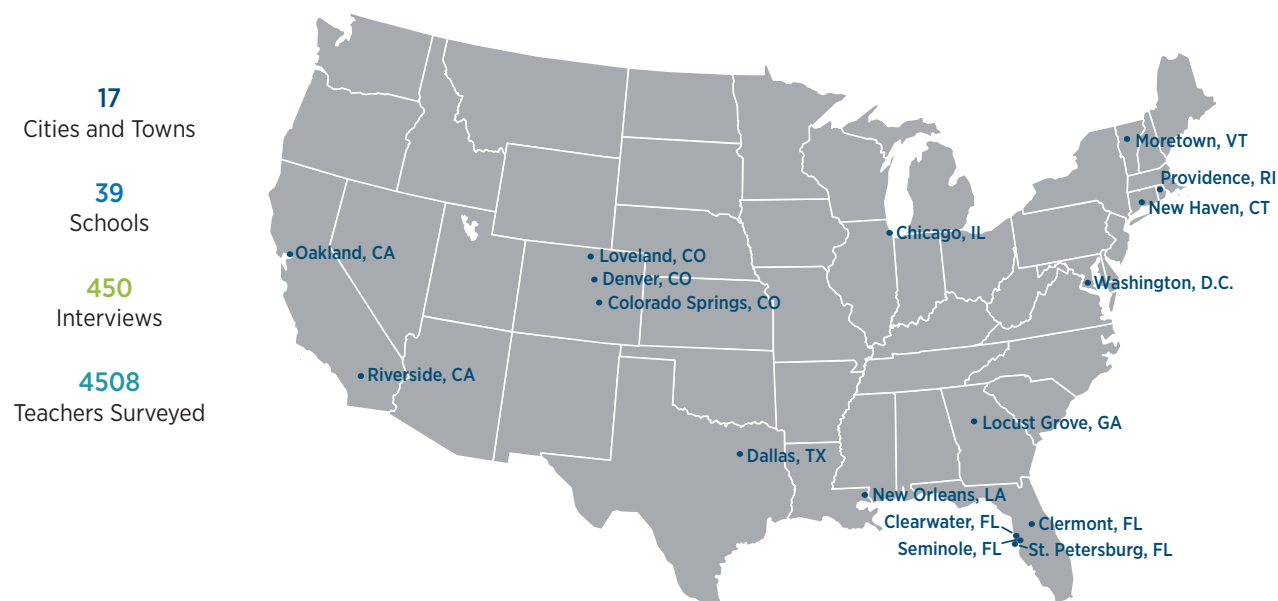
TABLE 1. Next Generation Grantees

Next Generation Systems Initiative Grantees	Next Generation Learning Challenge Regional Fund Grantees
Dallas Independent School District, Texas	CityBridge, Washington, D.C.
Denver Public Schools, Colorado	Colorado Education Initiative
Henry County Public Schools, Georgia	Great Schools Partnership from New England Secondary Schools
Lake County Public Schools, Florida	LEAP Innovations, Chicago
Pinellas County Public Schools, Florida	New Schools for New Orleans
Riverside Unified School District, California	Rogers Family Foundation, with Oakland Unified School District

In 2015 the Gates Foundation asked the Center on Reinventing Public Education to observe these grantees through the first two years of the initiatives. Our goal was to learn more about how these districts and regions were beginning to define and pursue personalized learning and what they were learning about how to innovate around personalized learning at scale. We oriented our work around two central questions:

1. How do teachers and principals go about designing and implementing personalized learning approaches?
2. How do the capacities, policies, and structures in schools and districts support or impede school-level innovation and its spread?

To answer these questions, we conducted over 450 interviews with more than 300 teachers, principals, superintendents, and central office staff in 17 different towns and cities. We observed classrooms in 39 schools and held focus groups with students. We surveyed 908 teachers from the initiatives about their instruction in these schools, as well as a nationally representative sample of about 3,600 teachers, which we used as a benchmark on teacher practice. We reviewed documents pertaining to district and partner plans for implementing personalized learning and other documents generated from the initiatives.



For the majority of schools we visited, we observed the first and second years of their effort to explore personalized learning. For a small number of schools that launched later in the grant period, we only observed their first year in this initiatives. Accordingly, it's important to keep in mind that our findings focus on a specific period of time in the life cycle of this innovation effort. It's also worth noting, however, that every school, district, and partner taking up personalized learning must navigate the early stages of this ambitious work. Understanding the opportunities and challenges they may encounter is critical for identifying how systems can better support a fundamental and innovative shift in teaching and learning.

After two years of study, we learned:

Personalized learning had strong support in schools—and they changed instruction. “I wish I had the opportunity to be in my own classroom as a student,” an enthusiastic elementary teacher in Florida said. “I love teaching like this,” she continued, “the students can see how excited I am, so they’re feeding off of that.” A Colorado elementary school principal said that personalized learning “is right for kids, and it’s not just a feeling ... kids in the school are seeing growth.” In Dallas, an elementary school student said personalized learning was “not like any other kind of learning. We learn different stuff than other schools in a better way.” This enthusiasm was matched by significant effort on the part of teachers and, for some teachers, examples of interesting and exciting new practices.

“I wish I had the opportunity to be in my own classroom as a student.”

– Elementary school teacher in Florida

At the same time, principals let teachers define personalized learning on their own, leaving academic rigor to chance and hindering schoolwide approaches. During the course of our fieldwork, personalized learning practices rarely got beyond a handful of pilot classrooms in most of the schools we visited. In those pilot classrooms, teachers often focused on changing structures in their classrooms (e.g., seating arrangements, stations) rather than on rethinking how teachers and students engaged with academic content. At the district level, most central offices responded to personalized learning by granting schools waivers and exceptions rather than changing the system to support new approaches. At the end of two years, despite some pockets of innovation, few schools had developed replicable strategies for personalized learning as originally envisioned by the Gates Foundation.

Teachers were tasked with innovating but didn’t have the strategies or supports they needed to successfully innovate. In the end, the early stage challenges we observed in the initiatives reflect what happens when educators try to innovate—that is, discover ideas, procedures, and processes that are new to their school and use them—in systems and conditions that were not designed to support innovation. Among the challenges schools faced:

- Teachers and principals struggled to translate abstract goals into meaningful student outcomes to guide classroom practice.
- Teachers lacked useful systems and structures to learn through prototyping and iteration.
- Principals often failed to provide the coordination and guidance necessary to formalize and codify individual teacher experiments and convert them into school-level practices and principles.
- Central offices, despite encouraging schools to experiment and explore personalized learning, generally failed to fundamentally change structures, policies, and supports to facilitate innovation in schools.

Implications and a Path Forward for Innovation

Taken together, the experiences of the schools in the Foundation’s personalized learning initiatives followed a familiar pattern of promising practices struggling to replicate at scale across systems. For all their promise, the initiatives’ challenges through the first few years of effort underscore the difficulty of innovating inside a system that was never designed for innovation.

The lessons learned from the successes and struggles of educators, school and district leaders, and partners who participated in the initiatives suggest that leaders must do four important things to build a more strategic system to support innovation at scale.

First, districts must help leaders and teachers in schools get clear on the problems that need to be solved and what needs to change to address them by:

- setting clear goals to focus innovation
- bringing together educators to identify important problems
- reviewing the needs and contexts of their schools and treating each school as a case that needs tailored support

Second, districts must create flexibility in the system, at both the school and classroom levels, by:

- being explicit about what flexibilities already exist and identifying remaining rules and administrative practices that create specific pain points for innovating schools
- engaging all central office departments in personalized learning goals for students and ensuring they respect promised freedom of action for schools
- giving principal supervisors and principals more flexibility to consider broader outcomes in evaluation
- looking for or creating “spaces” that provide opportunities for flexibility, such as after school programs, summer school, or special purpose innovation “zones”

Third, districts must build support for adult learning and knowledge management strategies for innovation by:

- building embedded coaching supports for prototyping and iteration in schools
- creating structured support systems that help school leaders with change management
- creating and implementing a plan to collect, refine, and distribute knowledge and information with the goal of getting it in the hands of many educators

Fourth, districts must identify which principals and faculties are positioned to design new models for instruction and which are positioned to adopt and adapt existing innovative practice by:

- seeking leaders who are interested and motivated to innovate by hosting discussions about personalized learning and the system’s broader goals for students
- establishing communities of practice to recruit and support collaborative learning among teachers and leaders from several schools
- supporting a design competition for schools to map out a new personalized design
- seeking out local charter partners who are poised for innovation and open to collaboration with the school district

In light of the major social and economic changes likely on the horizon, public education must find ways to support more innovation and experimentation. As public education pivots toward a future where learning and work will look fundamentally different than it does today, personalized learning offers a path forward. But if personalized learning and other innovative approaches to improve teaching and learning are going to make the most of their potential and succeed at scale, public education must build a new strategic system for innovation. In the following sections, we elaborate findings and discuss in greater detail what the early experiences of the schools and districts we studied suggest about building a system that is designed for innovation.

Changes the Bill & Melinda Gates Foundation Hoped to Support

In 2013 the Bill & Melinda Gates Foundation issued a request for proposals to school systems and external regional partners to launch and expand the number of schools personalizing learning. The ambitious program recognized that achieving personalized learning at scale would require school systems to change how they organize, operate, and oversee schools. It also recognized that schools could take different approaches to personalized learning.

With that in mind, the Foundation identified four broad elements of personalization as guidance, rather than telling districts and schools to implement a specific model. These elements included:

- **Learner Profiles:** Captures the individual skills, gaps, strengths, weaknesses, interests, and aspirations of each student.
- **Personal Learning Paths:** Learning goals and objectives for each student. Learning experiences are diverse and matched to students' individual needs.
- **Individual Mastery:** Continual assessment of student progress against clearly defined standards and goals. Students advance based on demonstrated mastery.
- **Flexible Learning Environment:** Multiple instructional delivery approaches that continuously optimize available resources in support of student learning.

In 2014 the Foundation funded six school districts, and six external organizations to partner with school districts to seed and scale personalized learning. The school districts were funded under the Next Generation Systems Initiative (NGSI), while the external organizations were funded under the Next Generation Learning Challenges (NGLC) Regional Funds for Breakthrough Schools initiative. The two initiatives supported work in different locations and did not overlap, although near the end of the grant period the Foundation twice convened leaders from both initiatives to discuss their work.

Both initiatives were committed to helping schools design personalized learning models to replicate across a district or region. Grantees were expected to have 1 percent of their students enrolled in schools with personalized learning models by the 2015-2016 school year, and 10 percent by 2018-2019. Grantees also were expected to reshape school district policies and functions to support their new personalized learning models. This system-level focus was a departure from the Foundation's earlier investments in personalized learning in individual schools (often charter schools).

Findings

Personalized Learning Had Strong Supporters in Schools—and They Changed Instruction

The majority of the teachers in the schools we visited were excited about personalized learning and many of them explored new approaches to instruction.

Many teachers and leaders believed in, and aspired to, personalized learning.

Many teachers and district leaders we interviewed believed personalized learning was good for students and their futures. For these teachers, personalized learning reminded them of why they wanted to become a teacher in the first place. “I think we all instinctively know that it’s the most natural, effective way to teach and learn,” said a 10th grade science teacher. A district administrator said, “One of the pieces we’ve heard most dramatically and forcefully from our teachers is, ‘I love this work... This is the way we’ve always wanted to teach.’”

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– District administrator

Although less directly involved in the initiatives than teachers, some school leaders were equally excited about personalization. These enthusiastic leaders actively drove their school’s transition toward greater personalization. In such cases, this translated into developing a schoolwide vision of personalization and common commitments about what approaches to try. In some cases, leaders redefined teacher evaluation tools to align with the principles and goals of personalization. In others, they reconfigured schedules to give teachers time to collaborate. Other leaders openly encouraged and supported teachers as they discovered what personalized learning would look like in their classrooms. As one teacher leader explained, “we try to tell [teachers] you’re not going to get in trouble ... We wanted to take chances, we wanted to learn what works.”

Excitement about personalized learning was evident in district central offices, too. Some system-level leaders actively shepherded personalized learning initiatives by building commitment systemwide and aligning school district policies to new ways of working. One district grantee, for example, committed to transitioning 100 percent of its schools to personalized learning by 2020. This district’s leaders reported that they continually emphasized their goal with staff, board members, parents, and community members. This district’s leaders also reported reorienting the way their central office supported and oversaw the district’s evolving schools. In most districts, central office teams produced frameworks and guiding documents to help move schools toward a vision of personalization. In one district, a team designed a new rubric for teaching in a personalized learning classroom to help how the district hired, supported, and evaluated teachers in personalized learning schools.

Teachers experimented with personalization.

Enthusiasm for personalized learning was matched by real efforts to change practice in classrooms. In our classroom observations, we saw teachers take risks and experiment with a broad range of new instructional approaches.



BRIGHT SPOT:
“FLIPPED”
CLASSROOM

We met a math teacher who spent the summer making instructional videos that delivered the core content of her lessons. During the school year she used the videos to free her to work directly with students during class time, a model often called a **“flipped” classroom**. When we visited her classroom, we found this teacher working one-on-one with students who were struggling with the lesson they had watched the previous evening. Other students worked either independently or with each other to master the content from the videos.

We also saw an industrial arts teacher who “flipped” his classroom to change how he used class time. In this case, the teacher made videos that demonstrated equipment operation and safety procedures. He asked students’ to watch the videos at their own pace outside of class. Once in his class, the teacher quickly assessed the students understanding of the online material so they could spend the majority of their time working on hands-on drafting and building projects.

Other innovations emphasized project-based learning and individualized learning plans. For example, we visited a program within a school in which a team of two teachers collaborated with a small group of high schoolers to design and implement individual learning plans. These plans engaged students for half of the day in projects that were crafted to expose students to content in the core academic subjects and state standards. The students spent the other half of their day in off-campus work or service projects aligned with their future goals.

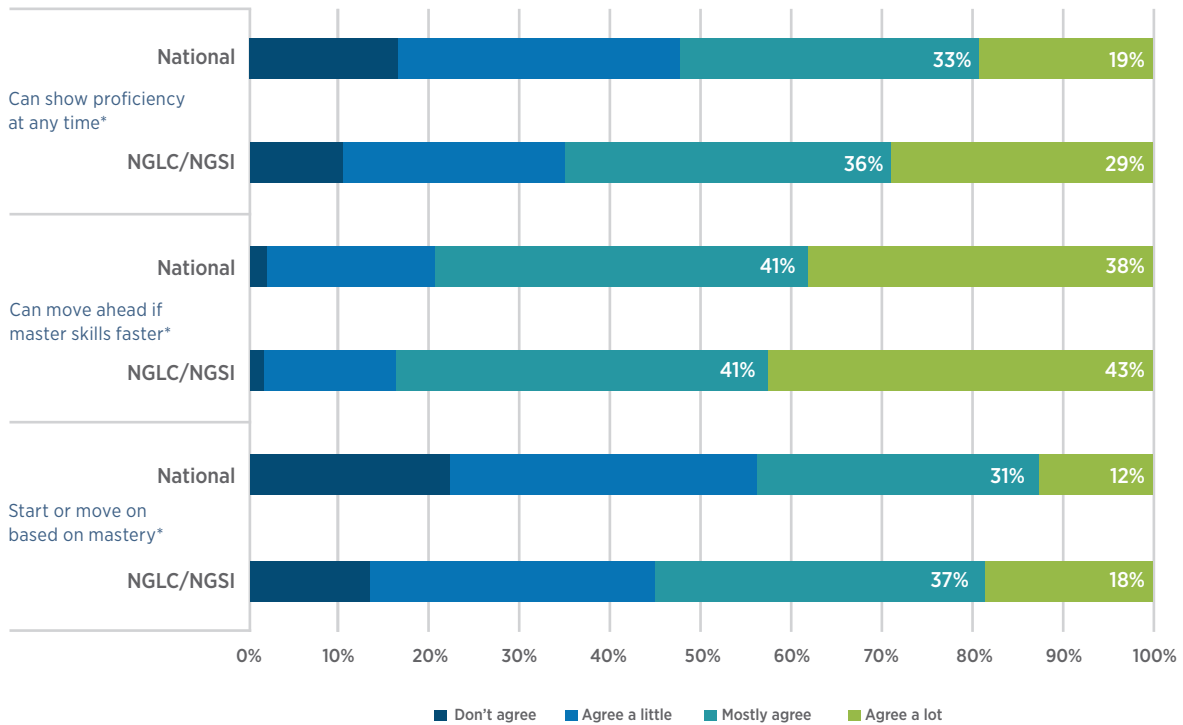
Elementary students experienced innovative approaches, too. We visited a 4th grade class, for example, that started its math block with each student picking up a binder of material that showed their learning goals, past work, progress toward those goals, and information on which activities will get them to the next level. These 4th graders then went about their work independently, pulling out books, grabbing worksheets, moving to a table where the teacher was helping students, or logging onto the computer to complete lessons. One student proudly declared that he was on 5th grade-level lessons—almost 6th grade. When we asked students in the class if they ever wished their teacher just told them what to work on, they replied “no”—seemingly surprised we would ask.

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As these few examples illustrate, the teachers we observed explored a range of classroom or instructional approaches associated with personalized learning. These approaches included station rotations, adaptive software, personalized learning paths (sometimes referred to as “playlists”), internships and mentorships, competency-based standards, flexible seating, and explicit socio-emotional learning activities around issues like perseverance and focus. During interviews, teachers reported trying a range of approaches, but the most frequent approaches we observed during classroom observations were those that focused on non-academic skills (e.g., habits of work), flexible seating arrangements (e.g., allowing students more choices about where to sit and work), and project-based learning.

Teacher survey data from the schools in the initiatives suggest that teachers in the initiatives were more likely than a nationally representative sample of teachers who answered the same survey to report that their students advanced through curriculum with mastery and that they gave students the opportunity to manage their own pacing (see figure 1).

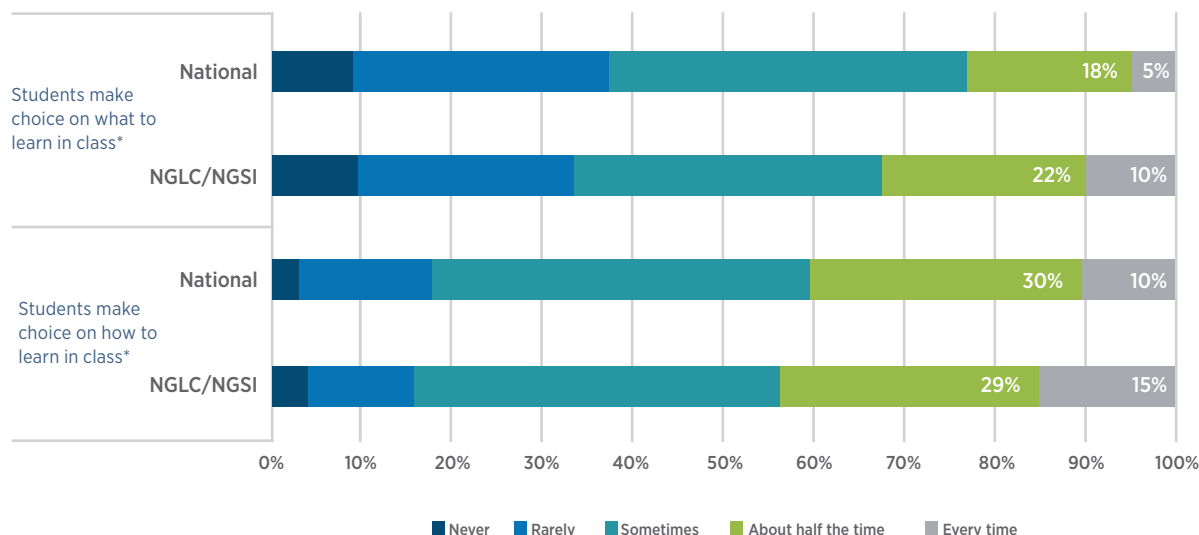
FIGURE 1. NGLC/NGSI Teachers Are More Likely to Let Students Progress at Their Own Pace



Notes: *Signifies statistically significant differences between the percent of NGLC/NGSI teachers and teachers nationally who report "Agree a lot" and "Mostly agree." The survey items are from the LEAP teacher survey from LEAP Innovations in Chicago. The national teacher sample includes more than 3,600 teachers whose contact information was available via a national list of likely teachers. This national sample reflects teachers and classrooms across the country and not just those involved in explicit efforts to personalize learning. The NGLC/NGSI sample includes schools from 10 of the 12 NGLC and NGSI grantees, though the number of schools from each varied. In total, 908 teachers from 38 schools participated.

Though a far less common practice, teachers in the initiatives were also more likely than teachers nationwide to report giving students choice in what and how they learned (see figure 2).

FIGURE 2. NGLC/NGSI Teachers Are More Likely to Give Students More Opportunities to Choose How and What They Learn



Notes: *Signifies statistically significant differences between the percent of NGLC/NGSI teachers and teachers nationally who report “Agree a lot” and “Mostly agree.” The survey items are from the LEAP teacher survey from LEAP Innovations in Chicago. The national teacher sample includes more than 3,600 teachers whose contact information was available via a national list of likely teachers. This national sample reflects teachers and classrooms across the country and not just those involved in explicit efforts to personalize learning. The NGLC/NGSI sample includes schools from 10 of the 12 NGLC and NGSI grantees, though the number of schools from each varied. In total, 908 teachers from 38 schools participated.

As the illustrations and survey results suggest, students in many grantee schools encountered new learning experiences. In some schools, student reported that they were energized and excited about their personalized learning classrooms (we say more on students who had different reactions later). Some students said they liked how the teachers helped them build not just academic skills but also a sense of purpose and responsibility. A high school student said, “Learning by yourself can work, because it gives you more responsibility. It makes you more responsible for your own learning.”

Even students in elementary school talked about taking responsibility for their learning and the benefits of moving at their own pace. During a focus group with 5th graders, one student contrasted how his math class last year was all “stuck” on the same topic and not allowed to move forward. But with personalized learning his classmates were able to work at their own pace:

Student: “...[Now] when you finish, if you’re very good, you get to do sixth grade-type math problems or you can work on sixth-grade *ST Math*, if you’ve passed fifth grade.”

Interviewer: “So you are all in different places in your math class. Is that a problem, or do you like that?”

Student: “I like it.”

Summing up the appeal of personalized learning, a principal said that she wished her school had started years ago to help students move through material at their own pace based on mastery: “We say almost every day, if we had known 10 years ago what we know today, what a different place the school would be!”

Principals Let Teachers Define Personalization for Themselves, Leaving Academic Rigor to Chance and Creating Inconsistencies from Classroom to Classroom

Enthusiasm notwithstanding, students, teachers, and leaders were candid about the uncertainty and difficulty they encountered as they explored and attempted to transition to personalized learning approaches.

Teachers reported having to discover personalized learning on their own.

A few examples of collaboration aside, teachers were often left to figure out on their own what personalization should look like. Many reported feeling overwhelmed and needing more guidance on what to do and on how to know if what they were doing was working. An elementary teacher reported that her district had told teachers, broadly, “This is what [personalized learning] is, but you can figure it out and make it your own.” As far as this teacher was concerned, the message was, “Figure out how to do it in your classroom.”

Of the 39 schools in the study, teachers in 12 schools reported having sustained opportunities to collaborate with their colleagues about personalized learning. Of these 12 schools, 4 had adopted formal schoolwide models (e.g., High Tech High and Summit). These formal school models seemed to facilitate teacher collaboration because they gave teachers a common language and set of activities around which to focus their work. In the majority of schools without formal models, teachers reported that there was rarely a shared understanding about personalization among the teaching staff.

Some teachers found that their enthusiasm about personalized learning wasn’t shared by their colleagues. A Florida middle school teacher, for example, said she worked mostly on her own because her colleagues were “not willing to make the change, to collaborate, and [then] you get that naysaying in the group.” A teacher at a different school said she thought that the naysayers resisted personalized learning because they feared that it was “going to get rid of [them] and put a computer in [their] place.”

Another teacher speculated that teachers didn’t support personalized learning because they had little incentive to try a new and ill-defined approach. In particular, one middle school teacher said that teachers who have “lots of success in [status quo] teaching and the state test ... don’t see why they should change.” Whether out of disinterest or fear, a lack of collegial focus on personalized learning was discouraging to teachers working on their own. “You really need like-minded [colleagues] to not feel frustration,” said an elementary school teacher. “Sometimes I feel like we’re going through the motions at our meetings [about personalization], and I get frustrated.”

Many classrooms emphasized classroom structures and activities over academic rigor.

Our fieldwork in classrooms suggests that teachers often emphasized classroom structure, decoration, and activities over concrete changes in what and how students learn. During our 110 classroom observations, we often saw lessons where students were active and engaged, moving around the classroom or working in groups. But often these same students were working on lower-level tasks, such as remembering or understanding information, rather than on more demanding tasks, such as critically analyzing a novel or assessing the validity of an argument.

In one high school, for example, we observed students in a civics class working with an interactive *Washington Post* article with data from East and West Germany in the years before the fall of the Berlin Wall. Rather than use the material to make comparisons or to integrate the results into a broader set of historical or political knowledge, students were simply recording facts from the article onto a digital worksheet.

In another high school, we observed a student-facilitated discussion in an AP language arts class on Truman Capote’s account of the murders of the Clutter family in the book *In Cold Blood*. The class had high levels of student participation and energy, but little direction. Although the student facilitator managed an orderly conversation, the students never explored deeper questions about the book even when they came up, such as how Capote used literary techniques to build empathy for the murderers.

By and large, and contrary to the expressed personalized learning goal of shifting students away from passive teacher-directed learning and toward more self-directed learning, teachers still directed most of the learning and activity in the classrooms we observed. Moreover, instead of forcing students to struggle toward understanding, we saw teachers often carried the cognitive load, directly instructing students when they stumbled in their learning.

Students—though they could make choices—had few opportunities to shape what and how they learned. On occasion, we saw students wasting time as new strategies or activities spiraled out of control. Of particular concern, we observed students who, based on the assignments they were completing, were behind their classmates academically. Too often we found these students navigating basic content in worksheets or on the computer while others engaged in more involved, multipart projects. Of course, personalized learning environments are meant to provide students with content at their current level, but students who are working behind their peers also should have the opportunity to participate in engaging activities at their level.

Different Students See Different Levels of Rigor in Classrooms

In one classroom, students were hard at work on projects, measuring area and volume while building an object of their choice. One student was making a scale model of a circus tent with three peaks of different sizes and an entrance hallway. She was measuring columns, cones, semi-circles, and rectangles. This was a challenging and complex project. A second student had drawn a pizza and was computing the area of the circular pepperoni. This project, which relied upon a two-dimensional object and ignored the volume component of the project, was decidedly less complex than the circus tent project. Finally, in a corner of the room, a third student sat in front of a computer with one hand on his head, mindlessly clicking through math software. This student was significantly behind academically and his teacher had assigned him to remedial practice to get him up to speed, but he looked utterly bored as his classmates were up and about working on their projects. The teacher has intentionally created learning tasks that would reach every student at their academic level. But just one of the three students we observed was engaged in rigorous work.

As the initiatives unfolded, some district leaders worried that the desire to create activities crowded out attention to academic and learning outcomes. A leader in one district suggested that sometimes there’s less to an exciting activity than first meets the eye. “There’s so much going on,” he said, “that—I don’t mean to say it in a negative way, but it’s like a shell game. You think you see something, so you look like this, and then you come back this way, and you’re like, ‘Wait, what just happened there?’”

Principals were not fully prepared to coordinate teachers’ exploratory efforts or press for schoolwide coherence.

Teachers weren’t the only ones grappling with the shift toward more personalized learning. Principals, too, had no roadmap for what personalized learning meant in practice and sometimes ended up disengaging

from the work—delegating responsibility for setting the vision for and supporting personalized learning to grant-funded coaches or individual teachers in pilot classrooms. One district leader said part of the problem was that principals had little support or capacity for leading the major organizational changes implied by personalized learning:

“I’ll just be blunt. In my opinion, and in my conversations with principals, their training really focuses on how not to get sued and how to evaluate people properly. That’s just not, frankly, very helpful. It’s not robust enough.”

Principals told us that they valued the opportunity for their faculty to explore new, more personalized models. But for various reasons they were unsure about what specific things they could do to help the pilot efforts converge into a coherent strategy and spread them beyond the pilot classrooms.

Part of the problem, as noted earlier, was that principals were unsure about the broader goals for personalization and how to develop concrete strategies to deliver on them. As a result, personalized learning efforts often ended up being a collection of activity-based approaches varying in the materials used, the structure of the classroom, and the expectations for how students engage in their work. For example, within a single school it was common to see one classroom organized into stations, another largely focused on whole group instruction, and still another classroom with students working individually. Though schools typically adopted just one online curriculum schoolwide (e.g., ST Math or IXL), it was common to see teachers using these tools differently: some teachers used them as a core tool for delivering content, for example, while others used them as “extra help.”

Overtaxed by other demands, many principals delegated leadership for the initiatives to a teacher, a team of teachers, or a coach. Delegating in this way had two consequences. First, when teachers were left on their own to explore personalization, their approaches often varied significantly from classroom to classroom. This lack of consistency, in turn, frustrated some middle and high school students who moved across classrooms throughout the day and week.

Second, by letting individual teachers explore personalized learning without recognizing the importance of coordinating or aggregating their efforts, leaders narrowed the possibilities for personalization to what an individual teacher could accomplish inside their classroom. An individual science teacher could design a project on the health of local waterways but have few opportunities to explore interdisciplinary projects with other teachers (for example, a project that examined the health of local waterways and the political process that regulates pollutants and cleanup).

In contrast, teachers who had support from their principal to work with others reported feeling that they had more guidance and direction and often were able to offer more varied learning experiences for their students. One teacher in California contrasted how she is coordinating with her colleagues now with the way the school used to operate:

“I think traditionally teachers had this one room, and they were the emperor in their own domain and would collaborate occasionally with other people who were emperors in their own domain in the same area. I think now we’re constantly trying different ideas off each other. We’re talking ... I would say [to move toward more personalization] you have to be prepared to be exhausted but happy.”

Another principal who similarly supported collaboration around personalized learning explained that she learned how to lead and coordinate innovation thanks to coaching she received on change management and project management, a leadership support that was uncommon in most schools in the sample.



BRIGHT SPOT:
COLLABORATION

Students were frustrated by shifting and varying expectations.

As noted above, when the personalized learning initiatives in schools looked like a mix of approaches and activities, students experienced personalization in inconsistent and sometimes confusing ways.

Some students—especially secondary students—were frustrated with their personalized learning experiences because, among other things, teaching and expectations felt inconsistent from classroom to classroom and year to year. For high school students preparing to apply for college, shifts in grading and assessment practices created a special kind of confusion and anxiety. “We really didn’t know how [standards-based grading] worked and there was a lot of confusion,” said one high school student. “It was just thrown on you, and teachers really didn’t know much about how the overall trend was [determined]. We weren’t really educated on the new system.” According to another high school student, “[Our teacher] said, ‘You have to all get a four [the highest mark in the standards-based grading system], so go off and do it.’ But a lot of us didn’t understand what a four was because it wasn’t clear or it seemed impossible to reach.” In particular, students who had been successful under traditional models of grading and expectations were outspoken about their disappointment and frustration with the changes. A high school student said,

“Kids don’t like [standards-based grading] or understand it because they’re not used to it yet. Especially in my class. I’m still iffy about it because, I don’t want to sound like super proud of myself, but I’m used to getting As. In middle school and elementary school, I would know the answers. I’d get the A and I’d be proud of myself. Now it’s harder because I don’t just have to know the information, I have to process it.”

Another high school student said, “There’s a lot of teachers I got that are new this year ... You ask them [about a standards-based grade], and they say, ‘You did this wrong.’ I say, ‘But why did I get this grade?’” Her classmate added, “[The teacher] really doesn’t understand the [standards-based] grading system, so that messes with the kids.”

At the end of the grant period, despite making some progress toward defining personalized learning and seeing it come to life in select classes or schools, few of the school systems in the initiatives had developed replicable strategies or the level of scale originally hoped for. Whether these efforts yielded improvement in student performance remains unclear.

Teachers Tasked with Innovating Their Practice Were on Their Own

Despite the clear enthusiasm for personalized learning and the herculean efforts by teachers described above, why had most of the initiatives we observed failed to yield “holistic models that could be launched and replicated,” as the grant specified? We think a large part of the answer is that these school systems were trying to do something they were never designed to do: innovate.

Successful innovation and scaling requires that innovators have (1) a clear understanding of what they hope to accomplish—what problem is being solved and some way of knowing when they get there; (2) the flexibility and opportunity to take risks; and (3) strategies to learn through iteration.¹ If the goal is to innovate and learn as an organization, then innovators also need (4) processes and procedures for gathering what is learned, codifying it, and transferring this information to others.²

Teachers, who were tasked with innovating their practice and redesigning their classrooms, and principals, who were tasked with coordinating teachers’ explorations into new school models, had few of the strategies or supports needed for successful innovation. At every step—from getting a clear understanding of what they hoped to accomplish to processes and procedures for gathering what was learned—grantees encountered challenges.

As we explain in more detail below, teachers and schools had some flexibility to explore new practices, but that flexibility was fragile and constrained. District leaders and partners specified goals in framing documents, but for many teachers and principals, these goals remained abstract and untethered to practice. For the most part—especially early on in the initiatives—systems and processes to aggregate and disseminate what teachers and schools were learning were ad hoc and relied heavily on individuals. Key players in the central office, including executive leadership and instructional departments, rarely provided consistent support for personalized learning and the initiatives about district policy or practice changed very little.

In the end, the goodwill and effort that teachers, principals, and central office champions of personalized learning brought to the table were not enough to develop and spread innovation. Still, as teachers, principals, district leaders, and regional partners recognized their gaps and weaknesses, some of them shifted their efforts to better clarify goals, codify practice, and more deeply engage the role of school leaders. These shifts provide valuable insights on what would be required to make more comprehensive changes to the policies, structures, capacities, and functions of individuals throughout the school system—that is, what would be required to become a system designed for innovation.

Teachers and schools had nominal freedom of action, but it was limited in practice by resource constraints, bureaucratic rules, and misaligned incentives.

Both teachers and principals felt they had a license to innovate in their classrooms and in schools. Teachers commonly remarked that their principals encouraged them to “take risks” and “fail forward.” More than rhetorical encouragement, principals described several ways in which they protected teachers. One principal acknowledged that teachers will make some mistakes and said he would not hold a bad observation against them if the teacher was trying something new. In a more extreme example, a principal actively steered an assistant superintendent, who expressed skepticism toward the school’s personalized learning initiative, away from visiting classrooms where teachers were exploring new approaches.

At the school level, principals also noted that they had the freedom to explore new approaches in their buildings. Regional partners and district administrators leading local personalized learning efforts said they could not tell schools how to personalize learning but instead had to provide them with the freedom and opportunity to figure out what personalized learning would look like. As one district administrator explained:

“The end game for us is demonstration of mastery of those competencies that we articulated. We are not there yet with those, but that’s the end game. If kids can demonstrate mastery with sufficient evidence, that’s all that matters for schools. I don’t care about how you do anything else.”

For the most part, principals report that they had the flexibility they needed to pursue personalized learning. The rural New England schools in our sample had considerable flexibility because their small districts did not have large bureaucracies overseeing their work. In addition, the charter schools in the initiatives had built-in flexibility—this was the case for all of the schools in New Orleans, as well as a subset of the schools we visited in Washington, D.C., Denver, Oakland, and Chicago. Their charter status allowed them nearly complete freedom to hire and manage their staff (including shifting staff assignments, class size, and schedules), design their instructional programs, and shape their professional learning—all of which were relevant to exploring personalized learning. Importantly, they could make all of these changes without consulting district administrators.

Even among schools in the larger, more traditional districts, principals felt they had room to experiment. Of the 23 principals (from both traditional district and charter schools) in our sample who responded to a survey, 18 felt they had the flexibility needed to implement personalized learning. Indeed, schools in the sample did change (sometimes significantly) during the grant period by altering their school schedule, reorganizing staff, and hiring new positions or shifting staff roles.

Both teachers and principals, however, noted that their systems placed constraints on flexibility. For teachers, the assessment requirements and evaluation system were the most commonly cited constraint. Teachers frequently noted the tension between grade-based assessments and the desire to allow students to set their own pace for their learning. One district leader supporting personalized learning explained,

“What [teachers] have done is to allow students to progress based on their ability within a unit, but because testing is at a specific time, especially in courses like algebra, they don’t want them getting so far ahead. So we are working within the confines that are established by the state.”

A handful of districts in our sample were piloting competency-based assessment systems (with the support of their state education agencies), but as we left the field, these efforts were still nascent.

Teacher evaluation systems also loomed large for many teachers we interviewed. Several principals in our sample adjusted or mapped existing evaluation tools to expectations that reflect principles of personalized learning. However, the teachers we interviewed in locales that had not adjusted evaluation instruments in light of personalized learning expressed concern that they may be penalized for trying new approaches.

At the school level, principals noted boundaries that came from resource constraints, bureaucratic burdens, and misaligned mandates and incentives. One central office leader described the consequences of limited resources and exposure to new approaches for making change:

“As a principal, I felt like I was constrained and that I wasn’t able to do all the things I wanted to do. Not because anyone was telling me no, but because I wasn’t getting the financial resources or the curricular resources for those kinds of things.”

Bureaucratic processes also imposed constraints. Personalized learning directors buffered principals from the bureaucracy by negotiating waivers from district professional development activities, arranging for unique technology tools, and allowing for the reallocation of resources. But this flexibility was often

due to the savvy of principals or their central office director rather than accomplished by a permanent change to district policy or practice.

Negotiating flexibility for individual schools through waivers and “making things work” is ultimately an unsustainable strategy. The district personalized learning directors in one of the most responsive systems acknowledged that she may be able to sit down with six or ten schools to sort out what they need and figure out how to shift central and school resources and requirements to meet those needs today. However, she noted that she will not be able to work that way when 20 or 30 schools are pursuing personalized learning. She, along with the district’s assistant superintendent, were exploring ways to give schools more independence in decision making.

Negotiating flexibility for individual schools also leaves initiatives vulnerable to changes in district leadership and priorities. The future of personalized learning in one district where it was still finding a foothold was effectively terminated when the district hired a new superintendent who hadn’t bought into the initiative.

At its worst, relying on waivers and approvals takes control out of the hands of schools and puts it in the hands of bureaucratic departments. One regional partner that worked with local district and charter schools explained that “downtown,” as the central office was known, had provided schools with some flexibility over curriculum and some assessments but also came off as bureaucratic and unsystematic in granting waivers, and was often unclear about the point of contact for personalized learning schools. Though the district rarely told schools “no,” the regional partner felt the district stymied schools’ change efforts by being slow to respond and working in timeframes that denied the urgency to act felt by participating schools.

Finally, traditional accountability systems, according to principals we interviewed, created incentives against risk-taking and innovation. A principal of a Colorado school that was on the state’s accountability “clock” because of poor performance argued that accountability pressure slowed her school’s progress:

“When we first went into this journey, we had to give ourselves permission to take a [performance] dip. And we don’t have permission to do that ... We were going full blown and really going toward playlists, and groups were happening, and all of that was happening, and then our data came in. And it was not good. So then it was going back to what we knew best. It was coming back to a lot more structure...we’ve kind of driven back.”

Teachers and principals adopted personalized learning approaches before understanding the learning problems they were trying to address.

Teachers and principals may have had the flexibility to innovate, even if it was constrained to some degree, but many found the broader goals of personalized learning difficult to grasp. Moreover, they rarely connected the personalized learning approaches they were experimenting with to the specific problems that they were supposed to address. Ambiguity about what personalization was changing and why made it harder for educators to develop and assess new approaches, and for leaders and systems to identify the types of supports educators needed to succeed.

Leaders across most of the initiatives understood the importance of establishing goals and spent considerable time and resources articulating them. Denver’s driver model, Colorado Education Initiative’s Next Generation Learning Ecosystem, LEAP’s Learning Framework, Henry County’s pillars, Great Schools Partnership’s Framework for Proficiency-Based Learning, CityBridge’s Breakthrough Design Principles, Riverside’s Portrait of a Graduate, and Dallas ISD’s PL Coaching and Development Rubric are all examples of strong system-level efforts to define the goals for personalized learning and to outline elements of teaching, learning, relationships, and organization that would support those goals.

But teachers and principals struggled to translate these broad goals into reality and tie them to current problems and practices. The big ideas embedded in many of these goals—student agency and social and emotional learning—were compelling but abstract. Without a clear understanding of the goals and ways to measure progress, teachers often emphasized the **visible and tangible components** of personalized learning—for example, classroom seating structures, assignment formats, work routines—and lost sight of what they were trying to accomplish. Teachers jumped to the tangible components of personalized learning without considering whether and in what ways these components confronted the reasons students were not engaging in more personalized learning experiences or progressing toward the stated goals.

The goal of advancing students' agency provides an example of how goal ambiguity and confusion could lead educators to a focus on process over outcomes. Each of the NGLC and NGSi grantees included student agency as a central goal for its initiative. Our interviews with teachers and our observations of classrooms, however, showed that teachers commonly misunderstood agency as something they gave to students rather than something that students had to develop and express. Teachers and leaders often equated student agency (the goal) with the activity of giving students choices in their learning.

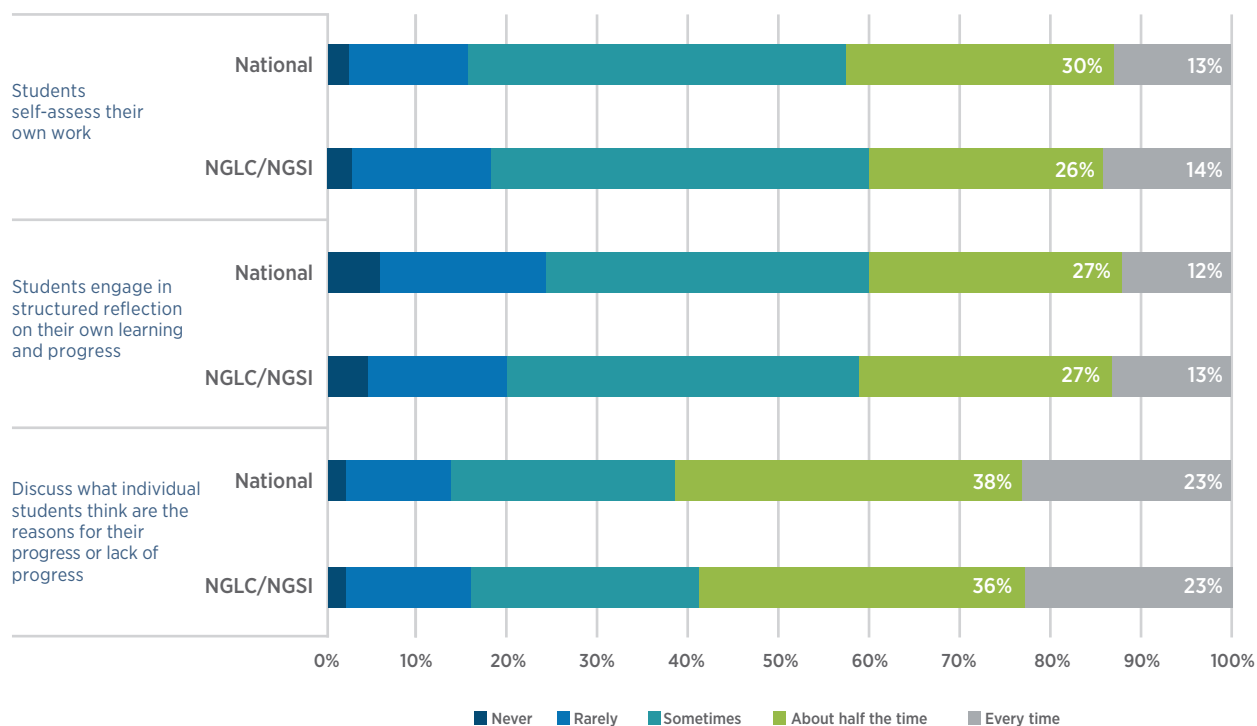
For example, in one observation, a middle school teacher covering the Fall of Rome provided her students with a “choice board” that offered students four different learning “pathways.” At the beginning of the lesson, students were given the board and told they could pick whatever pathway they wanted. However, students were not asked—or expected—to reflect on why they would choose one pathway over another. Moreover, the pathways themselves included many of the same activities, just presented in a different order. It wasn't clear that the pathways would offer distinctly different learning experiences.

In an interview with the teacher after the class, the teacher explained that the choices were intended to give the students some “control” and “agency” in their learning. She hoped that the students would like that and be more engaged in the activities.

These choices, however, didn't reflect meaningfully different learning opportunities. Nor did the choices enlist any metacognitive skills (like self-reflection, assessing learning needs and goals, or making choices based on that assessment)³ that are important for developing students' ability to express agency over their own learning and life. The teacher clearly put in a great deal of effort to present this lesson and the activity echoed the common refrain to give students “choice and voice.” But the activity and the teacher's explanation of the rationale suggest that the teacher may not yet be clear on the goal of developing agency and how activities in her classroom help to build students' capacity for agency.

This observation reflected patterns in the national survey, in which we found that the teachers in the personalized learning initiatives reported around the same degree of student reflection about learning as their national peers (see figure 3).

FIGURE 3. No Differences Between NGLC/NGSI Schools and Schools Nationally in How Students Reflected on Learning



When schools had clear and concrete goals and focused on the barriers that kept them from delivering on these goals, they were able to build a more common approach to personalization and innovation. One principal spent six months working with her staff to develop shared goals and expectations around competency-based (also referred to as mastery-based) learning, a key component of the initiatives’ vision of personalized learning. Her staff had a much clearer and shared understanding of what they were working toward and why than teachers in the other schools in our sample. When an instructional coach in this school went into a classroom, they took not just a “look for” document that outlined the type of behaviors they expected to see in the classroom, but also the school’s vision statement. Their feedback also focused on the link between what was happening in the classroom and the school’s overarching aspirations and goal. As one coach explained,

“When we coach, we always take the vision statement with us, so we’re talking to teachers and asking questions like ‘How does this tie to the vision?’ [or] ‘Tell me where does whole group instruction fit into the vision?’”

Over time, more schools and systems recognized the need to bring a similar sense of purpose to the work—and to bring the initiatives’ goals for students and related classroom behaviors into sharper focus. As an administrator in California said,

“I think the lesson learned across the board for all this is always coming back to the purpose of what’s best for kids and what are we going to do that supports them, not just what’s ‘personalized learning’ per se.”

By the end of our observations, most district personalized learning directors and regional partners had developed observation protocols and/or feedback strategies to help schools and teachers better connect their activities to the initiatives' broader goals. In some schools, teachers began to codify their practices on their own. After a year of confusion, for example, a team of fourth grade teachers in one school decided to map out four different levels of independent work for students, including the behaviors associated with each level and the ways students could demonstrate readiness to move to the next level. Norming and codifying goals and purposes like this took time. But we heard in interviews and noted in observations that the codified tools helped teachers and district leaders discuss their personalized work with common language and greater shared understanding.

Teachers were rarely prepared—or supported—to prototype and learn through iteration.

At its core, innovation involves cycles of iteration and testing. Innovators design prototypes, test and assess them, refine them, and then repeat the process. Across our sample, teachers, principals, and personalized learning directors used language associated with this way of working. They talked about Plan-Do-Study-Act (PDSA) cycles, prototyping, and design thinking. But in practice, as with the initiatives' broader goals, many teachers and leaders often struggled to use such processes in their day-to-day work in schools.

With a few exceptions, schools had little embedded support for prototyping and iteration. Instead, most school district professional development support was designed to support the implementation of atomized “best practices,” not the development of comprehensive, new approaches to instruction. In classrooms, teachers rarely used structured ways of assessing what they were doing. As a district official in Texas summarized:

“[Teachers are] doing a lot of things, but they’re not assessing them ... I was in one planning activity here a couple of weeks ago, and a teacher had a couple of math activities and I was like, ‘How do you know when they leave that station if they mastered it?’ She didn’t. I was like, ‘They could have sat over there for 45 minutes and not known what they were doing.’”

With little direct support for testing the effectiveness of new approaches, and in the face of hard-to-define goals, teachers often ended up evaluating what they were doing based on professional judgement and cues from student behavior and engagement rather than on more systematic assessments.



BRIGHT SPOT:

A More Systematic Approach to Learning

Most schools in the study took a decentralized and ad hoc approach to iteration and learning. But some took a more coordinated and systematic approach, thanks in large part to support and direction from school leaders. One principal described leading her team through a learning process this way:

“[To improve our project-based learning], we looked at a performance task that aligned to certain standards, and then we looked at a project that was aligned to cognitive skills and compared the gaps. We surfaced a lot of really cool things, like this [standards-focused task] only asks for one text. This [cognitive-focused project] asks for several. This asked for multiple different perspectives. This asked for one. And it helped us think about ways to increase the rigor of our projects to push so kids do better on their cognitive skills. We did it in our instructional leadership team to test it. We did it as a process, and then we debriefed that process, and then we took it back to departments and did it across the school. We need to do it across all projects. And so we’ve secured some funding to hold summer professional development here, and that’s definitely one of the tasks we’re going to have everybody do. Because everybody’s hungry for it.”

Over time, as personalized learning directors and their regional partners saw schools struggle to make sense of what was working, most of the districts increased the support they provided. One district that originally funded a central research and development department for personalization reallocated resources to provide more on-the-ground supports for schools. A regional partner that originally planned a curated series of talks and presentations about personalization shifted toward more direct engagement and support for school leaders and teachers. Another regional partner that originally supported individual teachers shifted toward supporting *teams* of teachers in schools. Over the course of the initiatives, all personalized learning district leaders and partners both intensified their support to schools and extended the time horizon over which they expected to see change.

Arrangements for aggregating and disseminating lessons learned were weak or absent altogether in most systems.

Districts and regional partners also struggled to learn from and disseminate lessons from the field. One of the benefits of a school district is that the central office has existing structures and relationships that enable administrators to scan and learn across schools, networks, and systems to disseminate information across sites. All districts and partners in our study described efforts to learn from their early innovators and to pass those lessons on to schools that joined the initiatives later. As the initiatives moved into the third year, districts and partners started to release interesting tools and instruments based on their earlier observations. For example, one district's personalized learning team developed an extensive micro-credentialing system that provided teachers with online lessons about personalized learning principles and approaches. Another district's personalized learning director developed human resource tools, including an observational rubric and hiring instrument. Yet another started to develop a model for structuring and implementing an independent learning period for students.

In every case, however, districts and regional partners found it difficult to identify the right knowledge to disseminate, at least by the time we left the field. And what they identified fell short of being full models that provided direction for how to organize time for teachers and students, along with complementary classroom and instructional approaches. We also noted that, despite a clear goal to share knowledge and practices across schools, what the sites learned about personalization mostly resided in individuals and never became part of a larger, transferable body of knowledge.

Systems for aggregating, organizing, presenting, and disseminating evidence and information on personalized learning models and practices varied from formal to informal across sites. One of the regional partners, Great Schools Partnership, entered the grant work with an existing body of knowledge in competency-based learning and an extensive knowledge management system that included practitioner guides, implementation and observation rubrics, professional development strategies, and policy guidelines. Two additional sites, LEAP Innovations and Denver Public Schools, supported local personalized learning initiatives with formal knowledge management systems. These organizations conducted research on the schools working with the organization, produced case studies and analyses on the strategies and approaches used across their sites, and provided framing and guidance documents for schools participating in or just joining the initiatives.

More often, districts and some regional partners relied on informal knowledge management practices that typically rested with the central office's personalized learning director or regional partner representative. This was particularly true when the work was unfolding during the launch of the grants. These personalized learning directors and partners often worked very closely with schools, helping them design what they were doing, conducting frequent visits to see work unfold, and discussing the successes and failures as schools wrestled with their experiences. In so doing, they learned from their schools' experiences.



**BRIGHT SPOT:
DISSEMINATION**

But relying on individuals to gather, synthesize, and disseminate all of the district’s knowledge on personalized learning presents obvious vulnerabilities. What happens when the key individual leaves their position or district? Indeed, as we approached the end of the grant period and the funding horizon for the central office personalized learning director grew short, several of these individuals moved on, leaving no clear notion of how the work and the accumulated knowledge would continue.

Even when systems for measurement were in place to support personalized learning, as they were for two participating organizations, they evolved during the initiatives. Two organizations revised the mix of support, evaluation, and dissemination they provided several times through the first few years of operation, looking for a better match between their work and the needs of schools. Though these organizations made significant investments in data collection and analysis and avoided the common pitfall of having all of the lessons accumulate in a single individual, the lead in one of the organizations noted that the information gained on designing and implementing personalized learning were still only “micro lessons.” He added that his organization had learned some things about how to implement certain strategies, such as adopting a rotation model in a classroom, but had yet to identify any schoolwide models for personalized learning that could be codified and replicated.

Dissemination proved to be its own challenge. Even when lessons on how to design and implement elements of personalized learning could be identified, we learned that finding an audience for the lessons and new practices was not automatic. The director of one of the formal knowledge management systems explained the naivete of their original plan:

“We thought, we’re a lab. We’ll figure out how practices work, we’ll tell the [professional development office], they’ll approve them. It will be beautiful. That’s not how it works at all. You can’t just toss a practice over the fence and hope it will get traction.”

In this case, the district and this organization were reconsidering the dissemination process and how to get the right information into the hands of those who would use it.

Key district leaders did not show consistent support for personalized learning, regarding it as just one among many initiatives.

Finally, all of the issues described so far were complicated by the fact that personalized learning was often one among many competing district priorities. At the district level, this meant that personalized learning often lacked consistent engagement by key players, including superintendents, curriculum and instruction offices, and principal supervisors. A central office administrator explained that moving the effort forward in her district was a huge challenge without support from the top:

“To me, it all boils down to that executive leader. Because the kind of things that I ran into were trying to pull the right people together for [part of the initiative], and then I wouldn’t get the people I needed from [the] curriculum [department] to attend ... I can’t insist that they’re there. Or different departments have different initiatives, and we’re not being able to integrate them all.”

For the most part, district curriculum and instruction departments were uninvolved in the early planning of the personalized learning initiatives. At times, they even stirred up tensions. Local personalized learning efforts, which aimed to redesign classrooms and schools, seemed to directly challenge the role of district curriculum and instruction (C&I) departments and their affiliated professional development (PD) offices. One district leader said staff in her district’s C&I department wondered,

“If personalized learning is the lead here, then what do I do as curriculum and instruction? Do I now support PL? That’s a whole change in [the] top to bottom organization. So it’s, ‘What do I do? Am I supposed to reorganize my whole way of work around this?’ and I don’t know if there’s clarity around that. I’m talking with the other districts, [and] it seems like [this issue] ... is not uncommon.”

C&I administrators and PD staff are experts trained in helping teachers to implement known strategies for instruction. Since personalized learning initiatives in every district except one resided outside the district's C&I departments, few C&I offices engaged in the initiatives. To the extent that personalized learning strategies were unknown and required iteration and innovation, it is plausible that PD offices were naturally skeptical.

Similarly, principals in three of the districts in our sample were overseen by a cadre of supervisors, all of whom were former principals. According to principals and district personalized learning directors, these supervisors—like their counterparts in C&I departments—often expressed skepticism about the promise of personalizing and used their influence as supervisors to shape the degree to which their principals pursued this initiative.

As a result, schools often heard mixed signals about instruction from their districts: on the one hand, they were asked to experiment with personalized learning at their school, but on the other they were still beholden to curricular frameworks, pacing guides, and assessment schedules that predated the initiatives. Teachers implementing personalized learning reported that district PD often missed the mark for what they needed. Principals who worked under more skeptical supervisors described a tough balancing act. As noted earlier, one principal steered her supervisor away from visiting her pilot classrooms. Others said that they were risking low evaluation scores by continuing their personalized learning initiatives.

Only one school district explicitly committed to pursuing personalized learning systemwide at the time of the study. This district adopted a central vision of personalized learning to orient its community, school board, and central office departments toward a new, systemwide vision of schooling. Although the district faced familiar struggles engaging its C&I department, its engagement with that department and the central office more broadly was supported and guided by a consistent and public message about how personalization fit into the district's broader strategic vision.

Even in districts that did not intend to take personalized learning districtwide, personalized learning directors sometimes found ways to influence the central office and raise the initiative's profile. For example, in one district where the initiative's directors recognized the importance of engaging the C&I department, the personalized learning director asked to join that department (rather than the technology and innovation department) to symbolically and functionally position personalized learning as a teaching and learning initiative. In another district, the personalized learning director tried to influence the system by developing tools for the human resources office to use in hiring and evaluating teachers for personalized learning schools. In a third district, the personalized learning director constantly tried to frame personalized learning in terms that others could understand to broaden its appeal. As he reported in an interview, he asks teachers and leaders who are skeptical about personalization,

“Are you committed to knowing more about your kids and developing a plan that’s going to be in their best interest, in an environment that’s going to work for them and allow them to demonstrate their understanding when they’re ready to, not just because it’s a fixed date on a calendar, all while giving back to some learning community? [Then] you’re still doing the same work. We’ve been very strategic in the last month and don’t even call it personalized learning anymore.”

In the end, the system change envisioned by the Bill & Melinda Gates Foundation as necessary for widespread adoption largely did not occur in the early years of these initiatives. For educators and schools, this meant that they didn't have true agency to make change and had to layer personalized learning on top of many competing initiatives. In the following section, we explore what changes are needed to support innovations such as personalized learning at scale.



BRIGHT SPOT:
CENTRAL VISION

Implications: If We're Serious about Innovation, What Do We Do?

Our findings illustrate the appeal of personalization in schools but also the challenges of innovating inside a system that was never designed to support innovation.

Innovation—creating new ideas and putting them into action—makes fundamentally different demands on educators and systems than when the goal is to *implement* “best practices.” Innovation asks educators to be willing to take risks and discover something new. Instead of identifying universal “best practices” and having technical experts train schools on how to use them, innovation asks systems to help schools search, create, invent, and test new practices. All school districts have professional development divisions that provide the technical training and coaching needed for implementation, but few, as we came to understand, have systematic structures to help schools through a process of discovery and innovation.

It's unsurprising, then, that schools struggled to innovate in these initiatives given these contexts. In general, school systems, especially large district bureaucracies, were never designed for innovation. They were designed for stability. Stability isn't necessarily a bad thing; no one wants school systems changing wildly from year to year. But the initiatives' challenges raise the question: Can school systems be better designed to support innovation? The challenges and successes experienced by these schools offer clues about what a more supportive system for innovation within school districts might look like.

Taken together, the experiences of schools participating in these personalized learning initiatives follow a familiar pattern of promising practices in classrooms that school systems struggled to formalize and replicate at scale across schools. The successes and challenges the schools encountered through the first few years of their initiative suggest that system leaders must do four important things to more strategically support innovation:

1. Help schools get clear on the problems that must be solved and what must change to address them.

To build a more strategic approach to innovation, school leaders and teachers must be clear about the instructional and learning problems they are attempting to solve. That might include differentiating instruction to better address variations in students' skill levels, building stronger relationships between students and teachers, or finding ways to build students' ability to collaborate and contribute to teams. What's most important is that the goal is clear.

The role of district leaders and partners should be to assess needs, identify common issues, and then select innovators best positioned to make progress on solving them. In Oakland, the Rogers Family Foundation, which partnered with the Oakland Unified School District, realized that many of Oakland's schools face enormous differentiation needs as students enter school with widely different levels of preparation. As a result, they invested in a school using technology to dramatically increase instructional differentiation. In Washington, D.C., Citybridge realized that a push toward competency-based instruction would require new assessment tools and funded a school to develop a technology-enabled, competency-based assessment system. In both cases, the partners invested in individual schools to take on problems that are important across many schools in their region.

School system leaders must also think explicitly about the different types of problems that can arise in different school contexts. For example, different challenges arise in elementary schools than in high schools, both developmentally for students and organizationally for adults. Similarly, system leaders might ask themselves what problems personalized learning would confront in rural schools compared

to schools in an urban setting. What types of problems would personalization need to address in schools with adolescents who have no prior experience with self-directed learning versus schools serving students in earlier grades? What types of problems would a personalized learning initiative need to solve in schools where the majority of students are English language learners, and how would that differ from schools where students are native English speakers? How does the transition to personalized learning look different in a school starting with a traditional instructional program versus one that already has aspects of a personalized instructional program?

Personalized learning approaches can and probably should look different in different places. District leaders must identify the specific problems that they are trying to solve so that, in time, all schools can find and adapt solutions that best suit their challenges and contexts.

Recommendations for districts and partners:

- **Set clear expectations** for what the district should accomplish for students. **NGLC’s My Ways** is an example of a goals framework that encompasses academic, social, and emotional goals for students.
- **Bring together educators to identify important problems** and issues that keep schools from delivering on those expectations. Decide as a team which problems to prioritize. **Innovate NYC Schools** is one example of a district effort to identify and prioritize instructional problems. Led by an office charged with leading innovation in the New York City Department of Education (the iZone), Innovate NYC connected educators with technologists and other vendors to discuss the persistent challenges in teachers’ classrooms with the goal of focusing potential technology and tool developers on the instructional problems and priorities of teachers. (See *Changing Methods and Mindsets: Lessons from Innovate NYC*).
- **Review the landscape of your schools** to identify cases of school-level problems to solve. In addition to different grade spans, what features characterize sets of schools in terms of communities or students served, instructional approaches, or geography? How do schools in the district affiliate with each other? These cases and affiliations might reflect the “types” of school-level problems that need solutions.

2. Create flexibility in the system—at both the school and classroom levels.

Innovation in schools is more likely to happen when educators and principals have the flexibility to try new things. Flexibility in key district systems such as staffing, programs, operations, and resources was a critical condition in awarding these grants.

Principals in our sample largely said they had the flexibility they needed. Many used it to change student grouping, class schedules, instructional materials, staff allocations, and assessment procedures. But flexibility often was granted to individual schools through the hard work of a central office champion or through negotiation with central office departments; policies were generally not applied to the district at large. Rather than providing flexibility via waiver and exception, district leaders who are committed to supporting innovation should scrutinize their district’s policies and practices to provide as much flexibility over resources, staffing, academic programs, and operations as possible.

Flexibility must be both district policy and a widely held conviction among the central office leadership and staff. That means engaging all central office departments—curriculum, instruction, and assessment, but also information technology, human resources, procurement, communications, and legal—in ongoing conversations about the district’s goals for students and how each department (no matter how closely connected to instruction they seem) play a role in supporting the innovation efforts of principals and teachers.

Districts that are further away from being able to offer flexibility to all their schools should consider carving out dedicated zones for innovation as a starting point. Dedicated zones allow a subset of self-selected schools to operate under different rules and generally with greater flexibility to encourage innovation and exploration. These zones can help seed innovative models for wider use. They can also serve as a transition strategy to inform efforts to offer flexibility more broadly. For example, special-purpose zones might reveal how principals and teachers respond to flexibility and highlight the supports other schools will need to use it effectively.

In addition to thinking about the rules that govern innovating schools, leaders should think about how the context for innovation can mitigate the risks that naturally come with experimentation. Since some innovations will fail, leaders should look for conditions and circumstances where failure is less harmful for students. For example, schools might experiment with new approaches during the summertime or after school without the risk of disrupting the bulk of students’ learning experiences.

Several schools in our sample carved out dedicated time during the day or week to explore new strategies. For example, one school with a large number of English language learners used a short block of time at the end of the school day as a “proving ground” for new strategies. As these strategies to provide students with more independence, flexibility, and personalization proved manageable and effective in this dedicated space, teachers then explored ways to use them in the rest of the school day.

Recommendations for districts and regional partners:

- **Be explicit about what flexibilities already exist and specific tensions** for innovating schools. Districts can work with principals to understand and utilize the flexibilities they have and build feedback loops between innovators and the district departments to identify opportunities to expand flexibility in policy and practice.
- **Engage all central office departments in personalized learning goals for students.** Establish innovation as the district priority (and not a special project). Then, spend time working with departments to understand their role and how the work in their office can be shifted to support school-level innovation toward personalization.
- **Give principal supervisors and principals more flexibility** to consider broader outcomes in evaluation. Districts can clarify the elements of principal and teacher evaluation systems that are non-negotiable and what elements can be flexed to account for and encourage innovative efforts in classrooms and schools.
- **Establish a dedicated autonomy zone** to transition toward more systemwide flexibility.
- **Encourage schools to innovate in dedicated spaces** such as specific time blocks during the day or after-school programs to mitigate the risks of failure.

3. Build supports and knowledge management strategies for innovation.

Innovation and inspiration are not the same thing. Innovation generally involves a systematic and cyclical process of experimentation, testing, evaluation, and monitoring and refinement. Districts and their partners have important roles to play in both helping to build the capacity of schools to engage in such cycles and to aggregate and disseminate lessons from early innovators.

All of the districts and regional partners in our sample knew that they needed to support schools as they worked to implement personalized learning. But over time, they found that schools needed even more support than they had originally expected. In particular, schools needed extra support around two crucial capacities: teachers' capacity for prototyping and short-cycle innovation, and leaders' capacity to lead and manage change.

Many good ideas about how to build school-level capacity for prototyping and short-cycle innovation already exist in the field. The classic PDSA (Plan, Do, Study, Act) model for improvement is well documented, and many consultants provide technical assistance in this method. The [Carnegie Foundation for the Advancement of Teaching](#) and [Stanford's d.school](#) offer useful guidance and a growing number of resources for pursuing innovation through short-cycle innovation and "hacks," or small tests and innovations that might build into more substantial changes over time.

Putting short-cycle, iterative learning into practice involves more than understanding the mechanics of process (most people in education are familiar with cycles of inquiry). It involves thinking about the supports that schools need to carry them out. These include resources, time, the flexibility to do the work, and strategic direction. While schools do not need to run randomized control trials, they nevertheless will struggle to innovate without taking a more systematic approach.

One outlier in our sample exemplified such a systematic approach. Teachers in this school worked in teams to map out their strategies and approaches. When a team identified a problem, its members collectively considered data on the problem and potential strategies to address it. Together they decided on one or more strategies that they would test independently. After testing the strategies, the team reconvened to reflect on the new strategy, its feasibility, and any data that showed how well the strategy worked. If any strategies proved worthwhile, the team would agree on what and how to implement them across the team. In addition to bringing coherence and a systematic process for problem solving, we noted that this deeply collaborative and reflective approach helped to quickly onboard new teachers to the school and team and created a strong professional culture.

The school districts in these initiatives also underestimated the critical role that leaders play in shaping how people work toward innovation. The handful of successful innovation leaders we saw stood out because they provided a clear vision for personalization, gave their staff the freedom to explore new strategies, and helped their schools drive toward coherence and convergence by codifying and spreading promising ideas. Unfortunately, principals rarely had professional development opportunities that supported innovation or organizational change. And, as we learned from our sample, principal supervisors sometimes hindered school-level innovation and change when they didn't understand or disagreed with the effort.

Finally, knowledge management is an important role for districts and regional partners to play as schools innovate. With different degrees of formality, the districts and partners in our study aggregated lessons from early innovators and shared them with other schools. At the beginning of the initiatives, it was common for a single person—typically the district personalized learning champion or an external partner—to do this work. As the initiatives unfolded, however, district personalized learning directors and their partners started to codify elements of personalization by developing and disseminating observation and evaluation rubrics, as well as training and credentialing tools. These formal and shared

tools have the potential to carry on, even if the leaders themselves do not remain in the district or partner organization.

Building internal networks is another way districts can facilitate aggregation and disseminate innovations. For example, instructional unit design teams in one district we visited created a forum across schools for teachers to not only share the activities and practices they found to be effective in their classroom, but also to collaborate on the design, implementation, and revision of personalized learning units. Several districts and regional partners formed ongoing teacher and leader communities of practice that provide learning and sharing opportunities to ensure that knowledge and expertise were built through the district or region, not just held in the district or partner offices.

Recommendations for districts and regional partners:

- **Build embedded coaching supports for prototyping and iteration** in schools. Districts can support iteration in the context of practice by providing or brokering expertise in improvement systems, such as Plan, Do, Study Act.
- **Create structured support systems that help school leaders** develop a vision of the future, build a case for change, marshal resources, and develop and communicate a plan of action—in other words, change management.
- **Create and implement a knowledge management plan** with the goal of getting knowledge in the hands of many educators. Districts and their partners can utilize cross-school networks, provide tools for evaluation of new strategies, and codify and distribute lessons and tested strategies.

4. Distinguish schools that favor innovation from those that favor replication and adaptation.

The spread of innovation always involves waves of activity. Initially, a pioneering group might push the boundaries and discover and design new ways of working. Then subsequent groups might take up those innovations and adapt them to better meet their needs. Put another way, even if a system wants to see all or most schools transition to personalized learning, not every school should invent its own personalized learning approach. School systems should identify which principals and faculties are best positioned to innovate and which are best positioned to adopt and adapt.

Although having every school invent its own approach could help generate buy-in, it can be inefficient. As one district leader reflected, “We are working with over 30 schools. They are all working on the same three problems and trying out roughly the same three strategies.” Given the high demands associated with supporting innovation, this same leader wondered if his district might be better off working more deeply with fewer schools and then codifying, packaging, and disseminating innovation from their efforts. In fact, one district did just that by limiting its personalized learning initiative to five schools in one feeder pattern. Another district limited the initiative to nine schools per year, allowing each cohort’s experience to inform the next cohort and limiting the strain on district support services.

Not every school will be ready or able to innovate. Districts should carefully consider the capacities and conditions needed to generate ideas and iteratively test and assess new strategies. All the districts in our study started the initiatives with a cohort of schools that included the most interested and eager leaders and educators. Intuitively, the districts and regional partners understood that some schools would be better positioned to innovate than others. But deciding who fit into this group was not always easy.

In some cases, districts and partners in our study tapped specific schools for the initiatives because they felt the school and staff would benefit from the process, or because they thought the school's organizational capacity seemed promising. Other districts and partners hosted a competition for proposals. Some school leaders expressed discomfort with how these competitions identified winners and losers. Still, many schools reported that thinking through their design and implementation plans via the competitions helped them get the ball rolling.

In both cases—scanning schools for likely innovators and design competitions—district leaders were looking for a combination of drive and capacity to identify potential innovators. Obviously, high-capacity schools—those with a commitment to personalized learning, strong leadership capacity, collaborative professional culture, and organizational coherence—are well-positioned to be early innovators. But focusing only on schools with these capacities leaves out potentially promising candidates. School districts need to focus not only on strong schools but also on schools that show the potential for innovation. Conditions for potential might include the following:

- A principal committed to leading change.
- A staff committed to a long-term effort to change teaching and learning in the school.
- Enough stability in the staff for knowledge to accumulate over time.
- Professional norms for sharing practice with others inside and outside the school.
- Time for collaboration and reflection.

Such conditions, coupled with leadership development around change management and staff development around prototyping and high-quality learning cycles (described in more detail below), could position more schools to lead innovative efforts.

Districts might also look beyond the usual suspects for partners. Local charter schools may already have flexible environments and systems for structured inquiry and learning, making them good candidates to explore and discover new models.

Recommendations for districts and regional partners:

- **Seek interested and motivated leaders** by hosting discussions on personalized learning and goals for students.
- **Establish communities of practice** to recruit and support collaborative learning among educators from several schools.
- **Consider a design competition** that provides resources and support for schools to map out a new personalized design (see the **Rogers Family Foundation design initiative** and the **CityBridge Breakthrough Schools initiative**).
- **Seek out local charter partners** who are poised for innovation and open to collaboration with the school district.

Conclusion

Personalized learning is not the first large-scale instructional change initiative to struggle to take hold in traditional school districts. Comprehensive school reform⁴ and the small schools movement⁵ are prime examples of how, even with widespread educator enthusiasm, school systems have a tendency to resist major changes to teaching and learning. Large bureaucracies, governed by rules, specialization, and hierarchy, are not designed to support innovation. All of the school systems that received grants under these initiatives said they were serious about system change, but most struggled early on to translate their intentions into action. In schools, despite the heroic efforts of educators who spent weekends and evenings searching on their own for ways to personalize their classrooms, identifiable approaches and designs were still rare as the grants concluded. Even when educators or whole schools did develop successful strategies, there were few efforts to learn from, formalize, or replicate those successes more broadly. Innovation in school systems, as this report shows, is difficult.

At the same time, the appeal and potential power of a more customized approach to instruction that allows students to move from passive learning to ownership and engagement was undeniable in the classrooms we visited. Almost none of the educators we interviewed wanted to return to more traditional approaches. After three years of hard work, struggle, and success, nearly all of the districts and regional partners in these initiatives continue to push toward more personalized learning for students and remain committed to supporting educators in this effort. Moreover, beyond the two initiatives we studied, the field can look to more fully developed and promising examples of personalized models in district, charter, and private schools.

School systems must find ways to innovate if they are going to truly prepare students for a workplace and an increasingly complex and diverse society that will place new demands on students. Indeed, the jobs of the future will likely require of people the very skills that personalized learning promotes—especially initiative, adaptability, creativity, teamwork, and problem-solving mindsets.⁶

In light of the major social and economic changes likely on the horizon, public education must find ways to support more innovation and experimentation.⁷ For district leaders, doing so requires getting clear on the problems schools are being asked to solve, giving schools the flexibility and supports they need to experiment and learn, and strategically seeding and spreading innovative practices within and across schools. For state leaders, philanthropists, and business leaders, the demands of the future require both supporting and pressuring school districts and the charter school sector to develop, refine, and share new approaches.

If developed, refined, and put into practice, the ideas that undergird personalized learning approaches could help ensure that all students find the right fit and get what they need. An education that responds to each student is something that every parent knows is valuable. As Todd Rose argues in *The End of Average*, every person and every student is a complex mix of attributes, strengths, weaknesses, and life experiences. Our schools must treat them as such. But if we are serious about meeting every student's needs, changes to policy and practice—many of which will likely upset existing interests—are going to be necessary. Like other promising reforms that came before it, personalized learning is at a crossroads, and it is urgent that those who believe in its potential lead a path forward.

Endnotes

1. Scott Anthony, David Duncan, and Pontus Siren, "Build an Innovation Engine in 90 Days," *Harvard Business Review* 92, no.12 (December 2014): 59-68.
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4. Mark Berends, Susan J. Bodilly, and Sheila Nataraj Kirby, *Facing the Challenges of Whole-School Reform: New American Schools After a Decade* (Santa Monica, CA: RAND Corporation, 2002); Susan J. Bodilly et al., *Lessons from New American Schools' Scale-up Phase: Prospects for Bringing Designs to Multiple Schools* (Santa Monica, CA: RAND Corporation, 1998); Comprehensive School Reform Quality Center, *Report on Elementary School Comprehensive School Reform Models* (Washington, DC: American Institutes for Research, 2006); Thomas K. Glennan, Jr., *New American Schools After Six Years* (Santa Monica, CA: RAND Corporation, 1998).
5. Aimee Evan et al., *Evaluation of the Bill & Melinda Gates Foundation's High School Grants Initiative: 2001-2005, Final Report* (Washington, DC: American Institutes of Research, 2006).
6. See for example, "The Future of Skills," Pearson website (accessed June 11, 2018).
7. David J. Deming, "The Growing Importance of Social Skills in the Labor Market," *The Quarterly Journal of Economics* 132, no. 4 (November 2017): 1593-1640; Carl Benedikt Frey and Michael Osborne, *The Future of Employment: How susceptible are jobs to computerisation?* Working paper (Oxford, UK: Oxford Martin Programme on Technology and Employment, 2013); James Manyika et al., *Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation* (New York, NY: McKinsey Global Institute, 2017).